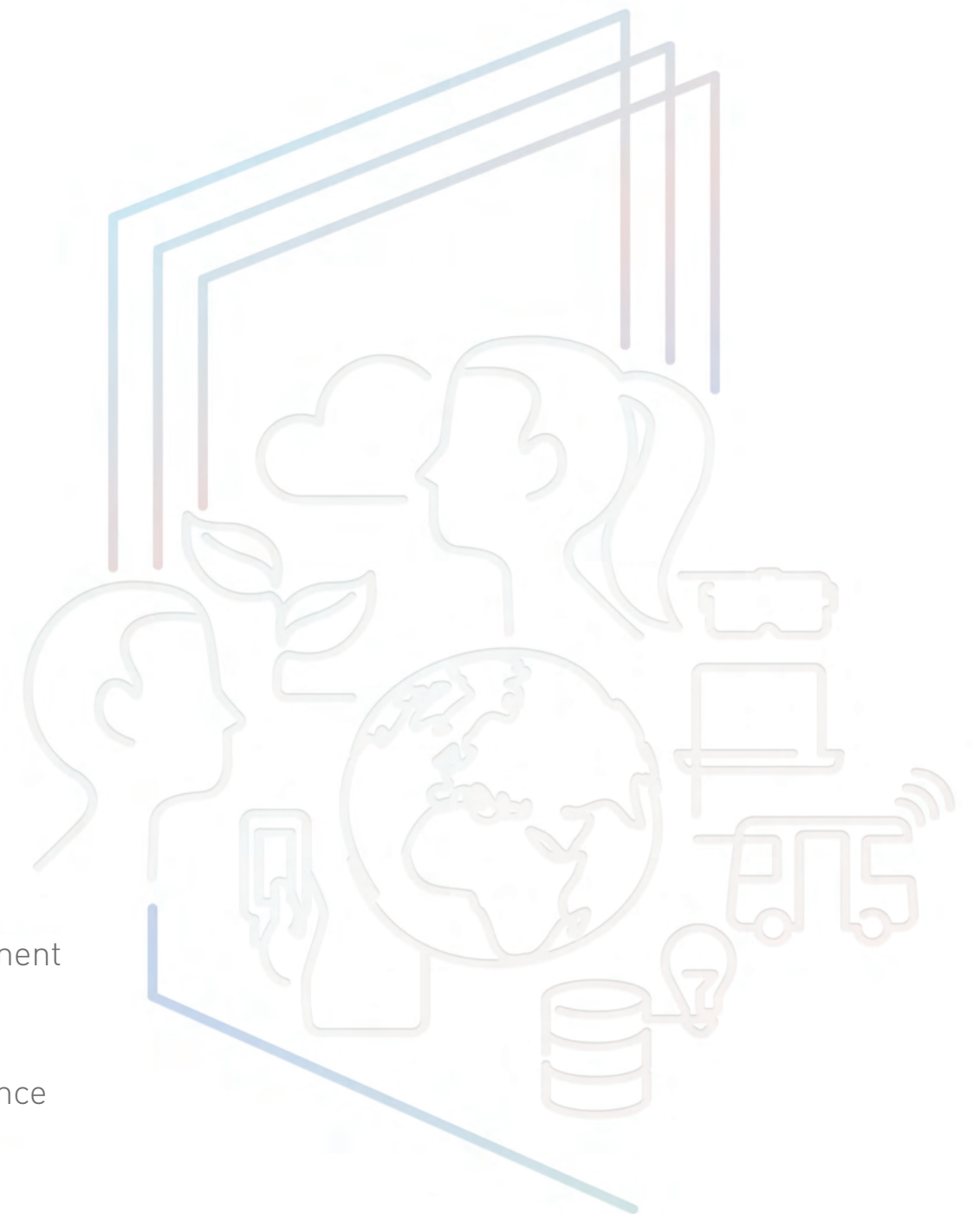


Beyond Digital Transformation

2020 SUSTAINABILITY REPORT



Environment
Social
Governance

About this Report

LOTTE Data Communication publishes its first Sustainability Report in 2021 to share sustainable management activities and achievements with wide-ranging stakeholders. This report contains LOTTE Data Communication's sustainable management policies, goals, management systems, and activities to expand economic, environmental, and social values.

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BEYOND DIGITAL TRANSFORMATION

Reporting Standards

This report has been prepared in accordance with the Core Options under the Global Reporting Initiative (GRI) Standards. The report has also reflected social and environmental indicators within the UN Sustainable Development Goals (SDGs) and Task Force on Climate-related Financial Disclosures (TCFD).

Reporting Scope

The report covers financial and business performance on all domestic and overseas workplaces of LOTTE Data Communication including its head office. Some topics were reported separately on domestic workplaces. Non-financial business performance is prepared for each workplace of LOTTE Data Communication. Financial information is presented on a consolidated basis in line with Korean International Financial Reporting Standards (K-IFRS). As for the data that require additional attention in terms of scope and boundary of reporting, they have been annotated separately.

Reporting period

This report presents LOTTE Data Communication's ESG performance and activities from January 1, 2020 to December 31, 2020. In addition, quantitative data from the last three years (January 2018 to December 2020) were used to identify trends by year. Significant management changes in the reporting period were annotated separately for the reader's reference.

Assurance

This report was assured by the Korea Management Registrar (KMR), an independent external verification agency, to ensure the reliability of the report. The international standard assurance of this report was performed in accordance with AA1000AS Type II. The Independent Assurance Statement is presented in the Appendix.



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CEO Message

We will create a more valuable future through growth and change based on 'Digital Transformation'.



Dear Esteemed Stakeholders,
I'm Jun-hyung Rho, CEO of LOTTE Data Communication.

On the occasion of publishing the LOTTE Data Communication Sustainability Report, we would like to express our deepest gratitude to our stakeholders for their trust and encouragement. The ongoing COVID-19 pandemic has changed all areas of life including culture, leisure, and education. In line with the expanding supply of COVID-19 vaccine, we are returning slowly to our daily lives, but the future world will not be a return to the pre-COVID-19 era and innovation based on digital technology will gain momentum after COVID-19.

LOTTE Data Communication has made various efforts to continue its growth in alignment with the megatrends. We have made bold investment decisions in upgrading our capabilities in existing businesses and further discovering new businesses through careful consideration of the nature of our business.

LOTTE Data Communication opened a new concept of hybrid distribution store that incorporates cutting-edge technologies such as AI Human, 3D camera, and LiDAR, further enhancing its Retail-Tech capabilities. We also laid the foundation for our future growth by adding a new business portfolio including the mobility business for autonomous driving and electric vehicle charger service, and metaverse business which has been spotlighted as another strong DT trend.

In addition to these efforts to create financial value, LOTTE Data Communication is working systematically to create non-financial values, including environment, social, and governance, to strengthen ESG management, which has gained more importance in recent times.

In the environmental field, we make efforts to reduce energy use and greenhouse gas based on three major environmental management strategies: creating a sound foundation for environmental management, upgrading environmental processes, and implementing an environmental management evaluation system. We are also striving to identify eco-friendly business models that utilize our IT capabilities.

LOTTE Data Communication has implemented regular social contribution activities with local communities, and continuously expanding its mutual growth program for win-win development with its suppliers under the slogan of 'Small Gestures Change the World.'

In terms of corporate governance, all employees are required to declare their willingness to comply with fair transaction. We have also nominated a Compliance Manager to manage our fair transaction programs in a responsible manner. Furthermore, we have established a preventive system for legal violations in order to take active lead in ethical and compliance management practices.

To manage and operate all these activities systematically, we have established the ESG committee within the BOD as a control tower for ESG management including a new ESG dedicated organization. In recognition of this company-wide effort, we obtained a Grade A in the KCGS (Korea Corporate Governance Service) ESG Evaluation, and a Grade AA in the Sustainvest ESG Evaluation.

LOTTE Data Communication will continue to internalize ESG management and prepare for a sustainable future through business innovation based on its digital technologies. We look forward to your continued interest and support for LOTTE Data Communication. Thank you.

December 2021
CEO Jun-hyung Rho

Company Profile

OVERVIEW

LOTTE Data Communication has grown into an intelligent enterprise partner that leads digital transformation and business innovation in various industries over the past 25 years since its establishment in 1996. We provide insights into retail, F&B, services, manufacturing, and logistics to customers based on cutting-edge technologies such as Cloud, AI, Big Data, IoT, and Blockchain. We are also actively investing and conducting R&D to secure business competitiveness as a 'first mover' in new future business areas such as metaverse, mobility, and healthcare.



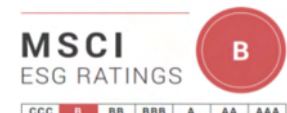
Date of Establishment	December 28, 1996	Head Office	179, Gasan digital 2-ro, Gasan-dong, Geumcheon-gu, Seoul, Korea (Gasan-dong 533-2)
CEO	Jun-hyung Rho	Date of Listing	Listed on KOSPI on July 27, 2018
Industry	Integrated IT system construction and software development	Business Area	IT outsourcing, SW development, cloud, data center, DT, smart city, security, AI, Big Data, Metaverse, Mobility, etc.

(As of 2020)

Sales KRW 849.5 billion	Operating Income KRW 38.8 billion	Profit or Loss during the Reporting Period KRW 29.9 billion
Employees 2,803 persons	Capital KRW 77 billion	Credit Rating A1

ESG HIGHLIGHTS

LOTTE Data Communication has strengthened management of non-financial impact through performance management of corporate activities such as environmental management, safety management, compliance with fair transaction practices, ethical management, and governance in line with changes in the corporate environment such as Socially Responsible Investment (SRI) and global ESG initiatives. As a result, LOTTE Data Communication obtained a Grade A in the Korea Corporate Governance Service (KCGS) ESG Evaluation, a Grade AA in the Sustainvest ESG Evaluation, and a Grade B in the ESG Evaluation conducted by Morgan Stanley Capital International (MSCI). We continue to expand investment in the environmental and social sectors, strengthen communication with various stakeholders, and establish ESG committees and organizations to reflect ESG principles in our corporate management system.

<p>Grade A in KCGS ESG Evaluation</p> <p>Korea Corporate Governance Service (KCGS) has been conducting ESG evaluations of domestic companies since 2011. In 2020, LOTTE Data Communication obtained a Grade A in the KCGS ESG Evaluation in recognition of its level in sustainability management system.</p>  <p>Rating Environment Society Governance</p>	<p>Grade AA in the Sustainvest ESG Evaluation</p> <p>Sustainvest is an institution that evaluates the ESG management performance of about 1,000 listed companies in Korea. LOTTE Data Communication was selected as an 'Excellent ESG Performance Company' with a Grade AA in the software and IT service sector and a Grade AA in financial scope.</p>  <p>ESG Information, Analytics & Investment</p>	<p>Grade B in the MSCI ESG Evaluation</p> <p>The ESG Evaluation conducted by Morgan Stanley Capital International (MSCI) of the United States assesses the ESG management performance of about 8,500 listed companies around the world every year. In 2020, LOTTE Data Communication obtained a Grade B in the MSCI ESG Evaluation.</p>  <p>MSCI ESG RATINGS</p>
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HISTORY

1996~2004 Beginning Phase

- 1996 - Established LOTTE Data Communication
- 1998 - Launched ITO (IT Outsourcing)
- 2002 - Started Groupware business
- 2004 - Merged with LOTTE Electronics

2005~2009 Development Phase

- 2005 - Received the 'Award of Excellence' at the Seoul Quality Management Convention
- 2007 - Opened the 1st data center
- 2008 - Certified as an 'Information Protection Consulting Firm'; Launched the company's security consultation business
- 2009 - Established the Vietnam branch

2010~2014 Initial Phase

- 2010 - Opened the 2nd data center; Established the Indonesia branch
- 2012 - Acquired CMMI Lv. 3 international software quality certification; Launched the company's environmental consulting business
- 2013 - Acquired 'Green data center Certification' for the UBiT Center; Registered as an 'Expert Agency for Energy Diagnostics'
- 2014 - Acquired ISO 50001 international certification for the standard energy management system

2015~2021 Value Growth Phase

- 2015 - Received the Minister of Public Safety and Security Award
- 2017 - Launched LDCC as a divided newly-established corporation; Received the 'Prime Minister's Award for Equal Employment'
- 2018 - Listed on the securities market; Received the Grand Prize at the Korea SW Enterprise Awards
- 2019 - Merged with Hyundai Information Technology
- 2020 - Promoted Self-driving Shuttles in Sejong Special Self-governing City
- 2021 - Established the ESG Committee for sustainable management, Acquired CALIVERSE specialized in Metaverse and VR

Business Portfolio

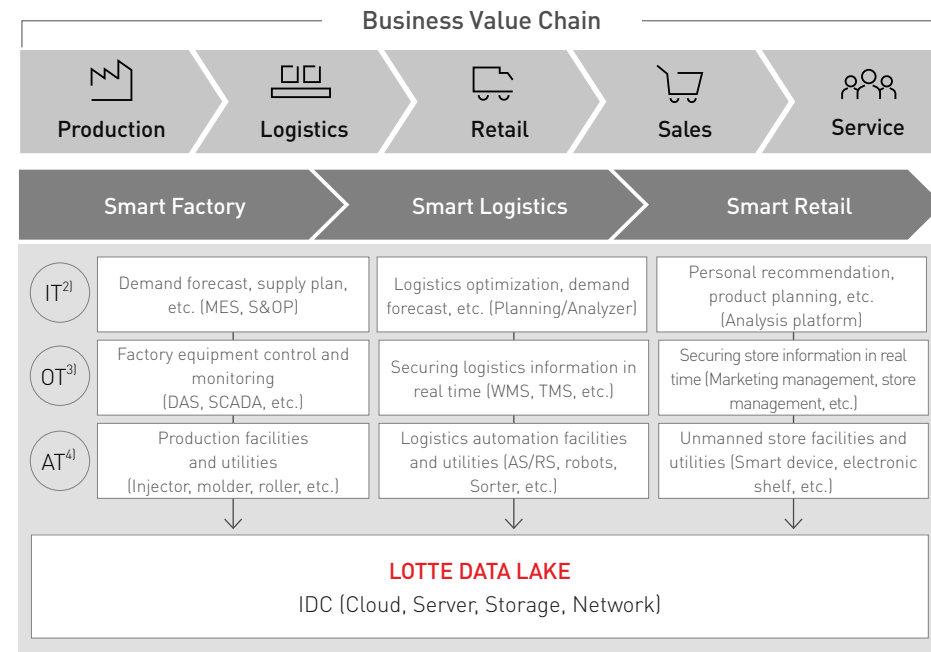
LOTTE Data Communication provides cloud-based IT services, platforms, and systems to strengthen corporate competitiveness, and offer up-to-date services based on the latest technologies such as AI, Big Data, Metaverse, and C-ITS¹⁾, Mobility.

Digital Transformation

LOTTE Data Communication leads customers' business innovation with latest digital technologies to support smart factory, smart logistics, and smart retail.

Established an Automatic Classification System on the Northern Terminal Automatic Sorting System of LOTTE Global Logistics (2020)

Established Smart Factory for the Anseong Factory of LOTTE Chilsung Beverage (2020)



1) C-ITS: Cooperative-Intelligent Transport Systems
2) IT: Information Technology
3) OT: Operation Technology
4) AT: Automation Technology

※ Detailed abbreviations can be found in 'Business for ESG Impact'

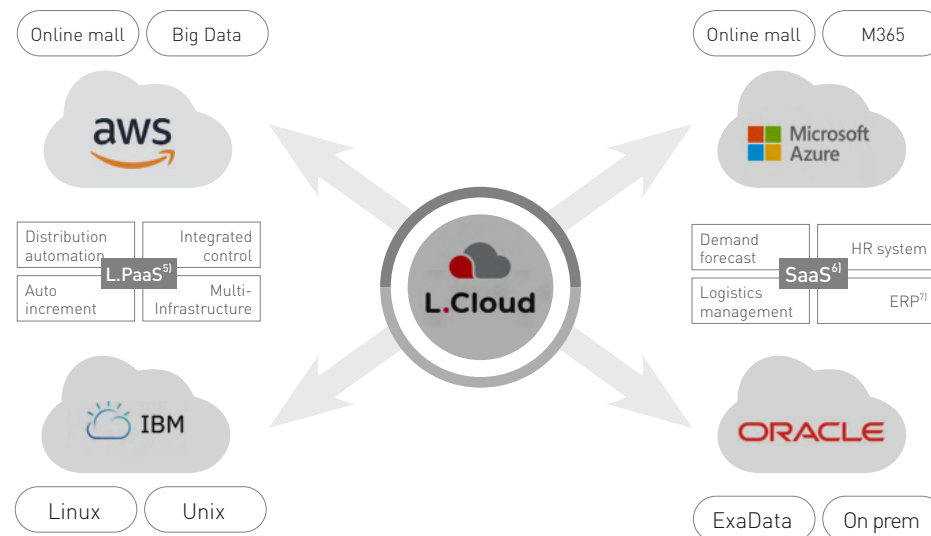
Cloud

We provide a hybrid multi-cloud environment optimized for customer business such as consulting, construction and transfer of systems, and managed services.

Established and operated an online shopping mall system for LOTTE e-Commerce and Kyobo Book Centre

Established and operated of hybrid cloud for research at Asan Medical Center in Seoul.

AWS Partner Network -Acquired 'AWS 300 CERTIFIED' (2020.12, with more than 300 AWS certificates)

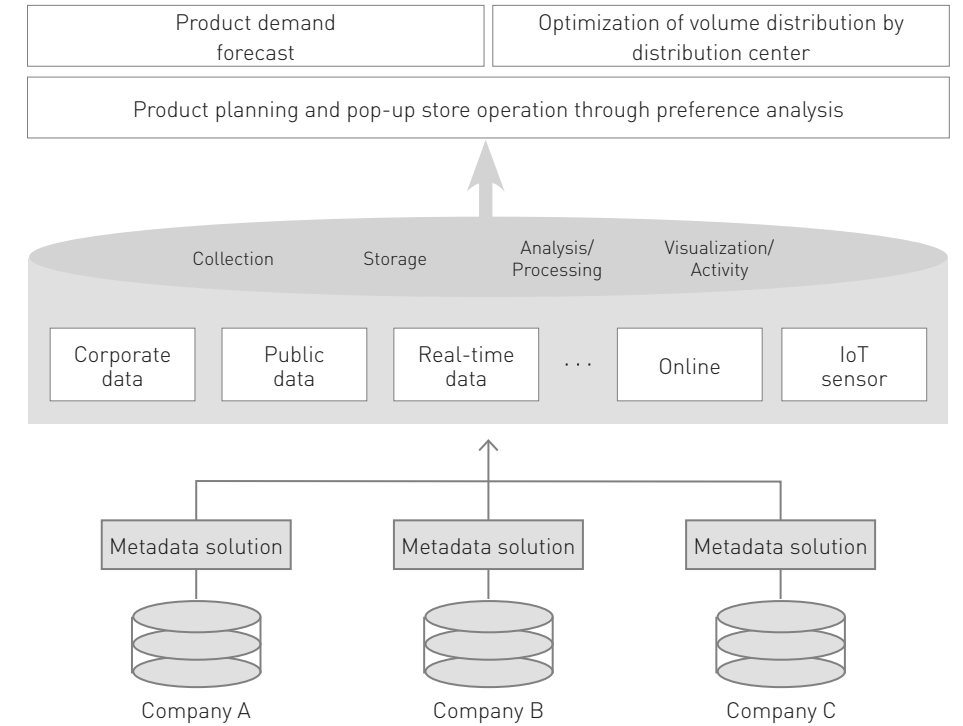
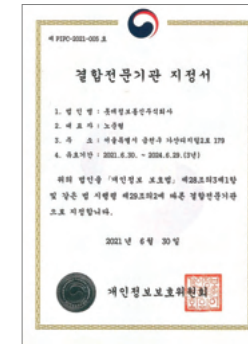


5) L.PaaS: LOTTE.Platform as a Service
6) SaaS: Software as a Service
7) ERP: Enterprise Resource Planning

Big Data

We identify new insights for the sustainable growth of companies and enhance business competitiveness through data linkage and combination.

Acquired the private data specialized agency certification designated by the Government (2021)



data centers

Data center business is expected to grow given the rapid increase in data and networks in the era of AI, Big data, and Metaverse. LOTTE Data Communication guarantees business continuity for customers based on its IT infrastructure consisting of four data centers in Korea.

Acquired the ISO 27001: Standard Certification for information protection, physical security, information access, and control management system

Acquired the ISO 20000: Standard Certification for IT Service Management

Acquired the ISO 50001: Standard Certification for Energy Management Systems

Acquired the ISMS: Information Security System Certification

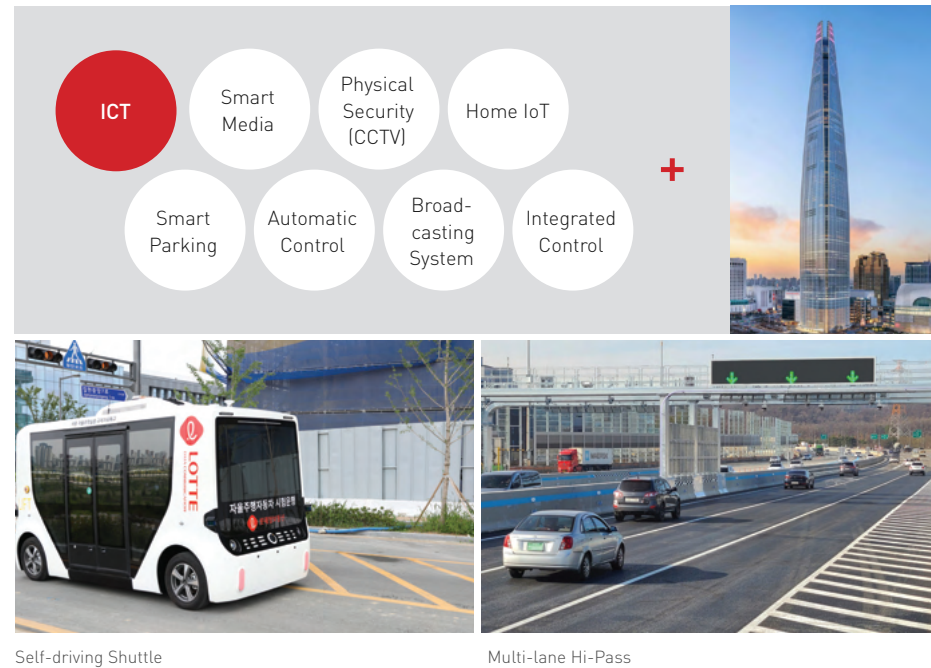


External view of data centers

Smart City

LOTTE Data Communication provides mobility (self-driving shuttle, ITS/C-ITS¹⁾, Hi-Pass, electric vehicle charging), smart building, smart safety, and digital life services, which are the key components of a Smart City system.

- Smart Mobility:** Self-driving Shuttles in Sejong Special Self-governing City, ITS for private and construction companies, Hi-Pass for the Korea Expressway Corporation, and AFC system for public transportation
- Smart Building:** LOTTE World Tower, LOTTE Center Hanoi, LOTTE Hotel L7 (Gangnam, Hongdae), Wonju U-City
- Smart Safety:** Detection of facility images and safety management
- Digital Life:** More than 130,000 smart terminals supplied to 2,000 schools nationwide.



1) C-ITS: Cooperative-Intelligent Transport Systems

Public / SI

Based on our excellent human capabilities and references, we have been implementing system building projects in various fields such as railway/transport SOC²⁾, public SI³⁾, and digital finance.

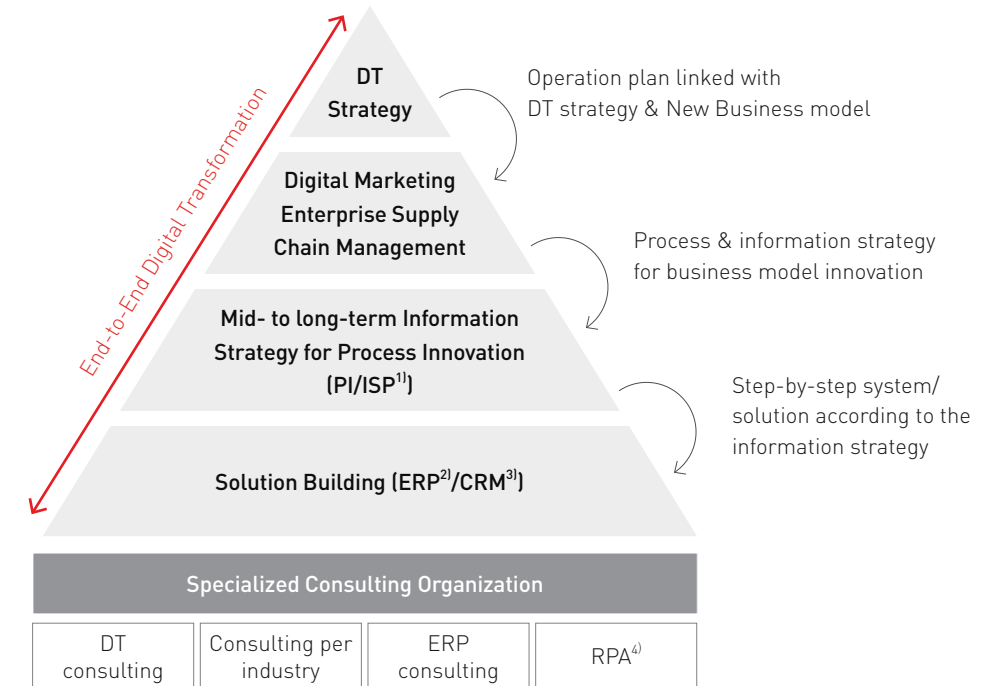
QR technology for the first urban railway station automation facility in Korea (2020)

<p>Finance Advancement of digital finance and establishment of next-generation AML⁴⁾</p>	<p>Manufacturing/Logics Implementing a global-level advanced management infrastructure environment</p>
<p>Signal Fast and safe train operation service</p>	<p>Railway AFC⁵⁾ Increased service efficiency and passenger convenience</p>
<p>Communication Support for safe operation of trains and convenience services for passengers</p>	<p>Railway MIS⁶⁾ Stable train operation, management, and service</p>

2) SOC: Social Overhead Capital
3) SI: System Integration
4) AML: Anti-Money Laundering
5) AFC: Automatic Fare Collection
6) MIS: Management Information System

Consulting

We play a leading role in customers' business innovation through end-to-end consulting services ranging from DT strategy to Process Innovation (PI) and construction of solutions.



1) ISP: Information Strategy Planning
2) ERP: Enterprise Resource Planning
3) CRM: Customer Relationship Management
4) RPA: Robotic Process Automation

Convergence Security

A group of information security experts at LOTTE Data Communication provides customized convergence security services to ensure business continuity for customers.

Comprehensive Professional Security Service certified by the Government/Institutions



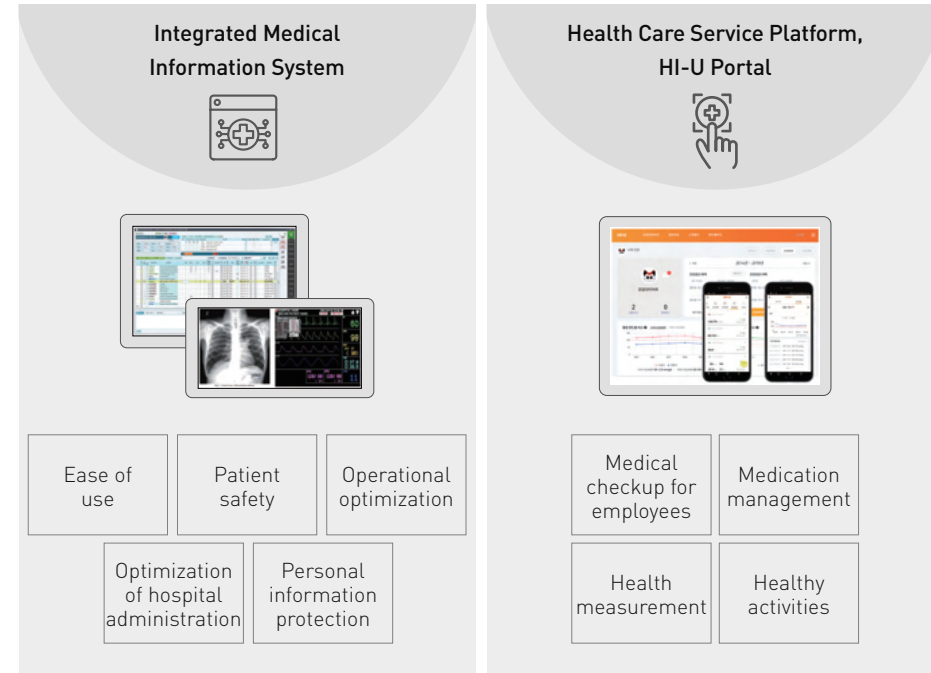
5) APT: Advanced Persistent Threats

<p>Security Consulting</p> <ul style="list-style-type: none"> Security certification consulting Weakness diagnosis and mock hacking Comprehensive information protection consulting IoT security consulting 	<p>Security Solution</p> <ul style="list-style-type: none"> Consignment management on personal information Visitor management Anti-ransomware Whitelist-based vaccine Endpoint security solution 	<p>Security SI</p> <ul style="list-style-type: none"> Advanced financial/public/medical security Security IT infrastructure design Integrated information leakage prevention system Physical security 	<p>Security Control</p> <ul style="list-style-type: none"> Integrated security control Control platform Cloud security control APT⁵⁾ response control 	<p>Cloud Security</p> <ul style="list-style-type: none"> Cloud security consulting Cloud security development Cloud security operation
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Healthcare

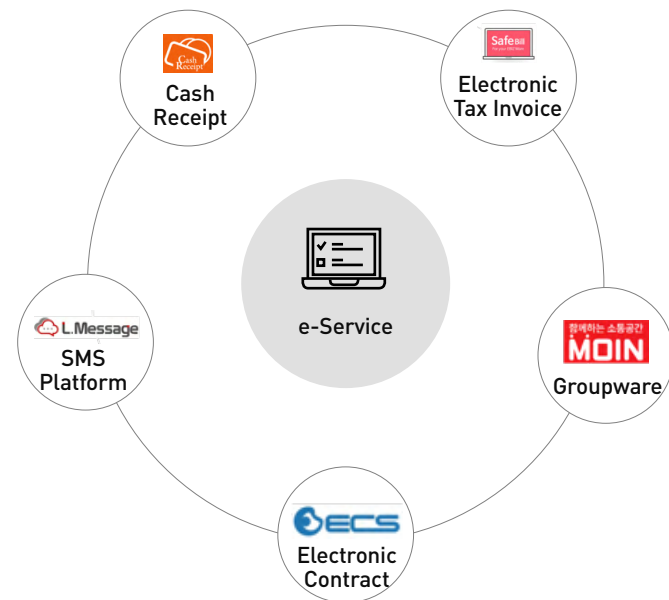
We support hospitals to provide the best medical services based on specialized in-hospital platforms for each hospital and an out-of-hospital platform that manages users' health.

National Certification for Electronic Medical Records (2021, Ministry of Health and Welfare)



e-Service

We assist clients to maximize work productivity and efficiency through various online business support solutions and digital workplaces.



ITO (IT Outsourcing)

We provide optimized services for the entire IT process, from IT outsourcing consulting to design, construction, management, and maintenance of the solutions.



Internal view of data center

New Business Development

We are continually striving to identify new business models such as metaverse, mobility, and smart healthcare for our sustainable growth.

Korea's first temporary license for self-driving shuttles without a driver's seat

Driving automation level 4 defined by the Society of Automotive Engineers [SAE]

1) C-ITS: Cooperative Intelligent Transport Systems



Metaverse
LOTTE Data

Communication has acquired Caliverse, a company specializing in metaverse to provide differentiated videos and metaverse platforms based on the world's best realistic content that combines the real with the virtual.



Mobility
LOTTE Data

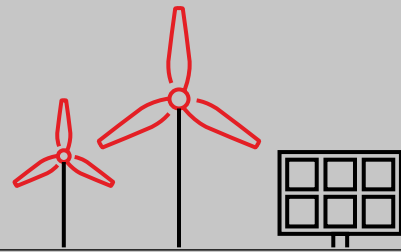
Communication is working to expand the total mobility business by internalizing core technologies for autonomous driving, infrastructure, and electric vehicle charging. We have obtained a temporary license to operate self-driving shuttles without a driver's seat in Korea, and are managing multi-lane Hi-Pass operation and C-ITS¹⁾ business in 170 locations in Korea.



Smart Healthcare
LOTTE Data

Communication provides customized solutions by utilizing patients' medical records and clinical big data. In addition, we provide a comprehensive smart healthcare service with medical solutions and health care platforms.

Key Performances



E ENVIRONMENT

1,658TJ
Energy Consumption

1.58
Data center PUE

166tons
Amount of Discharged Waste

95,587tons
Water Usage

0.095tons
Exhaust Gas Emissions

1,818.6tCO₂eq
GHG Reduction

S SOCIAL

45%
Ratio of New Female Employees

2,863persons
Human Rights Education Participants

1,304hours
Volunteer Hours

Acquired ISMS and ISO 27001

0case
Violations of Information Security

85/100 points
Customer Satisfaction

G GOVERNANCE

100%
Ratio of ethical/compliance management education completed

ESG Committee Established

KRW 12 billion
Shared Growth Funds

Obtained Grade A for governance in the KCGS ESG Evaluation (2020)

Commitments

LOTTE Data Communication has introduced various measures to strengthen communication and cooperation with various stakeholders for sustainable growth. As a responsible corporate of society, we will continue our contributions to ESG value through various activities and strive to create a valuable future.

20 Sustainability Management Strategies

22 COVID-19 Response

25 Stakeholder Communication

26 Materiality Assessment

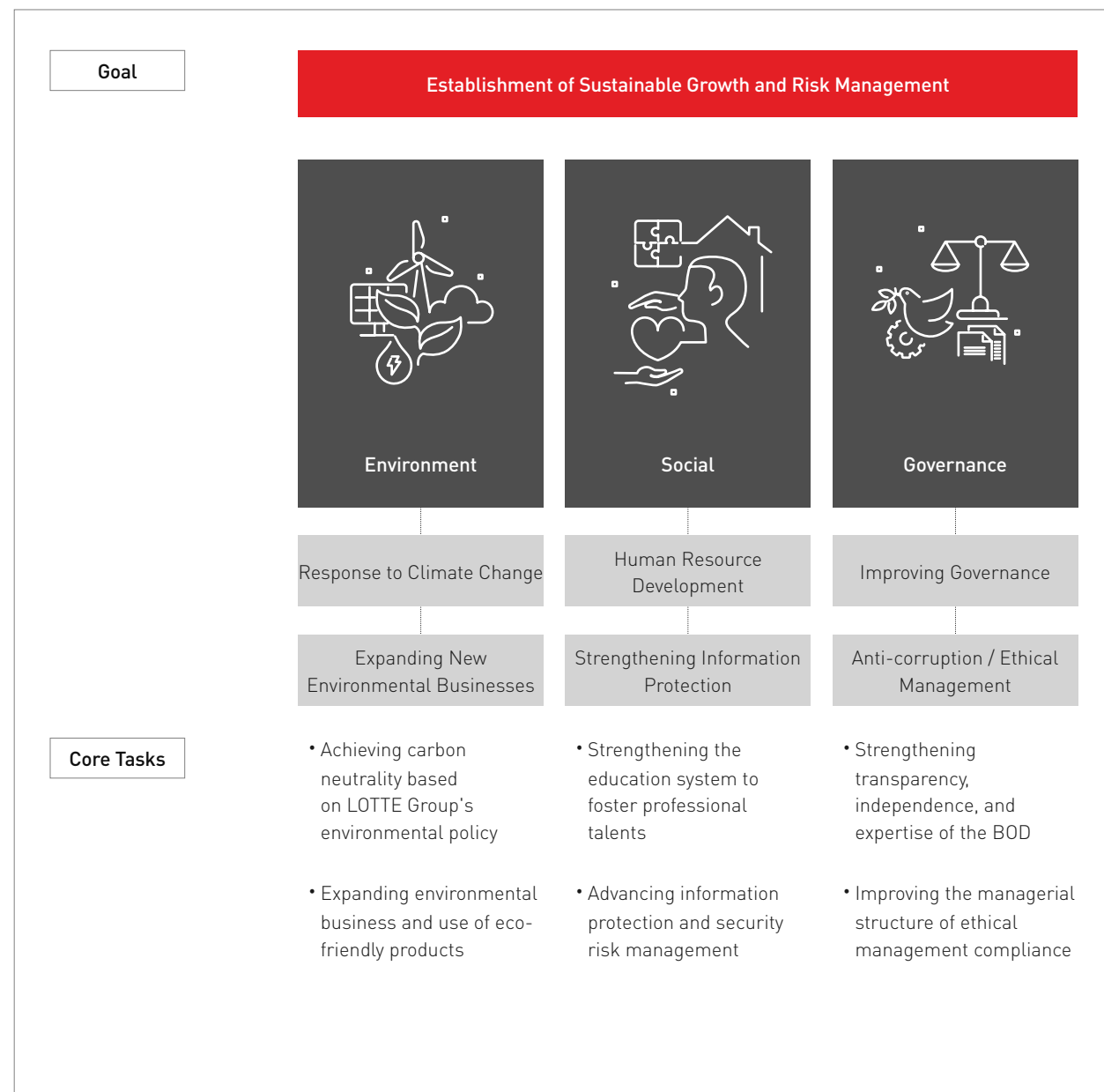
28 UN SDGs Activities

Sustainability Management Strategies

LOTTE Data Communication operates an ESG management system to establish a sustainable governance and promote environmental and social values. We are developing a sustainable corporate growth and integrated risk management system by establishing and implementing ESG strategic tasks systematically.

Sustainability Management Plan and Goals

LOTTE Data Communication contributes to society by developing, applying, and expanding IT technologies that solve various social problems facing our society, promotes the creation of positive social values, and continues to work with various stakeholders such as suppliers, customers, and local communities while expanding sustainable business.



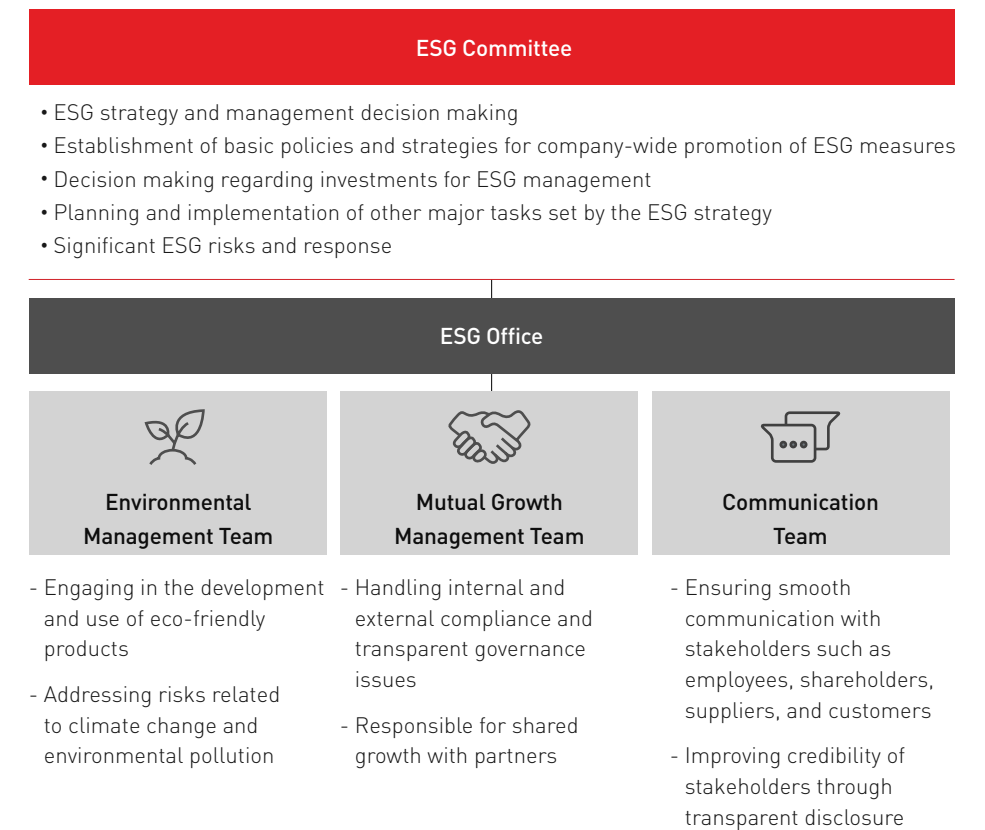
LOTTE Data Communication continues to improve its environmental management system in line with the LOTTE Group 2040 Carbon Neutrality Declaration, activating eco-friendly clean technology business, and reducing greenhouse gas emissions to respond to climate change as well as to achieve carbon neutrality. In addition to managing the environmental and social impacts of our business, LOTTE Data Communication plans to establish a transparent and fair corporate governance system. We will expand ESG management to enhance corporate value and become a respected company in society by achieving our comprehensive ESG vision and sectoral goals of environment, society, and governance.

Sustainability Management System

In 2021, LOTTE Data Communication introduced a sustainability management system. The ESG Committee was established as a sub-committee under the Board of Directors in July 2021 to ensure better decision-making and a firm system promoting ESG management. Furthermore, the ESG Office was established directly under the CEO to strengthen the company-wide ESG capability.

The ESG Office supports the activities of the ESG Committee and is responsible for setting strategies and goals, monitoring performance, and communicating with stakeholders. It also promotes the sustainability management activities of departments in charge of environmental management, human capital management, labor management, information security, supply chain management, and anti-corruption measures, and supports integration of ESG activities into the existing management system.

ESG governance

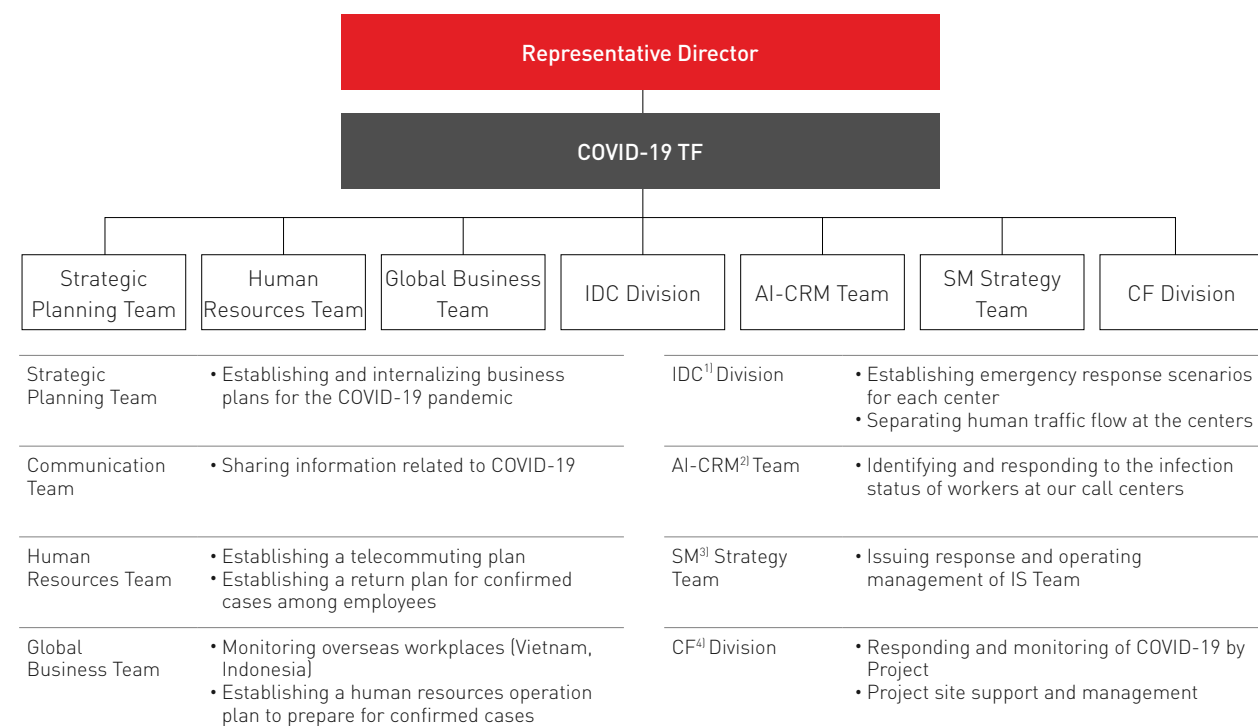


COVID-19 Response

COVID-19 Response Organization

LOTTE Data Communication has established a company-wide response and management system to prevent the spread of COVID-19 to protect our employees. In addition, we manage and support confirmed cases to participate in social efforts to respond to the COVID-19 pandemic crisis. COVID-19 TF has established and operated specific internal guidelines to create safe working conditions for employees and respond to the demands presented by external stakeholders such as the Government. In addition, the TF is engaged in collaboration among internal organizations and actively takes necessary step-by-step quarantine measures to respond more effectively and immediately to close contacts when a confirmed case of COVID-19 occurs at our workplaces.

Emergency Response Organization



1) IDC: Internet data center 2) AI-CRM: AI-Customer Relationship Management 3) SM: System Management 4) CF: Cross Function

COVID-19 Confirmed Case Response Process



Protection of Employees

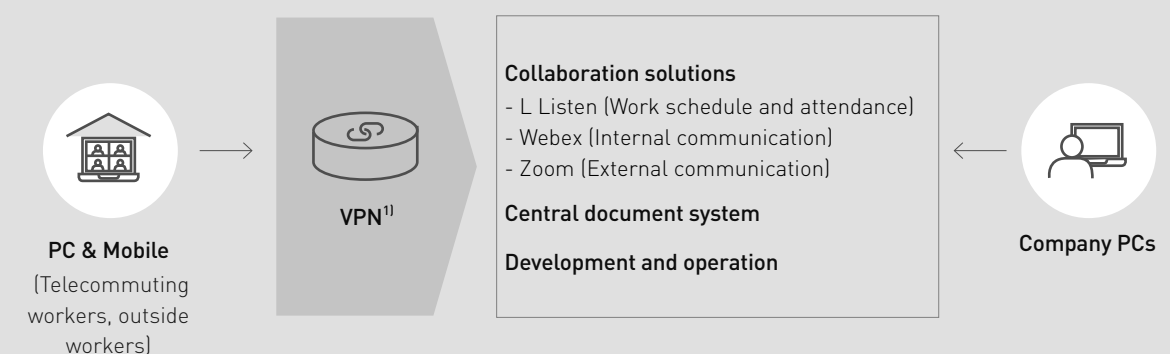
LOTTE Data Communication provided video conferencing and telecommuting working environment to protect employees from COVID-19. In addition, we have created a COVID-19 responsive work environment with screens, masks, and disinfectants for each seat used by in-house workers.

Key Measures for COVID-19 Response

- | | |
|--|---|
| Emergency Response System | <ul style="list-style-type: none"> Building an emergency response system for COVID-19 Real-time sharing system of COVID-19 status and measures (SMS, e-mail alert system) |
| Infection Prevention Activities | <p>Restrictions on the use of large meeting spaces</p> <ul style="list-style-type: none"> Distributing guidelines for in-house events and meeting rooms Restrictions on participation in large seminars and events <p>Workplace quarantine</p> <ul style="list-style-type: none"> When a confirmed case or contact occurs, the office is closed and disinfected. Checking employees' temperature and visitors restriction Temperature measurement with thermal imaging cameras displayed in each workplace Restriction of visitors if necessary |
| Support for Disinfection | <ul style="list-style-type: none"> Disinfection kits for employees Hand sanitizers in all office Support for medical expense of close contacts |

IT Infrastructure Support for Telecommuting

Since June 2020, LOTTE Data Communication has been implementing rotational telecommuting system per department to prevent the spread of COVID-19, and secure work continuity by creating the same working environment as in-house and via supporting various IT solutions for smooth collaboration among employees.



1) VPN: Virtual Private Network

Support for Partners

LOTTE Data Communication provided about 90 partners with KF94 masks, thermometers, sterilizers, foam boards, and health foods.

Supporting supplies to partners to respond to COVID-19



Disinfection at project sites



Foam board at project sites



Supporting supplies



Hand sanitizers

Stakeholder Communication

LOTTE Data Communication pursues sustainable management with various stakeholders including customers, employees, suppliers, investors and local communities. We operate various communication channels to interact with stakeholders on a regular basis. LOTTE Data Communication will continue to expand communication with stakeholders through active communication activities.

Stakeholders	Key Issues	Communication Channels	Major Activities
 Employees	<ul style="list-style-type: none"> - Work-life balance - Fair performance evaluation - Health and safety 	<ul style="list-style-type: none"> - Intranet - Anonymous suggestion channel (Maum Talk-Talk) - Employee surveys (Anonymous/Open) - In-house social media (Blog) - GWP¹⁾ Wannabe - GWP Live Message - Culture-Rise campaign - Reporting Center on the website 	<ul style="list-style-type: none"> - Performance evaluation system - Employee welfare and benefit systems - Employee empowerment programs - Creating a safe workplace and working environment
 Customers	<ul style="list-style-type: none"> - Safe and competitive services - Service quality - Protection of personal information 	<ul style="list-style-type: none"> - Customer inquiry on the website - Customer center (Phone) - SNS (YouTube) - Customer satisfaction survey 	<ul style="list-style-type: none"> - Organization dedicated to customer satisfaction - Securing competitiveness of services
 Suppliers	<ul style="list-style-type: none"> - Shared growth - Establishing a fair partnership - Supplier communications 	<ul style="list-style-type: none"> - Shared growth website - SNS channel for suppliers 	<ul style="list-style-type: none"> - Fair transaction culture - Fair transaction agreement with supplier companies - Shared growth program
 Shareholders & Investors	<ul style="list-style-type: none"> - Economic performance - Risk management - Stable governance 	<ul style="list-style-type: none"> - General shareholders' meetings - Performance briefing - NDR²⁾, Corporate Day - Disclosure of quarterly and half-yearly business performance data 	<ul style="list-style-type: none"> - Disclosure of financial performance through business reports - Enhancing corporate value through new business, collaboration, and investment
 Local Communities	<ul style="list-style-type: none"> - Contribution to local community development - Creating social values 	<ul style="list-style-type: none"> - CharLOTTE Volunteer Group - IT Supporters - Support for disabled athletes 	<ul style="list-style-type: none"> - Social contribution - Creating a transparent donation culture
 Government	<ul style="list-style-type: none"> - Compliance with environmental and safety laws - Public Private Partnership 	<ul style="list-style-type: none"> - Communication between the Government and public authorities 	<ul style="list-style-type: none"> - Cooperation with the Government and public authorities - Cooperation in technology Research & Development such as automated driving and eco-friendly products

1) GWP: Great Work Place 2) NDR: Non-Deal Roadshow

Materiality Assessment

LOTTE Data Communication conducted a materiality assessment to identify the sustainability management issues across the economy, environment, and society, and to meet the major interest of stakeholders throughout its sustainability management activities. In 2021, a pool of issues was summarized based on ESG initiatives and global sustainability management standards. LOTTE Data Communication conducted materiality assessment on key issues considering benchmarking in the same industry and results of internal and external surveys. We selected key issues from interests of stakeholders and organized the contents of the report with related information. LOTTE Data Communication will identify and manage sustainability issues by conducting a materiality assessment on a regular basis. We will also continue to communicate with stakeholders by disclosing these activities transparently through sustainability reports.

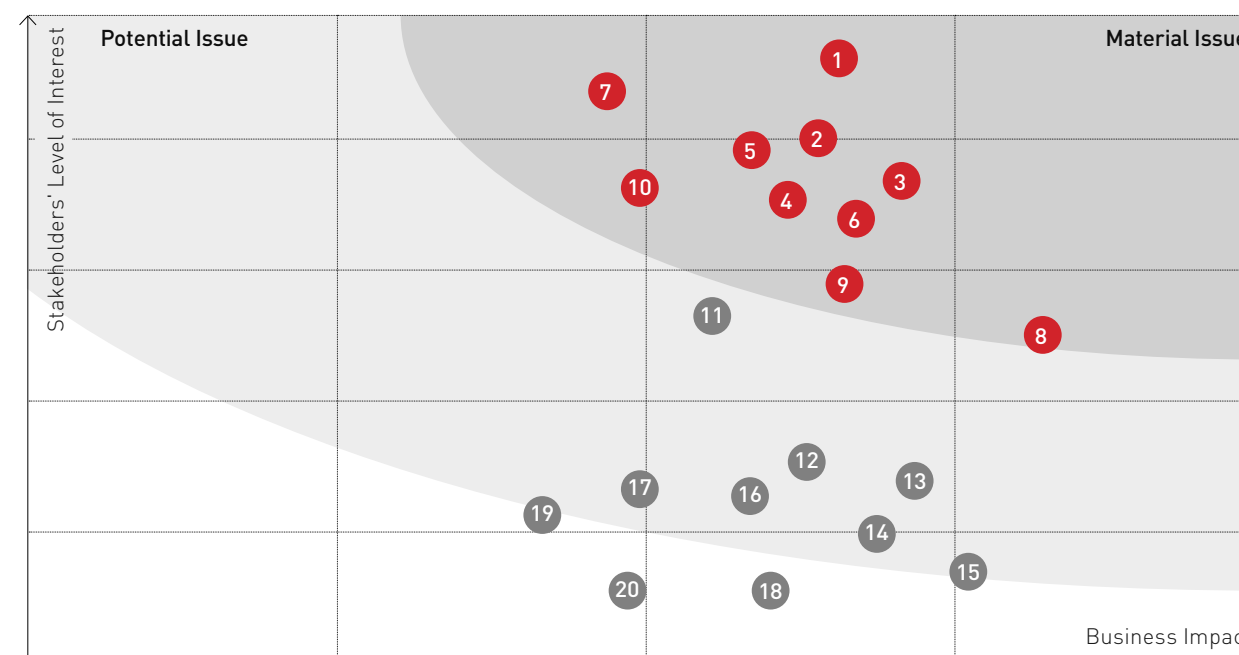
Materiality Assessment Process

Step 1. Identification	Step 2. Prioritization	Step 3. Validation
Identification of Issue Pool LOTTE Data Communication identified 37 ESG issues by analyzing the key points required by international standards and sustainable management trends.	Analyzing the Internal and External Environment - Analyzing international standards: Global standards and evaluation factors such as GRI Standards, UNSDGs, ISO 26000, and SASB - Analyzing industry peer reports: Key issues discussed by domestic and foreign industries in their Sustainability Reports - Analyzing media reports: A total of 1,158 articles related to environmental-economic-social performance and issues in 15 domestic daily newspapers, 36 Internet newspapers (analysis period: January 1, 2019 – August 26, 2021) - Stakeholder Survey: Assessment of stakeholder impact and business impact from issues by analyzing ESG interests and collecting opinions from 209 employees, customers, partners, local communities, media, shareholders/investment institutions, etc.	Selection of Key Issues The materiality assessment matrix was created in accordance with stakeholder concerns and business impact. 20 material issues are discussed in this report.

Materiality Assessment Results

Material Issue	Ranking			Key Stakeholder Impacted by the Topic					
	Total Ranking	Stakeholders' Level of Interest	Business Impact	Customers	Shareholders and Investors	Local Communities	Employees	Partners	Governments
New business growth and climate change governance	1	1	6	●	●			●	●
Employment and work-life balance	2	3	3				●		
Career development	3	3	10		●		●		
Social contribution	4	6	11			●			●
Diversity and equal opportunity	5	3	13	●					●
Workplace safety and health	6	8	8			●	●	●	
Business development and expansion, social economy contribution	7	2	19		●	●			
Customers' personal information management, data privacy protection	8	11	1	●	●			●	●
Sustainable management system	9	9	7	●	●	●	●	●	●
Climate change response governance system, PUE management, use of renewable energy	10	7	16	●	●	●	●	●	●

Materiality Assessment Matrix








Ranking	Category	Material Issue	Report Pages	Related GRI
1	Economy	New business growth and climate change governance	34-45, 54-57	201, 305
2	Society	Employment and work-life balance	63-64, 66-69	401
3	Society	Career development	64-65	404
4	Society	Social contribution	87-89	413
5	Society	Diversity and equal opportunity	61-62	405
6	Society	Workplace safety and health	71-74	403
7	Economy	Business development and expansion, social economy contribution	8-15	-
8	Society	Customers' personal information management, data privacy protection	79-81	418
9	Governance	Sustainable management system	20-21	102-19, 27, 29, 32
10	Environment	Climate change response governance system, PUE management, use of renewable energy	42-45, 48-51, 54-57	302, 305
11	Governance	BOD Organization and communication, shareholders rights protection, BOD and Committees	92-94	102-18, 22, 23, 24
12	Society	Human rights protection	60-62	412
13	Governance	Stakeholder participation and communication in sustainability issues	25-27	102-40, 42, 43, 44
14	Society	Fair performance evaluation and compensation system	66	404-3
15	Economy	Unfair practices and anti-corruption activities	84-86, 98-99	205, 206
16	Society	Labor-management relations	68-70	102-8
17	Environment	GHG emissions reduction and monitoring	54-57	305
18	Economy	Advanced climate change risk management system	54-57, 101	-
19	Environment	Waste recycling and circular economy transition	53	306
20	Environment	Eco-friendly products and services development	32-45	-

UN SDGs Activities

The Sustainable Development Goals (SDGs) set by the United Nations constitute a common goal for mankind that consists of 17 goals and 169 targets addressing environmental, social, and economic problems for the international community to solve by 2030. The SDGs pursue “No One Left Behind” as its common principle which recognizes the importance of the role corporate entities are required to play in order to achieve the ultimate goal of a healthier and better life for mankind. LOTTE Data Communication aims to create sustainable value through business and is promoting various activities by connecting its direction of sustainable management with the Sustainable Development Goals (SDGs).

LOTTE Data Communication’s UN SDGs Activities

Environment LOTTE Data Communication creates a sustainable business model that responds to climate change.			
	SDG 6. Ensure availability and sustainable management of water and sanitation for all	6.4. Improve water quality by reducing pollution, eliminating dumping, and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	LOTTE Data Communication is working to promote the efficient use of water in data centers to respond to the water shortage crisis caused by climate change. Water use has increased temporarily due to the recent increase in power efficiency. We plan to recycle rainwater to improve the efficiency of water use and reduce water consumption.
	SDG 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.3 Double the improvement in energy efficiency	LOTTE Data Communication has established the LOTTE Environmental & Energy Total Solution (LETS) to measure and manage company-wide greenhouse gas emissions. In addition, data center Infra Management System (DCIM) has been established, operated and managed to control the energy consumption of the infrastructure.
	SDG 12. Ensure sustainable consumption and production patterns	12.5. Substantially reduce waste generation through prevention, reduction, recycling and reuse	LOTTE Data Communication monitors and manages all processes of waste discharge, transportation, treatment and disposal through vendors responsible for treating wastes. In addition, we are working to reduce disposable products and increase the recycling rate to reduce the amount of waste generated due to COVID-19.
	SDG 13. Take urgent action to combat climate change and its impacts	13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	LOTTE Data Communication has established a group-level 2040 Carbon Neutral Targets to pursue international and national cooperation in responding to climate change. In addition, we continue to expand and implement environmental education for all employees.
	SDG 9. Innovation and infrastructure	9.4. Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes	LOTTE Data Communication aims to make eco-friendly data centers. We are operating a system for managing and reducing energy use, and have introduced a free cooling system for efficiency improvement and energy reduction.

Social LOTTE Data Communication strives for mutual growth.			
	SDG 1. Ending all types of poverty in all countries	1.4. Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including micro-finance.	LOTTE Data Communication has organized IT Supporters to conduct various IT-related volunteer activities. IT Supporters provide coding education for the underprivileged, IT employment and career counseling for teenagers, so that vulnerable children and youngsters can benefit from IT services.
	SDG 3. Good health and well-being	3.3. By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.	LOTTE Data Communication has established and operated a company-wide response system to protect employees from COVID-19. We strive to ensure employees' health and safety by allowing infected employees and close contacts to work from home, and by disinfecting facilities on a regular basis.
	SDG 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.4. By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship 4.7. Ensure that all learners acquire the knowledge and skills needed to promote sustainable development	LOTTE Data Communication provides relevant job and core technology training so that its employees can continue to strengthen their capabilities. In addition, we support the life cycle design of our employees through the certification support system and a support program for prospective retirees. LOTTE Data Communication provides 'anti-workplace bullying and anti-sexual harassment education' for all employees on a frequent basis in order to raise their awareness of human rights and to practice mutual respect. We strive to ensure healthy and safe work lives for our employees through trainings.
	SDG 5. Achieve gender equality and empower all women and girls	5.5. Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making	LOTTE Data Communication is implementing various policies to prevent gender discrimination in all areas including employment, promotion, evaluation, and welfare. In 2017, we received the Prime Minister's Award for 'Excellent Company based on the Equal Employment Opportunity Law' and achieved to 45% of newly hired female employees in 2020.
	SDG 8. Foster sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.2. Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	LOTTE Data Communication is continuously expanding its business based on the core technologies of the 4th Industrial Revolution, such as AI, big data, cloud, block chain, chatbot, mobile, and IoT.
Governance LOTTE Data Communication aims for a sound governance and fair and ethical management system.			
	SDG 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	16.5. Substantially reduce corruption and bribery in all their forms 16.6. Develop effective, accountable and transparent institutions at all levels	LOTTE Data Communication operates an online trouble shooting page to link with an internal corruption reporting channel, and operates a stakeholder reporting system to receive reports on any conflicts of interest. In addition, annual training is provided to all employees, and a responsible department is designated to provide advice on corruption inquiries. LOTTE Data Communication is striving to comply with the Fair Trade Act and foster a fair transaction culture by means of our Compliance Program (CP). We operate a subcontract deliberation committee to review RFPs and contracts in advance to prevent disadvantages to suppliers.

Business for ESG Impact

LOTTE Data Communication aims to create sustainable value through digital technology and meet various expectations from our society.

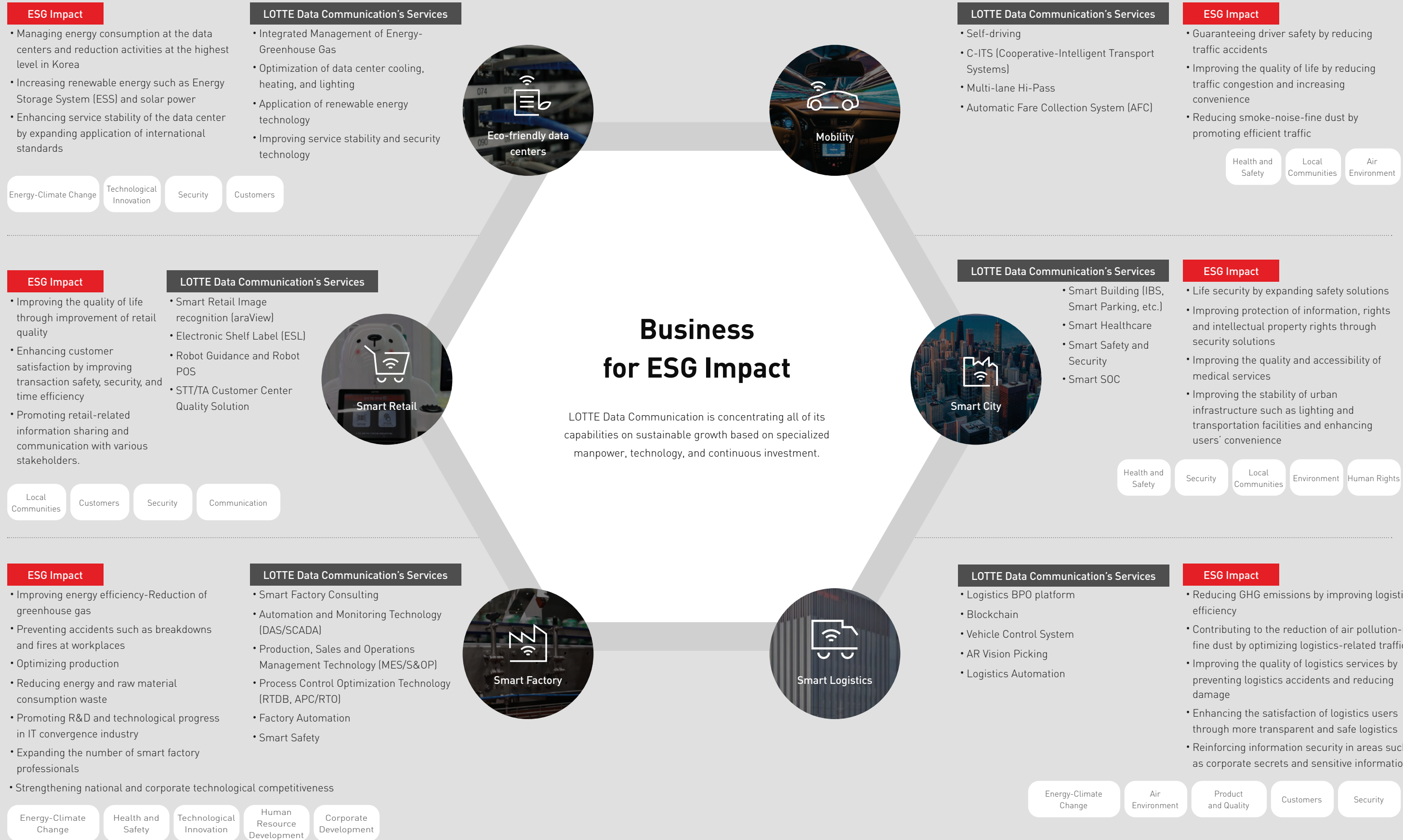
To this end, we are developing activities to expand eco-friendly data centers and create convenient and safe mobility and city life.



34 Highlight 1: Digital Transformation

38 Highlight 2: Smart City & Mobility

42 Highlight 3: Eco-friendly data centers



HIGHLIGHT 01

Digital Transformation

LOTTE Data Communication is an intelligent enterprise that pursues innovation of its corporate business relentlessly by adding the latest digital technology to the value chain from production to sales. These efforts have allowed us to improve productivity in a rapidly changing business environment, while providing integrated solutions for customers to continue to grow. In addition, we continue to implement sustainable business activities such as reducing greenhouse gases by improving the energy efficiency of our factories and distribution centers, and preventing workplace accidents such as breakdowns and fires.

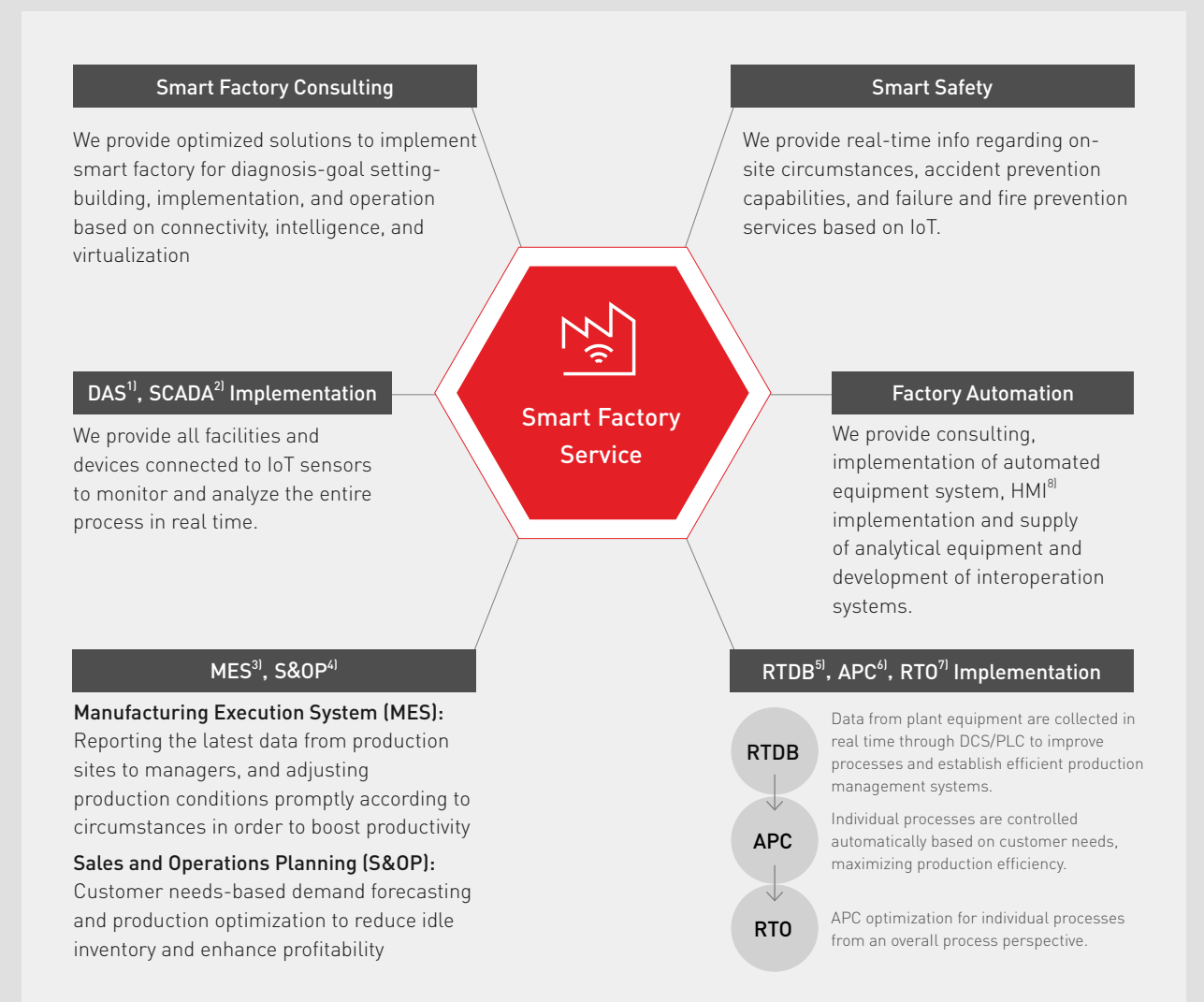


Smart Factory

LOTTE Data Communication provides optimized solutions for each value chain (R&D-purchase-production-shipment-factory management) pertaining to manufacturing plants. Our smart factory technologies such as facility automation, DAS, SCADA, MES, S&OP have facilitated innovation in all areas of factory automation. Customers have been able to improve inventory optimization and factory productivity by dramatically improving the accuracy of demand forecast, overall facility efficiency, and maintenance costs through LOTTE Data Communication's Smart Factory services.



Smart Factory Site



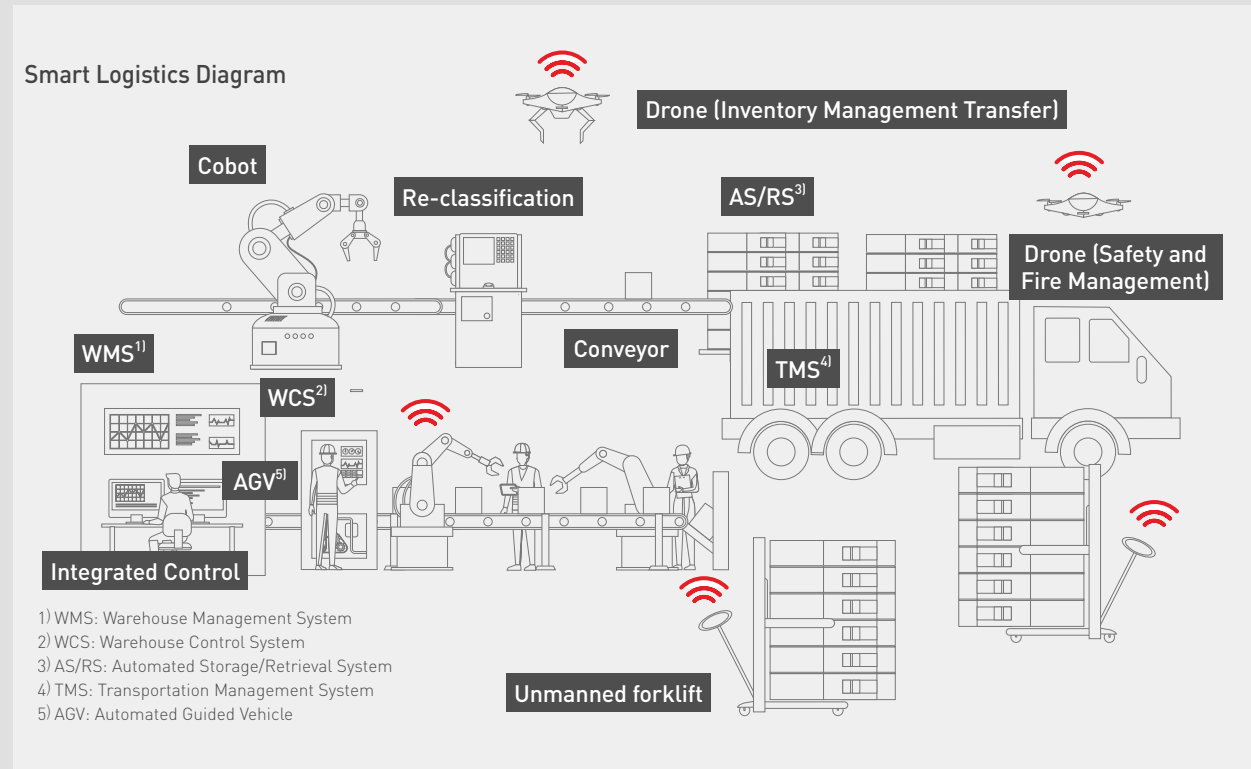
1) DAS: Data Acquisition System
 2) SCADA: Supervisory Control and Data Acquisition
 3) MES: Manufacturing Execution System
 4) S&OP: Sales and Operations Planning
 5) RTDB: Real-Time Database
 6) APC: Advanced Process Control
 7) RTO: Real-Time Optimization
 8) HMI: Human-Machine Interface

Smart Logistics

LOTTE Data Communication is leading the digitalization of logistics by securing advanced technologies in all areas of logistics, from consulting for logistics automation to design, control, and facility manufacturing. In March 2021, a delivery fare inspection system was developed with our AI technology for the first time in South Korea and has been applied to 9 logistics terminals, dramatically reducing logistics costs for the customers. In April 2021, we made an investment in JNDK, a company with logistics facilities and control solutions to innovate the logistics sector while strengthening our corporate competitiveness in the facility automation sector.



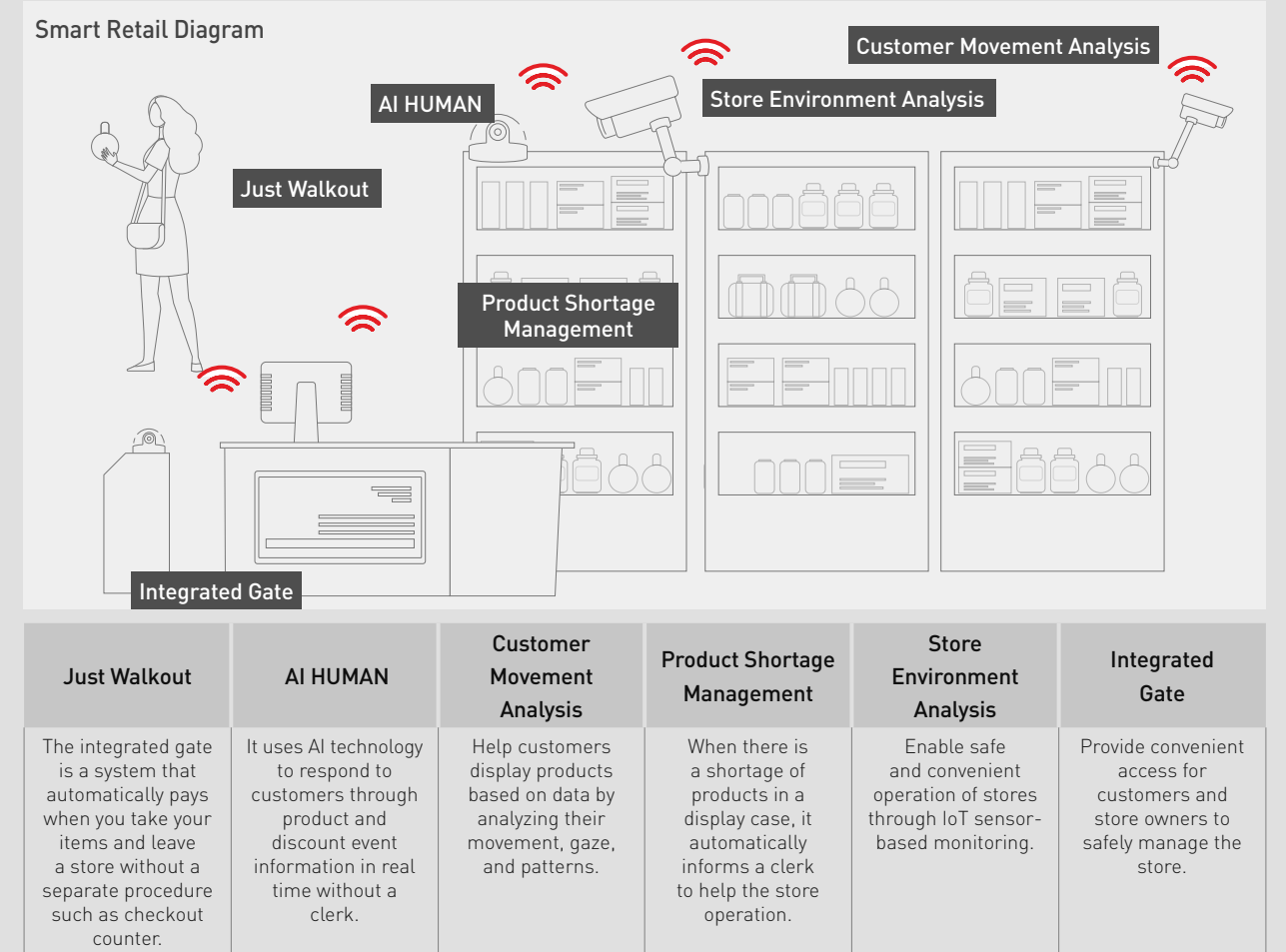
Smart Logistics Site



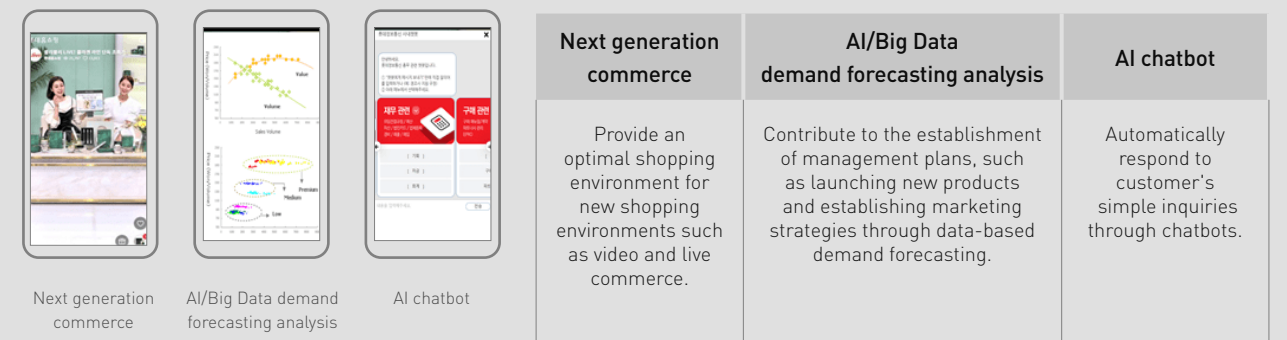
Logistics BPO Platform	Logistics Automation Facility	Blockchain History Management	Vehicle Control System	AR Vision Picking
Data-based decision-making systems to easily reduce the customer's supply network management burden. Platform-based management minimizes the response time of new logistics consignees and enables efficient management through data standardization.	Provide all the process of facility automation such as consulting, design, control, facility construction, information system, integrated control, and operational maintenance.	Provide reliable production, processing, and distribution of information by blocking data forgery and alteration using IoT technology and blockchain technology in the distribution process from producers to consumers.	Support efficient operation with services such as transportation management, fares calculation, statistics, accident prevention, cloud-based service, and experience-based optimal route suggestion in the overall product transportation.	Smart Glasses enable a paperless environment for overall logistics such as product location, order volume, position tracking and management of receipt/release.

Smart Retail

LOTTE Data Communication is leading the market for cutting-edge IT convergence technology in the distribution sector by expanding the development and application of Korea's best Retail-Technology. We are leading the innovation of customer experience by developing next-generation commerce, AI/Big Data based demand forecasting analysis, and AI chatbot, and building an integrated data analysis platform for multi-retail channels through the transformation of offline stores to smart stores.



Digital Retail Platform



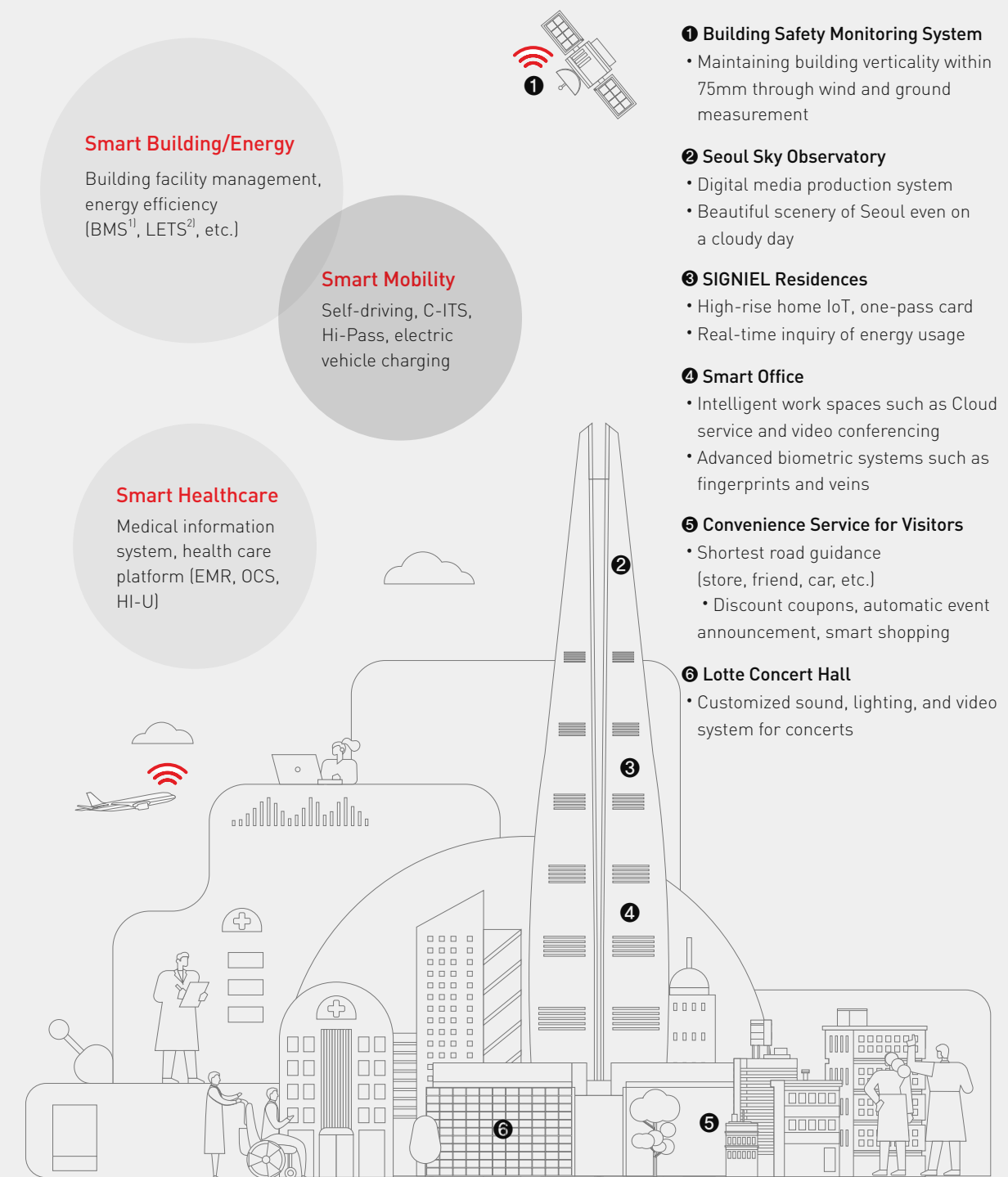
HIGHLIGHT 02

Smart City & Mobility

LOTTE Data Communication provides services that enable citizens to pursue convenient and pleasant lives by improving efficiencies in transportation, environment, buildings, and medical care in urban life.



Designing smart cities for the betterment of customers' lives



Smart Building/Energy

Building facility management, energy efficiency (BMS¹⁾, LETS²⁾, etc.)

Smart Mobility

Self-driving, C-ITS, Hi-Pass, electric vehicle charging

Smart Healthcare

Medical information system, health care platform (EMR, OCS, HI-U)

Cutting-edge IoT-based System at the LOTTE World Tower

- 1 Building Safety Monitoring System**
 - Maintaining building verticality within 75mm through wind and ground measurement
- 2 Seoul Sky Observatory**
 - Digital media production system
 - Beautiful scenery of Seoul even on a cloudy day
- 3 SIGNIEL Residences**
 - High-rise home IoT, one-pass card
 - Real-time inquiry of energy usage
- 4 Smart Office**
 - Intelligent work spaces such as Cloud service and video conferencing
 - Advanced biometric systems such as fingerprints and veins
- 5 Convenience Service for Visitors**
 - Shortest road guidance (store, friend, car, etc.)
 - Discount coupons, automatic event announcement, smart shopping
- 6 Lotte Concert Hall**
 - Customized sound, lighting, and video system for concerts

1) BMS: Building Management System
2) LETS: LOTTE Environmental & Energy Total Solution



LOTTE Center Hanoi

- 1) IBS: Intelligent Building System
- 2) C-ITS: Cooperative-Intelligent Transport Systems

Smart Building/Energy

LOTTE Data Communication further developed the know-how on the automation system technology applied to high-rise buildings by establishing the IBS¹⁾ system at the LOTTE World Tower, the tallest building in Korea, and the LOTTE Center Hanoi, one of the major landmarks in Vietnam. LOTTE World Tower is equipped with IoT and eco-friendly technologies offered by the LOTTE Data Communication to adjust lighting, heating and cooling, temperature and humidity of all spaces automatically. Various safety systems to prevent fire and theft can be integrated based on IT systems. In addition, a tower parking operation and control solution provides a one-stop parking management service for the entire process from entry/exit to payment.

Smart Mobility

LOTTE Data Communication is securing industry-leading technologies and quickly expanding related services to respond to the rapid changes in the transportation and mobility industries, such as C-ITS²⁾, autonomous driving, and eco-friendly vehicles. We are currently engaged in a project to commercialize and adapt our system to the C-ITS applied to the national transportation network: Incheon Bridge, Second Access Road, Busan New Port, and the Second Gyeongin Expressway. LOTTE Data Communication's multi-lane Hi-Pass system provides a seamless traffic data collection service through stable collection of fares and redundant control unit structures with 99.9% accuracy, the highest level in Korea, even at speeds of up to 180 km/h. Our multi-lane Hi-Pass system is operated on over 70 roads as of now, and is being expanded nationwide.



Multi-lane Hi-Pass



C-ITS System

LOTTE Data Communication has obtained a temporary license to operate a pilot project for self-driving shuttles without a driver's seat in Korea. Our self-driving shuttle has been recognized for its stability in handling unexpected situations such as pedestrians and cyclists as well as road driving requirements such as lane keeping, lane change, and cross over into another lane. LOTTE Data Communication is conducting demonstration operations of self-driving shuttles in the pilot section at Sejong Special Self-governing City, and is engaged in research on further advancement of the technology jointly with the Korea Transport Institute.



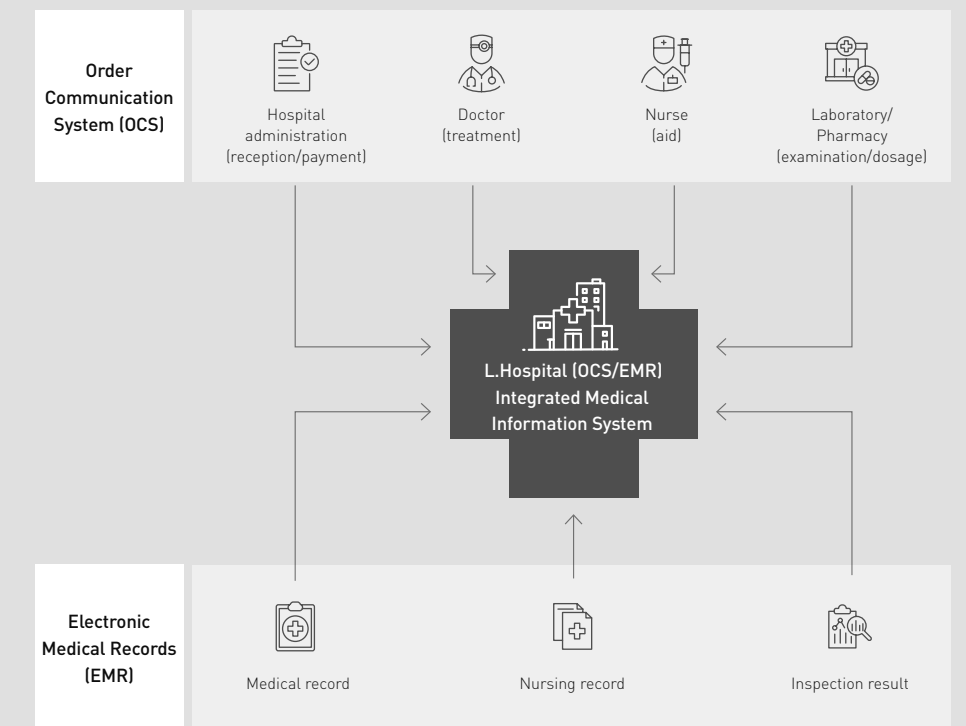
Self-driving shuttle

Smart Healthcare

LOTTE Data Communication has been contributing to the prevention of diseases and promotion of citizens' health by providing high quality medical services to large domestic and foreign hospitals such as Hyundai Asan Hospital and Soonchunhyang University Hospital for over 20 years. L. Hospital, an IT solution with medical OCS¹⁾ and EMR²⁾ technology, is an advanced IT-medical convergence technology framework that can build an integrated database and handle various medical tasks, including record management, through a consistent integrated system. L. Hospital is a trustworthy solution chosen by more than 50 large medical centers and government agencies.

- 1) OCS: Order Communication System
- 2) EMR: Electronic Medical Record

L.Hospital - Integrated Medical Information System



LOTTE Data Communication provides HI-U³⁾ Services, a total healthcare platform for its employees. We strive to protect our employees' health through diverse functions such as reservation of medical checkup, inquiries regarding the result, filing an insurance claim, medication management, health notes and health food reservation service.



HI-U Services

- 3) HI-U: Health-In-U

HIGHLIGHT 03

Eco-friendly data centers

Global regulations and initiatives have been strengthened to manage the impact of corporate activities on the environment, energy and climate change. LOTTE Data Communication is actively promoting an eco-friendly management of data centers in response to these social demands. In December 2020, the construction of the fourth data center was completed based on an eco-friendly management plan from planning to design stages.



LDCC data centers at a Glance

LOTTE Data Communication operates four specialized data centers. These data centers are systematically linked to guarantee information security and stability of services. Each center provides business continuity by preventing failures and taking prompt action through 24/7 control services throughout the year. We have established an advanced information security environment at all workplaces for our customers based on international standard security certifications and regulations such as ISMS and ISO 27001.

1st data center

- Established in Jun. 2007
- Total floor area of 7,411m²
- Building with 4 stories above the ground



2nd data center

- Established in Nov. 2010
- Total floor area of 4,036m²
- Building with 2 stories above the ground



3rd data center

- Established in Nov. 1996
- Total floor area of 26,810m²
- Building with 2 stories below and 5 stories above the ground



4th data center

- Established in Dec. 2020
- Total floor area of 16,350m²
- Building with 2 stories below and 7 stories above the ground



Real-time Monitoring System

DCIM¹⁾ has been established, operated and managed to control the energy consumption of the data center infrastructure. The energy consumption efficiency is mainly improved in two ways. First we are aggregating and reviewing energy consumption data and PUE³⁾ for data center facilities (UPS²⁾, battery, generator, thermo-hygrostat, etc.) while managing operation functions such as air conditioning, cooling, and server efficiency. Second we improve energy efficiency by a timely use of energy and prevention of waste generation.



Monitoring System Screen

Efficiency of data center Operations

LOTTE Data Communication's 1st data center replaced all aged air cooled thermo-hygrostats in 2020, and installed a free cooling system that enables combined operation (summer: air-cooled, winter and weather changes: water-cooled). The system can supply cold water using outside air during the winter and weather changes. The PUE index of the center was improved from 1.73 in January 2021 to 1.58 in August 2021 by reducing the operation power of thermo-hygrostats and improving the cooling efficiency.



Cooling tower



Thermo-hygrostat

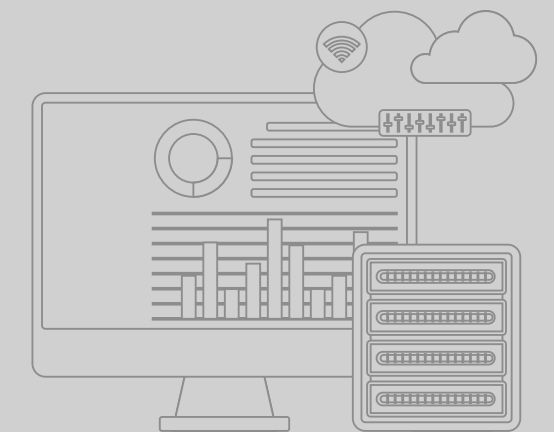
1) DCIM: data center Infra Management System
 2) UPS: Uninterruptible Power Supply
 3) PUE: Power Usage Effectiveness

Low Carbon data center

The 4th data center operated by LOTTE Data Communication is characterized by cutting-edge digital technology and low-carbon energy efficiency. A free cooling thermo-hygrostat has been installed in the center with a containment system to increase the efficiency of cooling air supply. In addition, the total energy consumption of the center was reduced by 27% compared to the existing data centers through various construction methods such as improving air circulation and cooling efficiency with design of the balcony structure. LOTTE Data Communication plans to expand such energy efficiency improvement technologies to all its data centers, considering the nature of data centers that need to be operated 365 days a year, 24 hours a day.



Cold Aisle Containment System



Environment

'Creating Green Value', the environmental management vision of LOTTE Data Communication, presents the philosophy of environmental management to lead future-oriented insight and action in global cooperation to respond to climate crisis.



48 Environmental Management

54 Response to Climate Change

Environmental Management

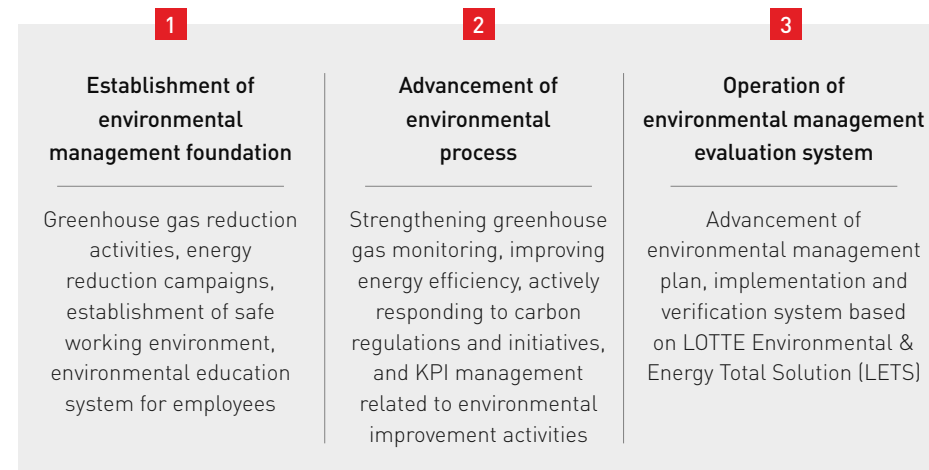
Regulations on environmental protection and response to climate change have been strengthened at all levels of society, including global companies, governments, and NGOs. LOTTE Data Communication is building and expanding solutions to respond to environmental regulations that are applicable to corporations. We take the lead in advancing corporate greenhouse gas management by planning and implementing the nation's best greenhouse gas reduction project through an integrated environmental-energy-greenhouse gas management system. We will continue to promote sustainable corporate management that creates new value from a corporate perspective in accordance with global standards required by various global initiatives such as TCFD¹⁾, CDP²⁾ and PCAF³⁾ related to environmental and climate change.

Environmental Management System

Achieving the Vision of 'Creating Green Value'

Under the vision of "Creating Green Value," LOTTE Data Communication pursues the value of environmental protection throughout its business activities, and has established three environmental management strategies to respond effectively to the global issue of climate change. Based on these strategies, we promote activities that reduce carbon emissions and energy use. Management and departments are organized for systematic operation of environmental management activities. We operate environmental management evaluation systems to promote organic collaboration between workplaces and the head office, and regularly improve standards, procedures and processes for environmental management activities based on an integrated computer management system.

Environment Management Strategy

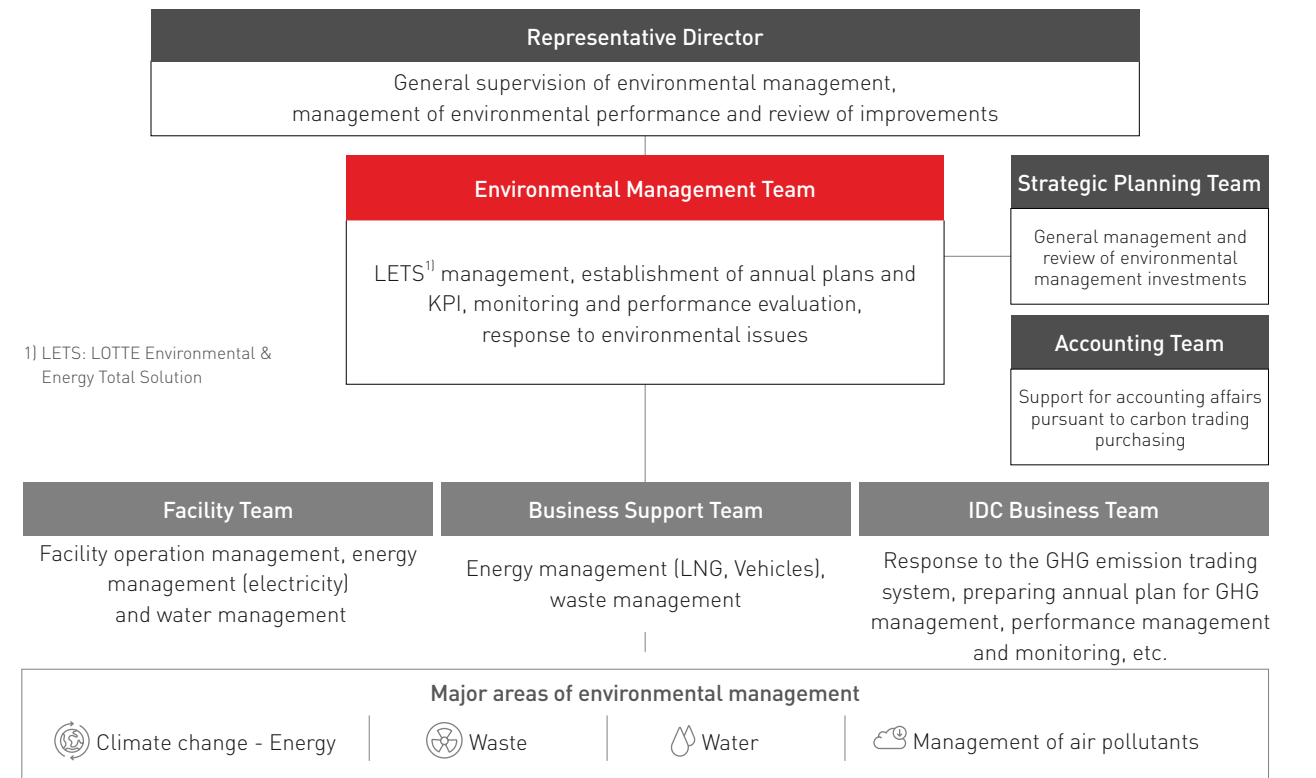


Environmental Management Governance

LOTTE Data Communication established the ESG office under the Representative Director. The environmental management team is in charge of the company-wide measures in response to climate change and implementation of environmental management. The ESG Committee under the BOD deliberates, approves, and supervises important issues such as establishing, investing, and inspecting performance of environmental management goals at enterprise level through the ESG committee within the board of directors.

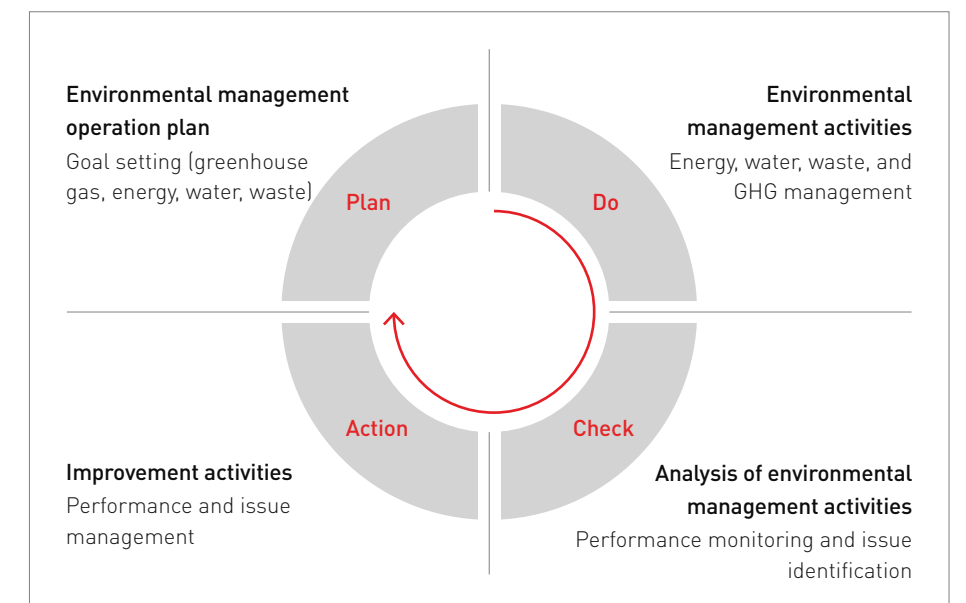
1) TCFD: Task Force on Climate-Related Financial Disclosures
 2) CDP: Carbon Disclosure Project
 3) PCAF: Partnership for Carbon Accounting Financials

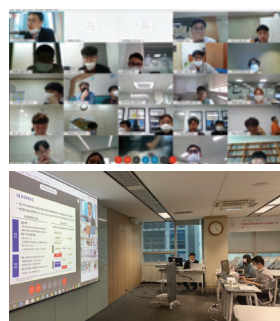
Environmental Management Organization



Environmental Management Process

LOTTE Data Communication aims to establish and implement environmental goals and plans based on the PDCA (PLAN-DO-CHECK-ACTION) methodology to address major environment issues such as climate change, energy, waste, and water, and promote improvement measures based on regular performance reviews and evaluations.



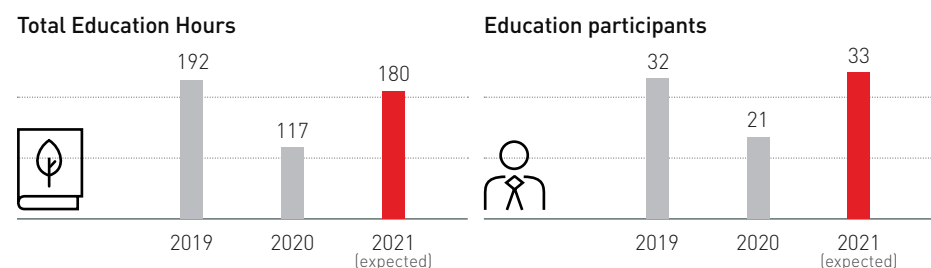


2020 Online Environmental Education

Environmental Education

Environmental education for employees is operated under two categories: an expert course for departments related to environmental management and a general course applicable to all employees. The expert course consists of seminars and workshops by external experts wherein 12 special lectures were held in 2020. The general course consists of ESG course and Acropolis environmental course. In August 2021, a seminar titled 'ESG Era, Management Paradigm Transformation' was held by a professional instructor. We plan to further expand ESG environmental management education to all employees to further strengthen their capabilities for environmental management.

Environmental Education for Employees



Environmental Management Goals and Investment Plan

1) Nitrogen oxide
2) Sulfur oxide
3) Particulate matter

LOTTE Data Communication is participating in the efforts to accomplish the 2040 Carbon Neutral goal at the LOTTE Group level, and plans to implement company-wide carbon emission reduction and eco-friendly management goals every 10 years. We have established a step-by-step environmental management strategy. In the short term, greenhouse gas emissions are reduced through process efficiency. In the mid to long term, carbon neutrality can be achieved by applying innovative technologies and expanding eco-friendly businesses.

Environmental Management Goal

Category	Key Activities
Environmental management system	<ul style="list-style-type: none"> Plan to apply for Environmental Management System (ISO 14001) certification in 2022 PDCA cycle-based internal environmental review Capacity building education for environmental staff Maintain energy management system (ISO 50001) certification
Energy and greenhouse gas	<ul style="list-style-type: none"> Achieved the annual greenhouse gas reduction target (1910tCO₂eq) in 2021 Establish and implement a carbon neutral strategy, streamline energy utilization, and introduce renewable energy Reduce power consumption by introducing a free cooling system of thermo-hygrostat
Waste	<ul style="list-style-type: none"> Introduce a management system for each stage in the use and disposal of equipment and consumables Planning and implementing activities to reduce the amount of waste generated and improve the amount of recycling
Water	<ul style="list-style-type: none"> Executives and employees' campaign activities to reduce water usage Review and promote water reduction technologies
Air pollution management	<ul style="list-style-type: none"> Prevent air pollution through NO_x¹⁾, SO_x²⁾, PM³⁾ management of combustion facilities (boiler, absorbent cold/hot water heater)
Stakeholders engagement	<ul style="list-style-type: none"> Comply with environmental regulations and policies, and actively participate in environmental initiatives

Investment plan and performance on environmental management activities

Date	Location	Plan	Investment period	Activities	Impact	Implementation
2020	3rd center	Replaced the thermo-hygrostat and existing fans to higher efficiency fans	Feb. to Apr.	Managed the speed of thermo-hygrostat FAN and introduced variables FANs	Reduced emission by 600 tCO ₂ eq/year	0
		Replaced normal lights with LED lighting	Aug. to Dec.	Replaced normal lights with LED lighting	Reduced emission by 100tCO ₂ eq/year	0
	1st center	Introduced free cooling thermo-hygrostat	Jul. to Dec.	Reduced the operating power of compressor by applying integrated air-cooled and water-cooled cooling technologies.	Reduced emission by 950 tCO ₂ eq/year	0
		Replaced the existing boiler with low NOx boiler	Aug.	Introduced low NOx burner to boiler	Reduced NOx emissions	0
2021	2nd center	Introduced free cooling thermo-hygrostat	Jan. to Apr.	Reduced the operating power of compressor by applying integrated air-cooled and water-cooled cooling technologies.	Reduced emission by 200 tCO ₂ eq/year	0
	3rd center		Jan. to Dec.		Reduced emission by 300 tCO ₂ eq/year	0
	1st center	Introduced charging devices for electric vehicles	Jul. to Aug.	Introduced 5 charging devices for electric vehicles	Reduced GHG emissions	0

LOTTE Data Communication continues to promote not only in energy consumption reduction and efficiency improvement at data centers, but also in facility improvement activities to reduce carbon emissions and thereby prevent environmental pollution.

Environment Management Performance

Performance Evaluation and Audits

Environmental Management Indicators and Evaluation System | LOTTE Data Communication is evaluated annually for its environmental management level according to the Sustainable Growth Environmental Management Index to ensure compliance with LOTTE Group's environmental management policy. The LOTTE Sustainable Growth Environmental Management Evaluation System manages performance indicators for core topics (organization, strategy, activity, performance, report) promoting environmental management in compliance with the government's environmental information disclosure system, greenhouse gas emission trading system, and major domestic and overseas ESG standards. LOTTE Data Communication establishes, implements, and evaluates the annual improvement plan for this performance indicators. The results are managed in conjunction with LOTTE Group's integrated environmental management system.

LOTTE Sustainable Growth Environmental Management Indicators

Category	Item	Category	Item
Organization, document system, education	Designation of an environmental organization and person in charge	Activities	Environmental management audits and results Report on the group's environment system
	Job assignment and documentation of the activities carried out by the environmental organization	Performance	Waste and water generation and recycling compared to the previous year
Manager with professional qualification	Waste plastic management		
Completion of LOTTE group education	Energy savings and greenhouse gas reductions		
Establishment of strategy	Establishing annual goals and step-by-step roadmaps for environmental management		Air pollutant emissions and water pollutant emissions
		Violations, number occurred and information of government environmental regulations	
	Environmental Management System (ISO 14001) and Energy Management System (ISO 50001)	Report	Scope and level of environmental information disclosure

Environmental Management Audit Activities | LOTTE Data Communication conducts internal and external environmental audits to implement and improve company-wide environmental management policies. Internally, we set up our environmental management goals, analyze performance, and conduct audit to improve any comments on environmental problems. In addition, we have received external environmental review and verification for our workplaces subject to the emission trading system from the Ministry of Environment, and accordingly have renewed the Energy Management System (ISO 50001) certification every year.

Environmental Audits

External Environmental Audits	All workplaces are subject to regulations under the greenhouse gas emission trading system. Accordingly, we publish the GHG Emission and Energy Consumption Statement every year with third-party verification.
ISO 50001 Certification	In 2014, LOTTE Data Communication acquired ISO 50001 Certification. We renew the Certification from an external agency in the first quarter and conduct regular internal audit in the fourth quarter every year to maintain an effective energy management system.
Internal Environmental Audits	LOTTE Data Communication conducts internal environmental audit twice a year for all data centers. The scope of the audit includes overall environmental management such as energy, greenhouse gas, waste, water and air quality. The environmental audit in the first half of the year focuses on setting goals for the year and reviewing the previous year's performance, while the audit in the second half focuses on implementation of goals and monitoring the progress of improvement measures.

Energy Management System

LOTTE Data Communication manages carbon emissions and energy consumption based on the Energy Management System (ISO 50001).



ISO 50001 Certification

	February 2014	February 2017	January 2021
	ISO 50001 certification initially acquired	Renewal completed and certification maintained (valid until 2020)	Renewal completed and certification maintained (valid until 2023)

In addition, we are operating procedures for each sector (water, waste, air) in compliance with the Environmental Management System in all workplaces, and plan to complete the Environmental Management System certification (ISO 14001) for the company-wide environmental management system in 2022.

Activities for Prevention of Environmental Pollution

Waste Management and Reduction | All workplace wastes are general waste and contain no designated waste. In 2020, the use of disposable products increased due to the measures taken in response to COVID-19, and the amount of waste increased temporarily. LOTTE Data Communication strives to reduce waste by encouraging recycling and reducing disposable products. Waste emission is planned to be reduced by 96.48ton in Seoul office and 37.82ton in Yongin office by 2021 by means of waste reduction activities.

Waste generated in the workplace and set targets

Location	Unit	2018	2019	2020	2021
Seoul office	ton	97.90	113.87	128.45	96.48
Recycled Waste Materials	ton	34.30	33.34	45.73	32.70
Yongin office	ton	47.06	39.65	32.12	37.82
Daejeon office	ton	4.26	4.38	5.70	8.12

※ The Daejeon office uses standard plastic garbage bags and generates less waste

Waste Management Activities in data centers

Location	Description
1st center	Additional sorting to increase the rate of waste recycling Consignment of transportation and disposal to vendors responsible for treating wastes
3rd and 4th centers	Monitoring all processes from discharge, transport, and treatment of waste through the online waste treatment system (Allbaro) for waste management and reduction Depending on the type of waste, it is then sorted, classified and separated to promote recycling activities



Blank panel

Recycling of Consumables in data centers | We are actively pursuing recycling activities to reduce waste related to facilities and consumables required for data centers. To minimize loss of cooling in data center server racks, blank panels are installed and racks are collected and recycled in disposal phase. When removing, relocating, and installing server equipment, existing power cables are checked for their condition, and suitable products are reused.



Low NOx burner in the 1st data center

Activities for Management of Air Pollutants | LOTTE Data Communication installed prevention equipment (low NOx burner) for air emission facilities and completed the acquisition of related licenses in line with the strengthening of the Air Conservation Act in 2020. We conduct self-measurements twice a year and perform management activities such as keeping logs of the prevention facility.

Responses to Climate Change

Climate change is called the Green Swan causing direct and indirect uncertainty in the economy, environment, and society worldwide. LOTTE Data Communication is aware of the importance of responding to climate change, hence is promoting cooperation among all stakeholders. As part of its efforts, LOTTE supports global initiatives such as the Paris Agreement and SBTi (Science Based Targets initiative) at the group level and has set the 2040 Carbon Neutral goal roadmap to limit global warming within 1.5°C and to proactively respond to Korea's 2050 Carbon Neutral Strategy.

Goals and Strategies responding to Climate Change

LOTTE Data Communication is responding flexibly to the rapidly changing climate crisis based on the PDCA methodology that establishes, implements, and verifies climate change goals on an annual basis. Our response measures to climate change aim to reduce greenhouse gas, waste, and energy use from data centers. The 2040 LOTTE Group Carbon Neutral strategy is adopted to improve energy efficiency and introduce renewable energy.

LOTTE Data Communication has specified energy consumption and greenhouse gas emission goals and reduction plans for workplaces every year based on the 2040 LOTTE Group Carbon Neutral strategy. The activities and performance of workplaces are aggregated qualitatively and quantitatively and managed at the company level. Mid- to long-term goals and detailed activities of workplaces are integrated among the LOTTE Group, LOTTE Data Communication and different workplaces.

Goals for Climate Change response (2021)

Location	GHG (tCO ₂ eq)
Seoul	15,582
Daejeon	3,556
Yongin	68,764
Seoul_ Former office building	622
Total	88,524

Climate Change Response Plan

Category	2021 Plan
1st data center	Improved cooling efficiency by replacing old thermo-hygrostat
	Improved cooling efficiency of the computer room by installing containment
	Reduced power consumption of the compressor in the thermo-hygrostat by adopting a free cooling system
2nd data center	Improved cooling efficiency by replacing old thermo-hygrostat
	Improved cooling efficiency of the computer room by installing containment
	Reduced power consumption of the compressor in the thermo-hygrostat by adopting a free cooling system
3rd data center	Reduced power consumption of thermo-hygrostat by replacing EC-FAN
	Reduced power used by the lighting system by replacing old lights with LED

Carbon Asset Management and GHG Reduction

Greenhouse Gas Reduction Management and Carbon Credit Management

LOTTE Data Communication has calculated and managed GHG emissions by facilities based on the LOTTE Environmental & Energy Total Solution (LETS) developed internally. LOTTE Data Communication's direct GHG emissions (Scope 1) are caused by boilers, cars for business use, and emergency generators in the workplace and indirect GHG emissions (Scope 2) are caused by power consumption at the data centers.

In 2020, GHG emissions (Scope 1 and 2: 80,618 tCO₂eq) increased by 11.5% (8,318 tCO₂eq) compared to those of the previous year (72,300 tCO₂eq) due to a surge in the demand for data services. LOTTE Data Communication's indirect emissions (Scope 2) related to power consumption from data centers accounts for most of its total emissions (99% or more) as of 2020. LOTTE Data Communication sets and manages carbon emission intensity targets based on sales and total floor area as its key performance indicators while setting annual goals and evaluating its performance.

Scope 1, 2 GHG Emissions

Category	Unit	2018	2019	2020
Scope 1+2	tCO ₂ eq	64,158	72,300	80,618
Scope1 (Direct Emissions)	tCO ₂ eq	393	449	431
Scope2 (Indirect Emissions)	tCO ₂ eq	63,765	71,851	80,187
GHG intensity (By total floor area)	tCO ₂ eq/m ²	0.93	1.05	1.17
GHG intensity (By Sales)	tCO ₂ eq/KRW billion	92.82	93.62	96.45

LOTTE Data Communication sets specific reduction targets for data centers every year and manages the achievement rate. In 2021, we plan to reduce greenhouse gas emissions at 1st data center and 3rd data center by 1,910 tCO₂eq through eco-friendly design and energy use efficiency activities and will continue to expand the use of new and renewable energy to achieve the 2040 Carbon Neutral targets.

Reduction in GHG Emissions (Unit: tCO₂eq)

Category	2018	2019	2020
Replaced normal lights with LED	32.3	62.2	98
Replaced EC-FAN of thermo-hygrostat	754.1	1,436.1	1,387
Free cooling	32.2	32.2	50.2
Improved operation of thermo-hygrostat	-	299.8	283.4
Total	818.6	1,830.3	1,818.6

LOTTE Data Communication has reported its GHG emissions (Scope 1 and 2) to the Ministry of Environment as a company subject to the GHG management targets in 2011 and the GHG Emissions Trading Scheme in 2020 in accordance with the Framework Act on Low Carbon, Green Growth.

Scope 3 GHG Emissions

LOTTE Data Communication calculates and manages annual emissions for other GHG emissions (Scope 3) indirectly related to the company's business in compliance with international regulations such as the Greenhouse Gas Protocol.

(Unit: tCO₂eq/2020)

Scope 3 items	GHG emissions	Description
Capital goods	17.1	Emissions from the manufacturing of externally purchased capital goods (Facilities, office equipment, etc.)
Waste	14.8	Emissions related to waste treatment
Business trips	232.9	Emissions related to transportation for employees' business trips
Commute	2,150.2	Emissions from transportation used by employees to commute
Downstream rental assets	1,487.9	Any building leased to outsiders, of which emissions are not taken into account in the greenhouse gas emission specifications
Investment	1,316.3	Total amount of greenhouse gases related to investment activities
Total	5,219.2	

Disclosure of Information Related to Task Force on Climate Related Financial Disclosures (TCFD)

LOTTE Data Communication discloses guidelines for governance, management strategy, risk management, and target growth related to climate change in accordance with the TCFD guidelines in order to respond proactively to climate change issues caused by global warming and to communicate its intention to reduce GHG emissions with all stakeholders.

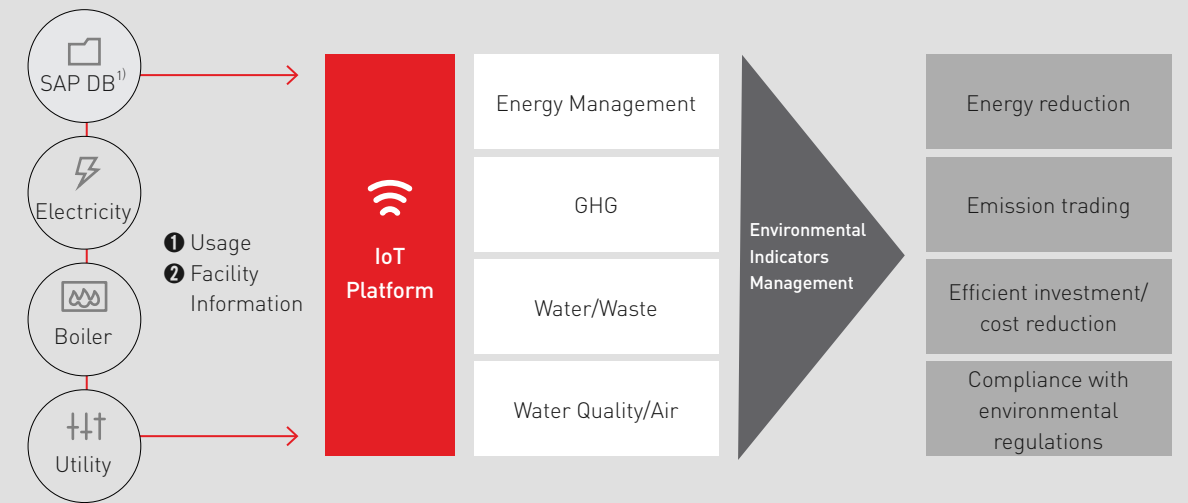


Disclosure items	Recommendations	Responses
Governance	<ul style="list-style-type: none"> Supervision, management, and evaluation by the BOD on climate-related risks and opportunities 	<ul style="list-style-type: none"> Composition, authority, and responsibilities of the BOD and the ESG Committee Key issues and monitoring status of the BOD and the ESG Committee
Strategy	<ul style="list-style-type: none"> Identification of short-, mid- and long-term climate-related risks and opportunities Impact of climate risks and opportunities on the organization's business, and strategic and financial plans Resilience of strategies taking into account climate scenarios 	<ul style="list-style-type: none"> LOTTE Group's eco-friendly management vision 'ECO Transformation 2020' Achieving 2040 Carbon Neutral Targets and expanding eco-friendly businesses Eco-friendly management plan
Risk management	<ul style="list-style-type: none"> Organizational processes for identifying, assessing and managing climate-related risks Integration of the organization's overall risk and climate-related risk management processes 	<ul style="list-style-type: none"> Conducting analysis of transition risk and physical risk related to climate change Selection and management of 12 significant areas (critical management risk areas) Environmental social impact assessment process
Indicators and reduction targets	<ul style="list-style-type: none"> Indicators used to assess climate change-related risks and opportunities Risk related to GHG Emissions Climate-related risks and opportunities, performance indicators compared to targets 	<ul style="list-style-type: none"> Achieving 2040 Carbon Neutral Target and expanding eco-friendly businesses GHG emission management by facilities and data centers GHG emission reduction management by GHG reduction activities and data centers

LOTTE Environmental & Energy Total Solution (LETS)

LETS launched in 2018, is the first total environmental management solution service in Korea. It is an integrated energy environment solution developed by LOTTE Data Communication based on the LOTTE Group's understanding and know-how incorporating various industries. LETS has been constantly upgraded to reflect domestic policies and regulations such as the Environmental Information Disclosure System in 2019 and the advancement of the Environmental Pollution Index management in 2020, as well as domestic and international trends and requirements such as TCFD and CDP. It is one of the best management systems among domestic IT companies and its modules for ESG will be upgraded by 2022. LETS provides a variety of platforms to help global leaders managing the environment, securing work efficiency by responding in a stable manner to specialized system-based environmental regulations, and addresses potential environmental management risks. LOTTE Data Communication will take the lead in the efforts to strengthen Korea's competitiveness in responding to environmental and climate change regulations by scaling up the application of LETS to various institutions and companies.

Integrated Management of Environmental Energy Data based on IoT Platform



Solution	Effect
GHG energy management function	Calculate emissions and predict future emissions through statistics and analysis of past usage patterns based on collection of information such as emissions and energy usage.
Real-time monitoring	Respond quickly by sending an email, SMS, or alarm to the manager in case of a sudden change in GHG emissions.
Carbon trading platform	Help to establish emission plans flexibly in a manner that is suitable for the internal and external environments by enabling free trade of carbon emission rights between groups, regions, and companies.
Modular solutions	Systems that are easy to add and delete, enabling optimized configurations for business situations.
Amount of GHG reduction potentials	Provide insights that can analyze the need for GHG reduction and calculate the cost to optimize emissions.

1) SAP DB: SAP Data Base



LETS main screen



GHG energy management function



Amount of GHG reduction potentials

Social

LOTTE Data Communication recognizes the impact of corporate activities on society as well as the importance of managing the impact. As a global business entity, we understand our corporate social responsibility and will participate to create a sustainable society through social value creation activities in various fields such as shared growth with partners, social contribution, human rights management, and stakeholder communication.



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- 60 Respect for Human Rights
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Respect for Human Rights

LOTTE Data Communication respects human dignity, values, and the right to seek happiness, and pursues the values of major global human rights regulations such as the Declaration of Human Rights and the UN Global Compact. To this end, we operate our business based on the principle of respecting the human rights of stakeholders directly or indirectly related to our business activities, such as our employees, suppliers' workers, and local residents.

Human Rights Management

LOTTE Data Communication has established and operated company-wide policies to prevent human rights issues that may arise throughout management activities, pursue human rights among stakeholders, and prevent any human rights violation.

Human Rights Management System

LOTTE Data Communication has specified human rights management practices within the employees' Code of Conduct and operates an effective human rights management monitoring system. In addition, various communication channels are developed to prevent human rights violations by our employees and potential human rights issues, while promoting various human rights activities.

Target	Means of implementation	Business
Customers, employees, shareholders, investors, suppliers, local communities	Employee education, anonymous reporting system, Reporting Center via website, education for partner companies, local community service activities, university-industry cooperation, etc.	Web accessibility certification, production, and delivery of SOC products for the disabled, etc.

Human Rights Management Practices in LOTTE Code of Conduct



1. We will respect human rights anytime, anywhere in all our works.
2. We will adhere to our values and standards for respect for human rights and expand them to our partners.
3. We will try not to create a negative impact on human rights due to our business.
4. We will guarantee and support human rights in our local community.
5. We will familiarize ourselves with and comply with local labor-related laws and regulations.
6. We do not tolerate child labor at our workplaces or those of partners, and comply with local laws and international standards for minimum age.
7. We will consult with the compliance manager and check the minimum age requirements under the relevant laws and regulations if we need to hire an employee under the age of 18,
8. We do not allow coercion, restraint, or other forced labor.

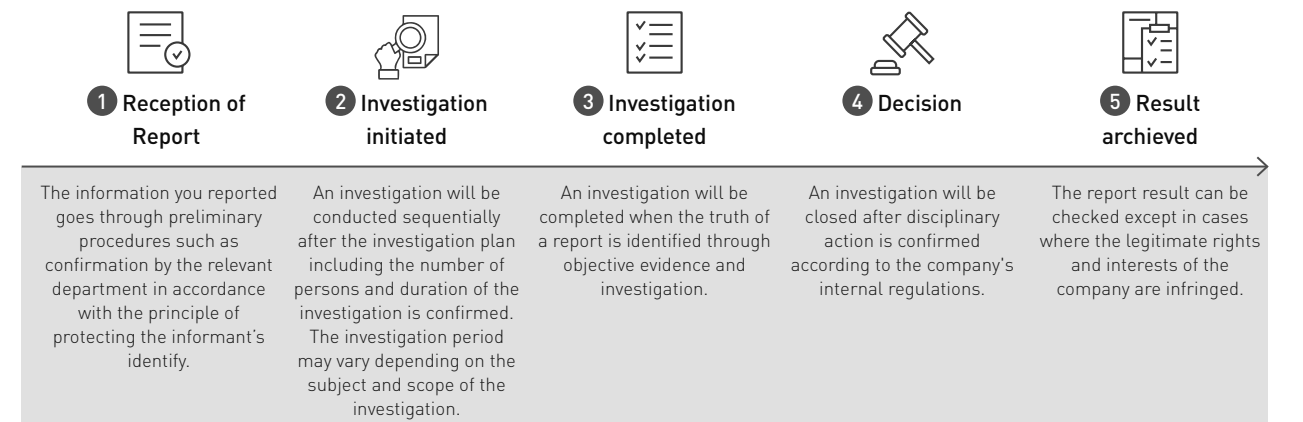
Monitoring of Human Rights Management

LOTTE Data Communication operates various communication channels to actively respond to potential human rights issues faced by stakeholders, including employees, suppliers, and customers, and handles the issues reported to us according to standardized procedures. In addition, those stakeholders are managed to prevent human rights violations as well as undesired disclosure of information on human rights issues.

Communication Channel for Stakeholder

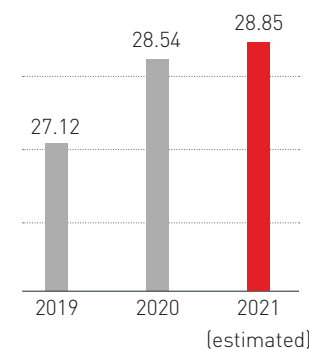
The internal grievance counseling channel 'Maum Talk-Talk' is provided to handle human rights related grievances and other work and personal counseling for employees. The Reporting Center is provided on the LOTTE Data Communication website for employees to report human rights issues so that appropriate measures can be taken. In addition, We also collect opinions from supplier companies' grievances and unfair practices during the transaction through the 'GominPeggi [Remove concerns]' page on our website.

Reporting Center Process



Diversity in Employees

Ratio of Female Employees (Unit: %)



1) SIAT: Smart IT Advance Training

Employees at LOTTE Data Communication are not discriminated against gender, race, nationality, religion, age, or health conditions, thus diversity and inclusion are duly respected. We strive to eliminate gender disparities and expand recruitment of the disabled to improve the work environment. LOTTE Data Communication is implementing various policies to prevent discrimination based on gender in all areas including employment, promotion, evaluation, and welfare. We pursue equal wage levels for men and women, and are actively expanding the recruitment of female managers, including female employees, with a ratio of 55:45 for male and female employees newly hired as full-time employees in 2020.

LOTTE Data Communication continues to make efforts in terms of education support and special recruitment for the disabled, and business partnerships with standard workplaces for the disabled to realize corporate social responsibility. Since 2021, we have participated in SIAT¹⁾, an IT education-recruitment program for the disabled, and implemented special recruitment for the disabled.

In recognition of its efforts to improve the job environment for the socially vulnerable, LOTTE Data Communication received the Prime Minister's Award for 'Excellent Company based on the Equal Employment Opportunity Law' and the 'Best Job Creation Company in Korea' for two consecutive years from 2019 to 2020. LOTTE Data Communication will continue to make efforts to expand job opportunities for socially disadvantaged groups.



Prime Minister's Award for 'Excellent Company Based on Equal Employment Opportunity Law'

Best Job Creation Company in South Korea

Human Rights Education

LOTTE Data Communication provides 'Workplace Bullying and Sexual Harassment' education for all employees every year, contributing to the creation of a healthy and safe workplace for employees. The 'Workplace Bullying and Sexual Harassment' education is also provided for new employees (both newly hired and experienced employees), new managers, and project sites (including suppliers employees) to raise awareness of human rights and encourage them to practice respect for human rights among workplaces.

Human Rights Education for Employees (Unit: persons, hours)

Category		2018	2019	2020
Anti-sexual harassment education	Number of participants	2,536	2,725	2,785
	Total education hours	13,131	10,721	2,923
	Education hours per person	5.2	3.9	1.0
Human rights education	Number of participants	2,465	2,978	2,863
	Total education hours	13,067	22,116	6,310
	Education hours per person	5.3	7.4	2.2

※ In 2020, education hours were decreased due to COVID-19.

Human Resource Development

The essential elements for corporate development are the participation of excellent human resources in driving change and innovation, in line with a sustainable work environment and a better work capacity in the ever-changing business environment. LOTTE Data Communication operates human resource management programs for each category of employees to develop employees with future-oriented competencies

Recruitment

Concept of Talent and Recruitment Process

The People We Seek



Challenge
Do not fear Failure



Passion
Make endless efforts for self-development



Partnership
Know how to cooperate and coexist

For newly hired employees, the group open recruitment method, which had been divided into the first and second half of the year, was converted to the 'hiring at any time' method to hire talented people from more diverse positions at any time. In addition to an open recruitment, we strive to secure talent through various channels such as conversion-type internships, industry-academic cooperation internships, and SPEC-tackle (a blind recruitment method that evaluates the applicant's job performance ability and competency rather than the specification-oriented document screening). For experienced employees, we frequently hire them through an open recruitment process or an in-house recommendation as the occasion demands. LOTTE Data Communication has introduced various interview methods for the recruitment process to perform in-depth evaluation of not only basic capabilities but also the development potential of the applicants. We promote fair and transparent recruitment to prevent discrimination based on factors that are unrelated to our job. In 2020, the recruitment was conducted mainly through video untact interviews and more than 200 people were hired on a large scale despite the crisis caused by the COVID-19 pandemic.

Recruitment Process for Newly Hired Employees



Recruitment Process for Experienced Employees



Recruitment of New Employees (Unit: No. of persons)

Category	2018	2019	2020	Total
Male	167	215	120	502
Female	137	155	100	392
Total	304	370	220	894

Recruitment Channel

Recruitment of Customized Talent - Hiring at Any Time | In 2021, LOTTE Data Communication introduced the 'Hiring at Any Time' recruitment method to adopt a flexible recruitment system hiring necessary talents at any time. We effectively provide employment opportunities to job seekers by specifying R&R in the recruitment notice and shortening the recruitment period. For experienced employees, job competency-oriented recruitment is carried out by introducing coding tests, job assignments, and portfolio evaluations to verify their IT skills.

Future-Oriented HR - Internship Recruitment | LOTTE Data Communication hires talents who will lead the future IT industry through 'internship recruitment'. We provide job opportunities for excellent talents through internships to be full-time employees.

Job Competency-Oriented HR - SPEC-Tackle | LOTTE Data Communication hires talents with excellent job competencies through the 'SPEC-Tackle Recruitment' program introduced in 2016. The SPEC-Tackle recruitment process consists of document screening with minimum personal information and job-related portfolios and essays, job assignment and interview. Through the SPEC-Tackle recruitment process, we hire practical talents by excluding quantitative factors such as grades, which are mainly evaluated in the existing hiring process, and focusing on communication-based evaluation of core job competencies.

Support for Employees Growth

LOTTE Data Communication has developed and regularly supplemented various programs to strengthen employees' capabilities in a sustainable manner.

Education Program for All Employees from Staff to Leaders

We provide education programs defined by the competency level required for each job. Employees can take group education or online education (LDCC-MOOC) to improve their capabilities required for performing their jobs. The education program is revised every year to meet business strategies and technology changes.

Illustration of curriculum by job

Target	Name of course	Period
All employees	EZ Learning	January to December
All employees	LDCC-MOOC ¹⁾	January to December
All employees	Compulsory education	July to December
Person in charge of related works	Participation, consultation, and communication on occupational health and safety	Quarterly
Prospective retirees over the age of 50	Outplacement education	Constantly

1) MOOC: LDCC-Massive Open Online Course (Online open class)



Education for New Employees

Education for New Employees

LOTTE Data Communication provides specific contents in the education program so that new employees can well adapt with the corporate culture and organization. The education program covers compliance and safety, environment regulations, special lectures by the CEO, and introduction of various divisions to help new employees acquire a general understanding of the company. After joining the company, we also provide online education (Tech. Expert) opportunities to improve their IT capabilities for three years.



Core Technology Courses

Core Technology Courses

LOTTE Data Communication provides core technology courses to nurture future technology experts. The courses consist of various lectures and practical programs delivered by internal and external experts focusing on core technologies of the 4th Industrial Revolution such as AI, Cloud, Data Analytics, and Security. A total of 6,400 employees (cumulative) completed the core technology courses from 2018 to 2020.




Certification Support System

LOTTE Data Communication supports employees with the costs for applying certification tests and maintaining the certification. As of 2020, we support test costs for 50 IT certifications. The certification support system is supplemented every year in consideration of our technology demand and strategic direction.

Retirement Support Program

LOTTE Data Communication provides training and consulting on life planning, career planning, outplacement and startup for those over age 50 nearing their retirement. These programs are provided through specialized institutions so that they can confidently open a new chapter in their life and avoid any negative effects related to retirement. The program has been implemented since September 2020, and a total of 4 people have participated in the program.

Retirement Support Program

 Career design	<p>Basic Education on Life Design - Self-diagnosis, vocational career design, self-development design, social service design, etc.</p> <p>Career Design - Life career goal setting, career design practice/strategy</p>
 Job placement	<p>Lifelong Job Design - Change management/self-exploration, career goal setting, competency analysis, job search strategy/job search activity</p> <p>Job Placement - Application document, employment information</p>
 Job and start-up education	<p>Employment Education - Middle-aged and elderly career design, recruitment market trends and job search strategies, resume preparation skill, interview clinics</p> <p>Start-up Education - Middle-aged and elderly start-up market analysis, and start-up case analysis</p>

Performance Evaluation and Compensation System

LOTTE Data Communication pursues objective and fair evaluation based on performance and competency of employees so that promotion and compensation can be set according to their work abilities and performance. We are operating a transparent compensation system including wage increases and performance bonuses based on the evaluation. To this end, we conduct competency evaluation to measure the competencies and practices that LOTTE Data Communication employees should adopt, and carry out performance evaluation to measure the degree of achieving their business goals.

Evaluation item and description

Item	Description	
Evaluation of achievement	Attainment of the target set for the year	
Evaluation of competency	Leadership	Leading change, human resource development, performance-oriented, executive ability
	Job expertise	Competency defined by job
	Job behavior	Behavioral competency defined by job group

Performance Evaluation | Employee performance evaluation is conducted twice a year through an absolute evaluation method based on talent development to promote "innovation" rather than "internal competition." Appropriate work goals are decided between evaluators and appraisers through prior consultation at the beginning of the year. Mid-term review of the goals is implemented, and the absolute evaluation scores are given according to final scores and annual performance achievement in November. In addition, the "L-Listen" platform is used to support improvement of individual work performance through regular performance coaching and feedback.

Job Competency Evaluation | LOTTE Data Communication conducts job competency evaluation once a year. We evaluate employees in terms of job behavioral competency and job expertise and managers in terms of job behavior and leadership capabilities. Job positions are updated for 5 job groups, 11 series of class and 42 job functions. Furthermore, job competencies are verified systematically through a consultative group.

Benefits

LOTTE Data Communication is operating various welfare systems for work and life balance. We plan to improve the welfare system by reflecting the voices of employees.

Insurance and Pension

LOTTE Data Communication offers group accident insurance for employees' health and safety, and pension funds in accordance with the Enforcement Decree of the Employee Retirement Benefit Security Act. In addition, financial funds for severance pay are accumulated and managed in external financial institutions to ensure stable retirement pension.

Insurance System	Death	Disease death, death by injuries, injury-related disorder
	Diagnosis fee	Cancer, cerebrovascular disease, and diseases with bloody discharge
	Medical expenses	Inpatient treatment expenses, outpatient medical expenses, prescription expenses
	Other	Death from overwork, hospitalization bill

Pension Program	Retirement Pension	Defined Benefits (DB), Defined Contribution (DC)
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Benefit program

Health/Life support 	Support for family events	Expenditure for congratulations and condolences	
	Group accident insurance	Group accident insurance for employees including spouses	
	Regular health check-ups	Support for health check-ups	
	Family care leave and vacation program	Family care leave and vacation for child-rearing and disease in the family, etc.	
Leisure and self-development support 	Student loan interest support	Full support for interest on student loan availed by employees	
	Club support	Cost support for in-house club activity	
	Language and certification support	Job-related certification application fee and maintenance fee support Tuition support for offline language school	
	Selective working hours	Flexible working hours except mandatory working hours (Core Time)	
	Refresh vacation	Annual leave for three consecutive days (available twice each in the first and second half of the year)	
	Sabbatical leave	5 days of sabbatical leave for employees who have worked for more than 3 years	
	Selective benefits	Welfare points as part of selective benefits	
	Pregnancy and childbirth support 	Reduction of working hours during pregnancy	Reduction of working hours by up to 2 hours during pregnancy
		Pregnancy and childbirth gift	Gift support for marriage, pregnancy, and childbirth
		Spouse maternity leave	Spouse maternity leave for childbirth
Parental leave		Support for mandatory use of parental leave for at least one month (Male: mandatory for one month)	
Infertility support		Infertility treatment and therapy and leave of absence	
Happy working mom		Business education program for those who are scheduled to return to work from parental leave	
Mom's healing		Psychological counseling program for working moms who are planning to return to work.	
Parenting support 	Daddy school	Childcare program for fathers who recently had their first child	
	Congratulatory gift for employees' children entering school	Congratulatory gift for employees' children entering school	
	Tuition for employees' children	Tuition support for employees' children	
	Workplace nursery	Support for workplace and local nurseries	
	Reduction of working hours during children's infancy period	Support for reduced working hours from 1 to 5 hours per day	
Child care leave for school enrollment	Support for female employees with children expected to enter elementary school		

Employee Communication

Healthy Organizational Culture

LOTTE Data Communication established the Great Work Place (GWP) organization in 2017 to build a flexible and creative organizational culture. We are strengthening initiatives to improve employee satisfaction by supplementing the HR system based on employee surveys.

GWP Organization Role

Implementing activities to enhance organizational culture	Communication channels	Improving work environment
Specify necessary changes to create a more flexible and enjoyable organizational culture and carry out change management activities.	Promote in-house communication by offline channels such as communication council, Wannabe, CEO meetings, and online channels such as Maum Talk-Talk, SNS LIVE, Culture-Rise	Listen to grievances raised in the field and collaborate with relevant departments to create a good working environment.

LOTTE Data Communication has established three policies for innovation of the organizational culture.

1) Free organizational culture | The position system has been reorganized from the five-level system to a three-level-system to promote rapid decision-making and execution. In addition, the competency level required of each position has been defined to create a culture in which employees can be recognized by the organization based on their objective work ability and competency, rather than their hierarchical relationship determined by position or age.

2) Innovation in the way we work | LOTTE Data Communication aims to promote a reporting culture that clearly conveys only the core idea by applying a 'Simple, Straight, Speed' culture to streamline communication within the company. We are trying to reduce unnecessary meetings by introducing "Brain 333 rules (share meeting materials before 3 hours, end meeting within 30 minutes of decision-making, and share meeting results within 3 hours)."




3) Work flex in time and place | A flexible working time system has been introduced to help employees maintain their work-life balance and increase their work efficiency. The system allows employees to freely set commuting times, except for the Core Time (10 am to 4 pm). In addition, the telecommuting system allows them to work at home or in a smart office located in Jamsil area depending on the nature of their works.

Organizational Culture Improvement Activities

'Culture-Rise,' a communication channel to change the organizational culture | Culture-Rise has been conducted regularly since 2021 to gradually promote and manage changes in the organizational culture. 'Culture-Rise' conveys the meaning of 'Let's raise our organizational culture'. In doing so, we are continuously communicating about visible changes in the organization culture and in the way we work.

'Wannabe,' an employee-led communication council | LOTTE Data Communication operates 'Wannabe', an employee-led communication council on an annual basis. 'Wannabe' has the meaning of 'a company where everyone desires to work,' voluntarily promoting employee activities to create a healthy organizational culture. Wannabe has been carried out from the first to third phases. The ongoing fourth phase of Wannabe promotes activities to improve the organizational culture.

"Changes that Wannabe has made" Phase 1~3 initiatives

Category	Program	Description
Health and support 	Comprehensive health checkup	Expanded the health checkup period
	Employee counseling channels	Grievance counseling channel (Maum Talk-Talk), Reporting Center
	Strengthening manager education	Regular leadership education, evaluator education
	Improving the method of paying holiday gifts	Diversified gift items selected by employees
Working conditions 	Flexible time system	Introduced selective working hours, designated core hours
	Actual use of annual leave	Added more reasons for vacation and expanded mandatory annual leave and refresh leave
	Implementation of the work management system	Inputting actual working hours after monthly work plan and introducing a compensation leave system
	Expansion of Casual Day	Introduced free-dress code, expanded lunch hours
Marriage, pregnancy, childbirth 	Introduction of infertility support program	Support for subfertility, new subfertility leave
	Psychological counseling and health care support	In-house health center, psychological counseling, and health care support
	Expansion of spouse's maternity leave	One day of congratulatory leave, 10 days of maternity leave
	Expansion of marriage support	Implemented the system of wedding gifts, maintained the existing congratulatory money support
Communication and sharing 	Activation of on-site communication	Regular visits to sites and regular company-wide meetings
	Diversification of communication channels	Real-time Live Meeting (CEO LIVE Talk), Regular Culture-Rise
	Company-wide sharing channel	In-house issues, announcements and frequent information sharing, company newsletters
	Wannabe campaign	Producing web dramas and sharing examples of excellent organizational culture by department
	Character production	Company characters, promotional materials, and visual materials

Family-Friendly Company Certification

Feb. 2013 - Dec. 2016
Acquired Family-Friendly Company Certification (3 years)

Dec. 2016 - Dec. 2018
Extended Family-Friendly Company Certification (2 years)

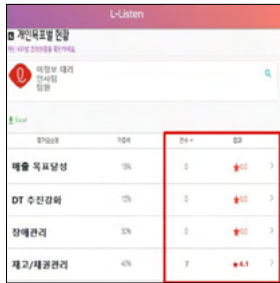
Dec. 2018 - Nov. 2021
Recertified Family-Friendly Company Certification (3 years)

Family-Friendly Company Certification

LOTTE Data Communication continues to promote activities for work-life balance in line with LOTTE group's family-friendly management and as result has maintained its Family-Friendly Company Certification since 2013. The Certification is provided by the Ministry of Gender Equality and Family to companies that are operating exemplary family-friendly systems, including childbirth and nurturing support, flexible time system, and promoting a family-friendly workplace culture in accordance with Article 15 of the Act on the Promotion of Creation of a Family-Friendly Social Environment. LOTTE Data Communication strives to support childbirth and parenting, provide a flexible time system, promote an organizational culture of family-friendly systems, and encourage increased utilization of annual leave.



CEO Live



Coaching App 'L-Listen'

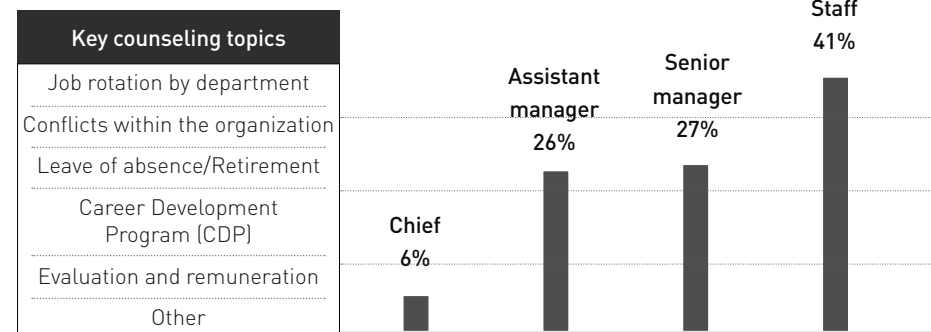
Communication Channels for Employees

CEO Live | In addition to regular meetings and field visits, CEO Live is aired on YouTube for transparent and flexible communication between the CEO and employees. It is used as an opportunity for employees to better understand the direction of company management and to hear the honest voices of employees.

Coaching App 'L-Listen' | 'L-Listen' is a coaching platform that supports leaders and team members to communicate about their work performance at all times. Team members frequently register individual performance, both large and small, and leaders can coach and provide feedback on the performance at any time. In doing so, team members can immediately communicate with leaders and improve their business ability, and leaders can manage performance in a systematic manner.

'Maum Talk-Talk' grievance counseling channel | We operate an in-house grievance counseling channel called 'Maum Talk-Talk', where employees can freely share grievances regarding the issues they face at work or at home. Employees can apply for counseling on various topics such as department and job circulation, workplace harassment, and human relations. For a comfortable counseling, employees can designate counselors, time and locations directly through the in-house personnel system.

Counseling Channel



LOTTE Data Communication's "Value Creation Culture" Evaluation Index

Outcomes	Actions	Fundamentals
Family friendly	Job satisfaction	Challenge
Mutual growth management	Good colleagues	Respect
Creating happiness for employees	Organizational pride	Originality
Creating corporate value	Pursuit of efficiency	Trust
Creating social value	Pursuit of innovation	Cooperation
	Pursuit of performance	Diversity
	Compliance management	
	Ethical management	
	Social contribution	

Health and Safety

Health and Safety Management System

LOTTE Data Communication established a Safety Management Office under the CEO and strengthened the safety and health management system to carry out related prevention activities and secure systematic on-site safety management capabilities under the management goal of 'LOTTE Data Communication, where both employees and customers are safe and happy'.



We operate a safety and health management system through systematic communication activities between dedicated organizations, business departments, and related entities to create safe environment for all employees, customers, and partners.

Main Activities for Safety and Health

- | | |
|---|--|
| Measures concerning establishment and implementation of the safety and health management system | ① Declaration of the management policy by the manager |
| | ② Review and education on appropriate action |
| | ③ Organization dedicated to safety management office |
| | ④ Composition of workplace professionals (safety/health managers) |
| | ⑤ Inspection/improvement of hazardous factors within the workplace |
| | ⑥ Listening to workers' opinions (2 times/year) |
| | ⑦ Procedures in response to crisis (once semi-annually) |
| | ⑧ Reasonable cost and period standards for subcontractors |
| Management measures necessary for implementation | ⑨ Appropriate budgeting/execution and management of the Safety Management Office |
| | ⑩ Verification of reported results |
| | ⑪ Necessary measures such as manpower, budget, etc. |

Safety Organization

LOTTE Data Communication has established a company-wide health and safety organization under the Safety Management Office. Workplaces with more than 300 employees have an in-house health and safety organization.

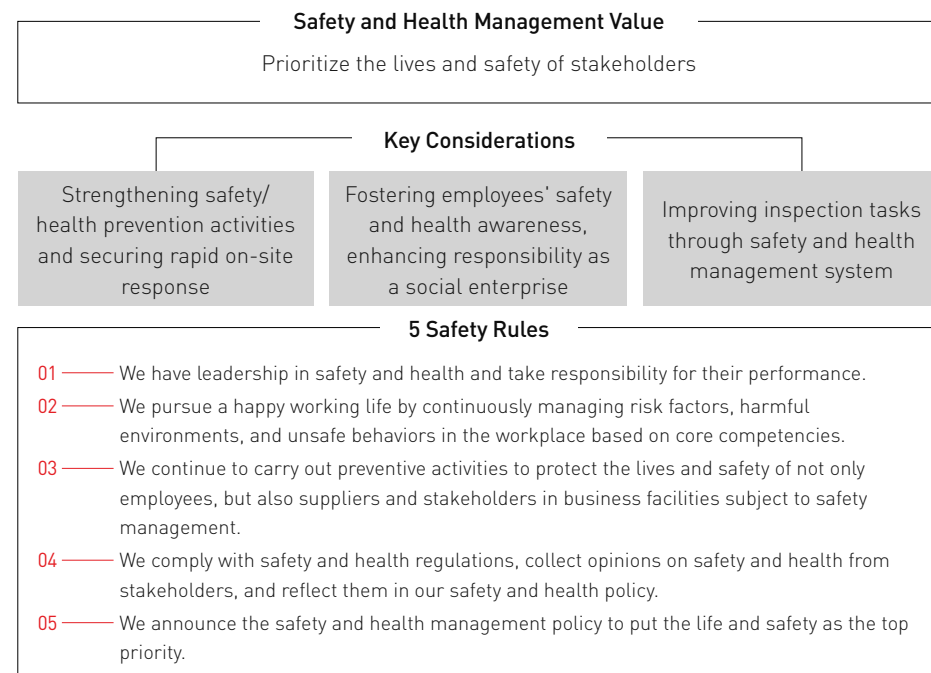


Safety and Health Action Plan





- 2021 Establishment of the safety and health system**
 Safety and health system
 Safety organization system
 • Organizing professional manpower, securing a safety management budget, and establishing an emergency response system
 • Risk assessment, on-site inspection system, and health administration office
- 2022 Enhancement of the safety and health management system**
 Securing safety and health management system certification
 • Securing safety and health Certification: KOSHA-MS, ISO 45001
 Efficient management of operation and management
 • Online safety/health documents, strengthening on-site inspection/training activities
- 2023 Prediction and response to safety and health**
 Integrated project monitoring system
 • Central control of intelligent CCTV and smart IoT equipment
 • Risk and prediction analysis based on tasks planned

Safety and Health Management Policy

LOTTE Data Communication puts the life and safety of its employees and related workers as the top priority in management, and aims to achieve the industry's highest level of safety management based on continuous risk prevention activities and an autonomous safety and health system.



History

May	Joint fire drill (with local fire stations)	January	Launched ceremony for volunteer fire department	
July	Established a safety organization (transferred business from the Management support team)	November	Awarded the 'Minister of Public Safety and Security Award' at the Korea Safety Awards (by the Ministry of Public Administration and Security)	
October	Selected as an exemplary workplace for safety management (with Seoul Fire and Disaster Headquarters)			
2014		2015	제14회 대한민국 안전대상 수상	
	December	Awarded the grand prize for safety evaluation of LOTTE Group	June	Selected as the best building for fire safety
	2018		2017	
	August	Selected as the best building for fire safety	June	Established the Health administration office
			July	Established the Safety management office (directly under the CEO) *Safety/Health/Facility Team
2020		2021		

Workplace Safety and Health Performance

LOTTE Data Communication revised the safety and health regulations in 2021 and holds the Occupational Safety and Health Committee every quarter to discuss and arrive at decisions on important matters related to safety and health issues. The Committee consists of safety-related employees such as employee members, worker members, business site managers and safety managers. We strive to ensure a safe working environment for our employees by establishing plans for prevention of industrial accidents, managing safety and health management regulations, inspecting and improving the working environment, investigating causes of industrial accidents, and performing activities to prevent recurrence.

All workplaces conduct regular safety inspections at least once a quarter to prevent safety accidents, and conduct regular drills in preparation for emergency situations such as fires, earthquakes, and power outages. In addition, we plan to provide quarterly safety and health education online and gradually expand the targets of education such as supervisors and safety and health managers. In the case of construction sites, regular on-site inspections are implemented to prevent safety accidents, and the results of inspection are reported to the Occupational Safety and Health Committee every month to manage the risk of safety accidents. Safety managers at workplaces and construction sites are assigned to the Safety Management Office, an organization in charge of safety and health, to ensure independence of safety management tasks. We plan to continually invest in safety and health by introducing a safety and health management system and an online occupational accident management system.

Industrial Accidents

Category	Item	Unit	2018	2019	2020
Number of work-related accidents	Employees	cases	0	0	0
	Supplier company	cases	0	0	0
Number of work-related fatalities	Employees	cases	0	0	0
	Supplier company	cases	0	0	0
Lost-Time Injuries Frequency Rate (LTIFR)	Employees	%	0	0	0
	Supplier company	%	0	0	0

Employee Health Care Activities

LOTTE Data Communication Headquarters operates a healthcare office where qualified health experts are available to monitor workplace safety and assist with the health management of employees. Health check-ups are provided for all employees to detect and treat diseases at an early stage and thereby promote preventive healthcare. LOTTE Data Communication's health program provides employees with disease and injury prevention and follow-up management processes including consulting on (pre) check-up items and (post) screening and counseling service. We use our programs to ensure employees with processes that can prevent diseases and strengthen follow-up management. In addition, the Healthcare office provides blood pressure measurements, body composition tests, and stress measurements, and supports health promotion activities to help employees create a happy workplace culture and practice self-directed health care.



Healthcare Office

Quality Management

All employees of LOTTE Data Communication are participating in quality management activities to satisfy customers and establish a quality culture. We contribute to sustainable development in terms of environment and society creating innovative values through quality management, customer satisfaction, and continuous improvement of quality.

Quality Management Policy and System

Quality Control Policy and Organization

LOTTE Data Communication is a professional service corporation leading the IT world. All employees are required to participate actively in quality management activities, aimed at achieving customer satisfaction and establishing a culture of quality, by faithfully carrying out the action plan described below.

The Company shall conduct its business while upholding the fundamental values of society, the requirements of the law and all relevant regulations, and the principles stipulated by the Company.

The Company shall meet the requirements of customers and the quality management system (ISO 9001:2015), and take the lead in creating customer value through professionalism.

To ensure the stable supply of products and services, the Company shall establish clear quality objectives along with feasible annual execution plans, and introduce sustained improvements to the quality management system.

The Company shall preemptively identify and resolve any issues that have the potential to threaten the quality of the products and services furnished to customers, based on an understanding of the internal and external circumstances.

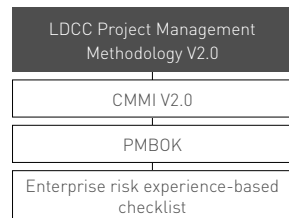
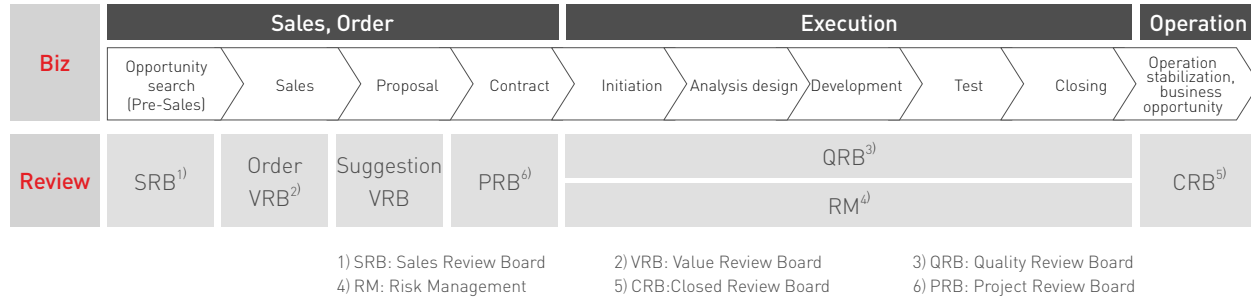
Quality Management Manual

LOTTE Data Communication operates a comprehensive quality management manual to respond preemptively and systematically to the quality requirements and demands of various stakeholders in the service value chain. We subdivide work into stages, manage the quality management manual, and continually improve the quality management system according to stakeholders' needs.



Quality Management System Operation Process

LOTTE Data Communication's quality management system basically complies with ISO 9001, a global standard, and additionally maintains a management system that exceeds the needs of the market and customers.



Project Management Methodology V2.0 | LOTTE Data Communication supports systematic project management based on project PMBOK⁷⁾ and CMMI⁸⁾ based on its unique experience and know-how. In addition, we strive to improve the technological competitiveness of LOTTE Data Communication and its suppliers by sharing methodologies and processes with them.

Project Management System (PMS)⁹⁾ | We are implementing project and quality management activities through PMS, a project management system. PMS is used to identify the progress and risk ratings of each project, and RM management and on-site management are operated along with PMS to ensure comprehensive management of projects.

Quality Mind Education for Employees

LOTTE Data Communication provides education to enable employees recognize the importance of customer satisfaction and quality culture, and to strengthen quality management activities.

Education for Improved Quality Awareness among Employees

Quality mind education	Reinforcing the service level based on quality management standards and establishing a quality culture for enterprises through quality education at department-level
Advanced professionals	Improving business performance ability and fostering professional manpower through regular quality education (understanding the project, managing quality at each stage)
Change management education	Recognizing the importance of quality at project sites and organizing One Team Buildings
Periodic on-site quality management surveys and sharing improvements	Sharing quality control and improvements through surveys on requirements, etc.

7) PMBOK: Project Management Body of Knowledge
8) CMMI: Capability Maturity Model Integration
9) PMS: Project Management System

Global Quality Management Certification

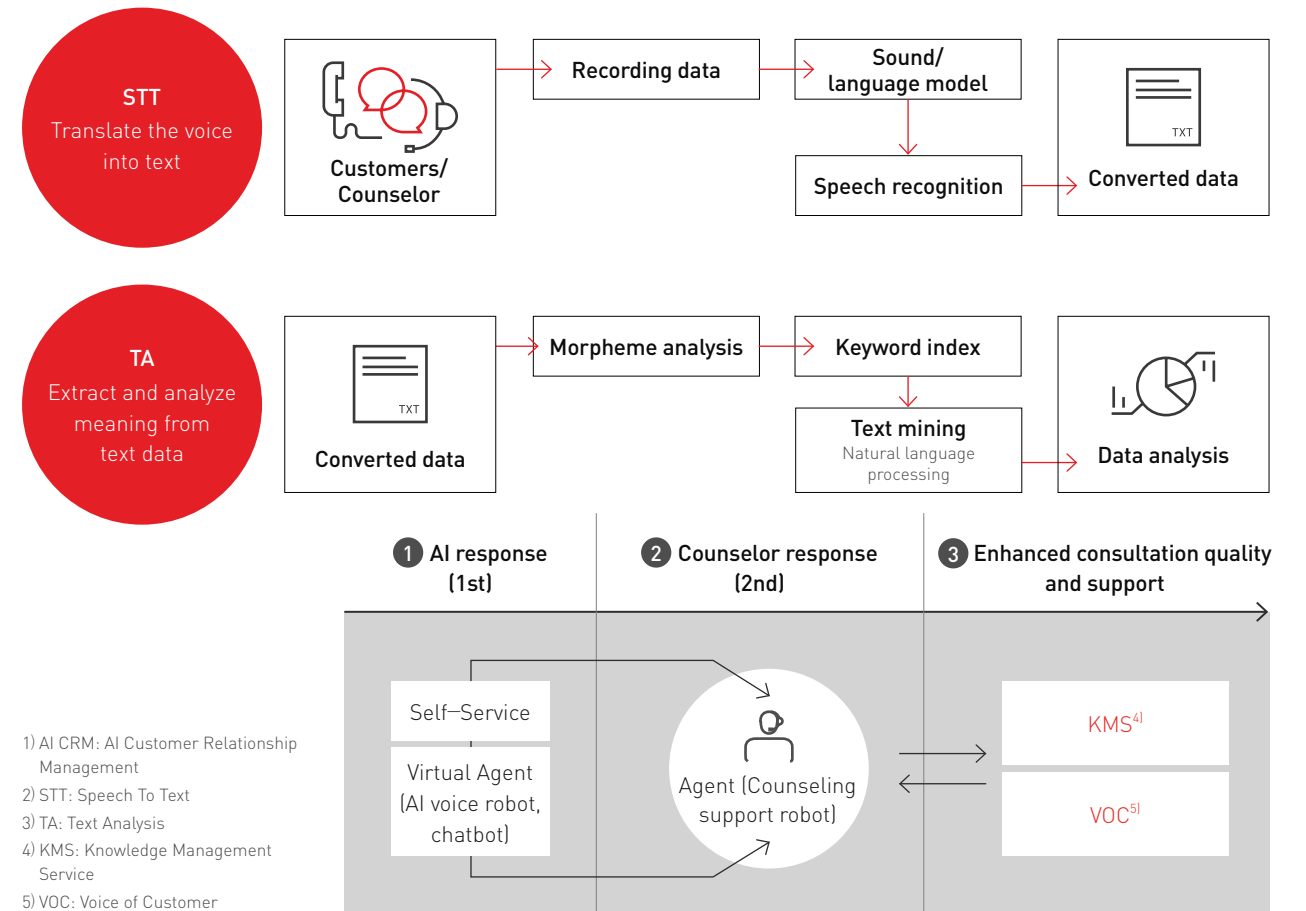
2002- Acquired Information Protection Management System Certification (ISO 27001)
2006- Acquired IT Service Management System Certification (ISO 20000)
2013- Acquired Quality Management System Certification (ISO 9001)
2015- Acquired CMMI (Capability Maturity Model Integration) Level 3 Certification

Customer Satisfaction

Customer Service Channel

LOTTE Data Communication utilizes the AI CRM¹⁾ Center as a customer communication channel. We have been able to improve the accuracy of answers and quality of counseling by applying innovative technologies related to customer consultation to actual sites and in-house technology for business automation chatbots and robots such as STT²⁾/TA³⁾.

CRM Center Using AI



Content Production	
Category	Produced content
Brochures and Leaflets	13
Videos	16
Newsletters	4

Customer Communication

LOTTE Data Communication is conducting various types of communication activities to improve stakeholders trust. To increase access to devices such as laptops and mobile phones, optimization technologies are applied to the LOTTE Data Communication website. The website presents information on various business trends, status, management status, and business changes. We obtained information and communication accessibility certification by complying with accessibility standard guidelines to improve users' convenience, including accessibility for the visually and hearing impaired and the elderly. In addition, we operate a YouTube channel to provide our IT services, solutions, and platform introduction videos, and send newsletters to partners, and plan to expand communication channels.

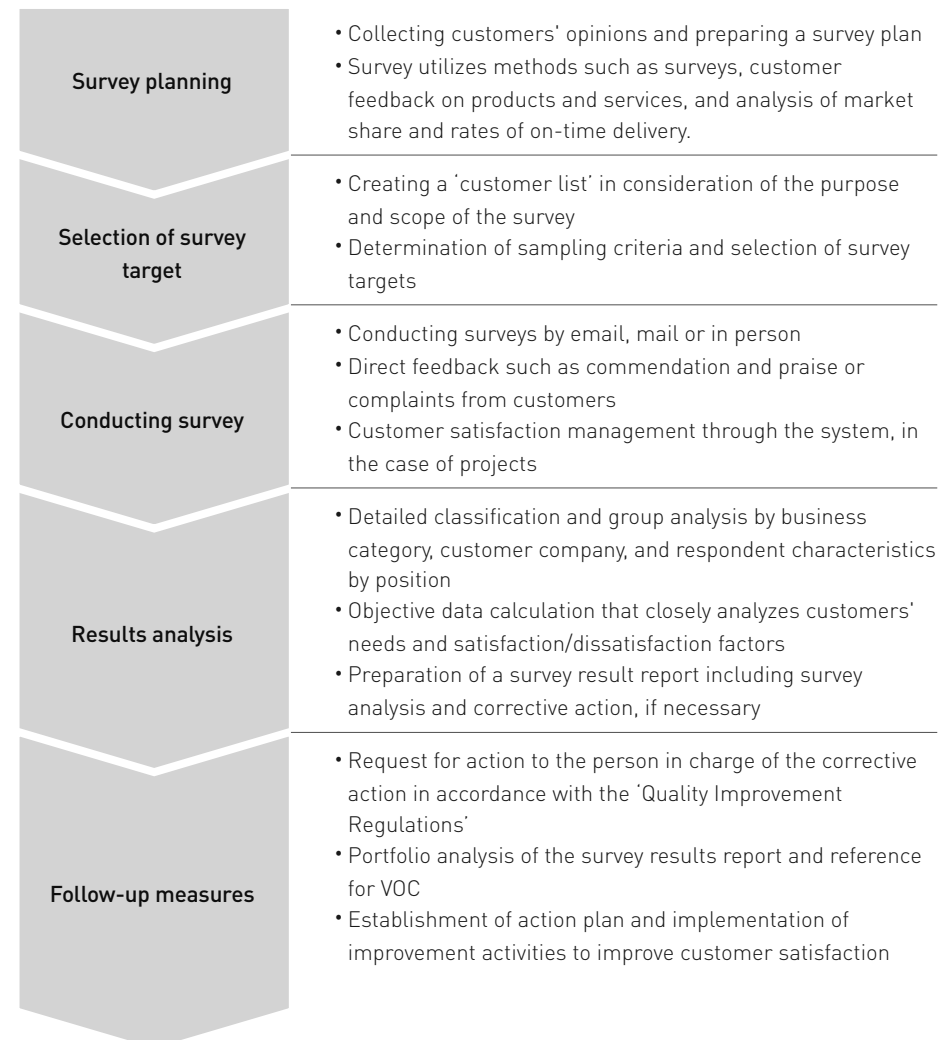
Customer VOC		
Year	Target customer companies	Satisfaction score (out of 100)
2018	18	79.2
2019	18	74.2
2020	17	85.0

Regular Customer Satisfaction Survey

LOTTE Data Communication operates a management system every year to listen to customer opinions and analyze feedback through a satisfaction survey (VOC) and reflect them in our business activities.

1) VOC: Voice of the Customers

Procedure for Customer Satisfaction Survey



Information Protection

LOTTE Data Communication recognizes the importance of information security and personal information protection in accordance with the development of information and communication technologies in the era of the 4th Industrial Revolution. We have established a management system to protect the information of companies and customers.

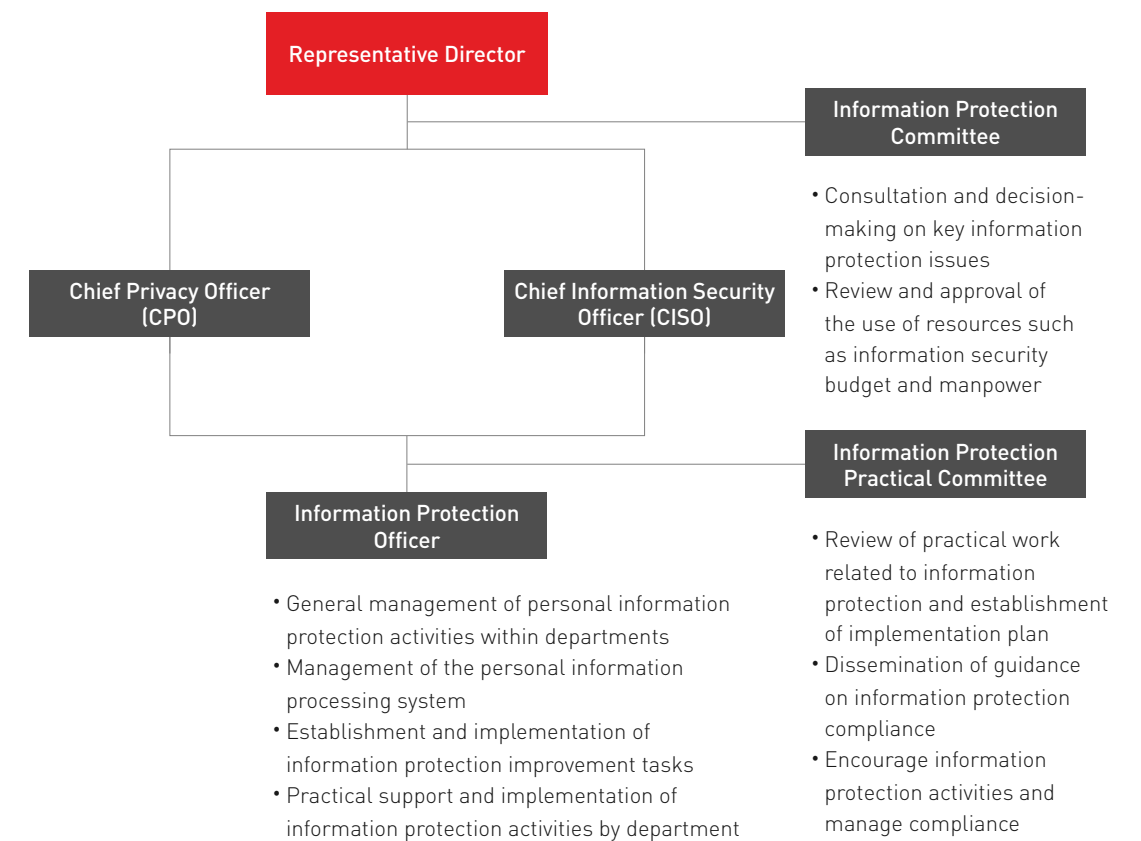
Information Protection System

LOTTE Data Communication provides professional information security solutions to various customers by utilizing its information security management system know-how, accumulated since its establishment in 1996. We acquired the Information Security Management System (ISMS¹⁾) and ISO 27001 certifications to implement global information protection standards. Information systems outside the scope of certification are checked and improved twice a year through our checklist and inspection process.

LOTTE Data Communication not only remains prepared for cyber threats 24 hours a day, but also provides security control services to our customers through a dedicated organization and operational guidelines to respond to breaches of security information. In addition, we are responding preemptively to changing corporate and social demands by strengthening the Endpoint Detection and Response (EDR²⁾) that is suitable for the gradual expansion of non-face-to-face communication environment.

1) ISMS: Information Security Management System
2) EDR: Endpoint Detection and Response

Information Protection Organization



Information Protection Level Diagnosis

Category	Description	Inspector
Self-check	Information protection management inspection by companies	Customer companies
On-site Inspection	Information protection management system inspection - 4 areas, total inspection - Non-contact work environment inspection	Security Policy Team
Performance Management	Enhancement of implementation management for field inspection improvement tasks - Reflecting the transition rate within the final result of the level diagnosis	Security organization for companies

Information Protection Activities

Managing Customers' Personal Information

LOTTE Data Communication operates a detailed management system for each stage of the information life cycle, including collection, creation, storage, utilization, and destruction of customers' personal information. We comply with the standards for encryption and access control, and review all IT infrastructure condition data every month. When entrusting personal information, we regularly monitor the processing status of the consignee and conduct management activities such as recommending pseudonymization for safe use of information.

Strengthening the Information Protection Management System

LOTTE Data Communication is strengthening its IT technology and data on information protection management system by source in consideration of the diversity of industries. Data is protected using a variety of methods, including inspection solutions to strengthen PC security, document encryption, media control, secure USB, blocking of harmful sites, Endpoint Detection Response (EDR), and server and database access control. We operate security systems such as network protection firewall, IPS¹⁾, and anti-DDoS²⁾, respond to real-time attacks through APT³⁾ response system, implement 24/7 control, and perform complex preventive activities such as DR⁴⁾ configuration for disaster preparedness. In addition, data center's information protection management system has been reinforced through ISO 27001 and ISMS certifications. The management system is strengthened throughout the group by means of security checks that are carried out at least twice a year.

1) IPS: Intrusion Prevention System
 2) DDoS: Distributed Denial of Service
 3) APT: Advanced Persistent Threat
 4) DR: Disaster Recovery

Security policy	Security check	Physical security	Security incidents
Security policies and guidelines are established, reviewed, and revised at least once a year to reflect related laws and regulations and update compliance measures.	Mock hacking is conducted every year to check vulnerabilities in infrastructure and mobile apps.	Access control and CCTV video information are provided for access and visitor management.	Control centers and forensics are operated to respond to infringement accidents, malicious codes, and disasters.

Information Protection Education

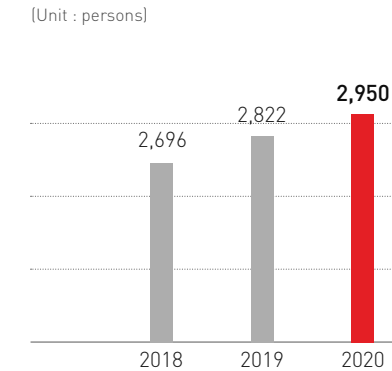
Education for Employees

LOTTE Data Communication provides information protection education every year for all employees. In 2020, we provided online education for all employees on the concept of personal information, laws related to personal information, steps to process personal information, personal information de-identification measures, and how to practice personal information protection.

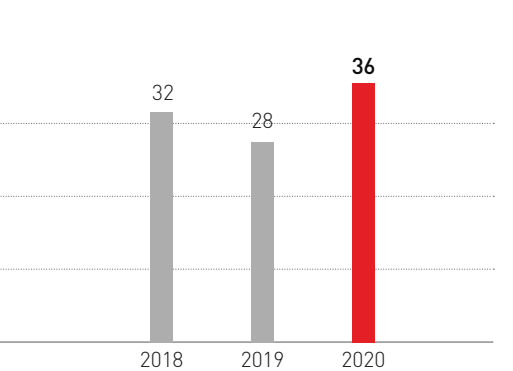
Education for Suppliers

LOTTE Data Communication provides personal information protection and supervision education at least once a year for all supplier companies related to personal information processing and provides online education on information security via a website. We are raising awareness and competency of our suppliers' employees on security management through these educational support activities.

Employees participating in Employee Information Security Education
 (Unit : persons)



Suppliers Subject to Personal Information Protection Education
 (Unit : companies)



Mutual Growth Management

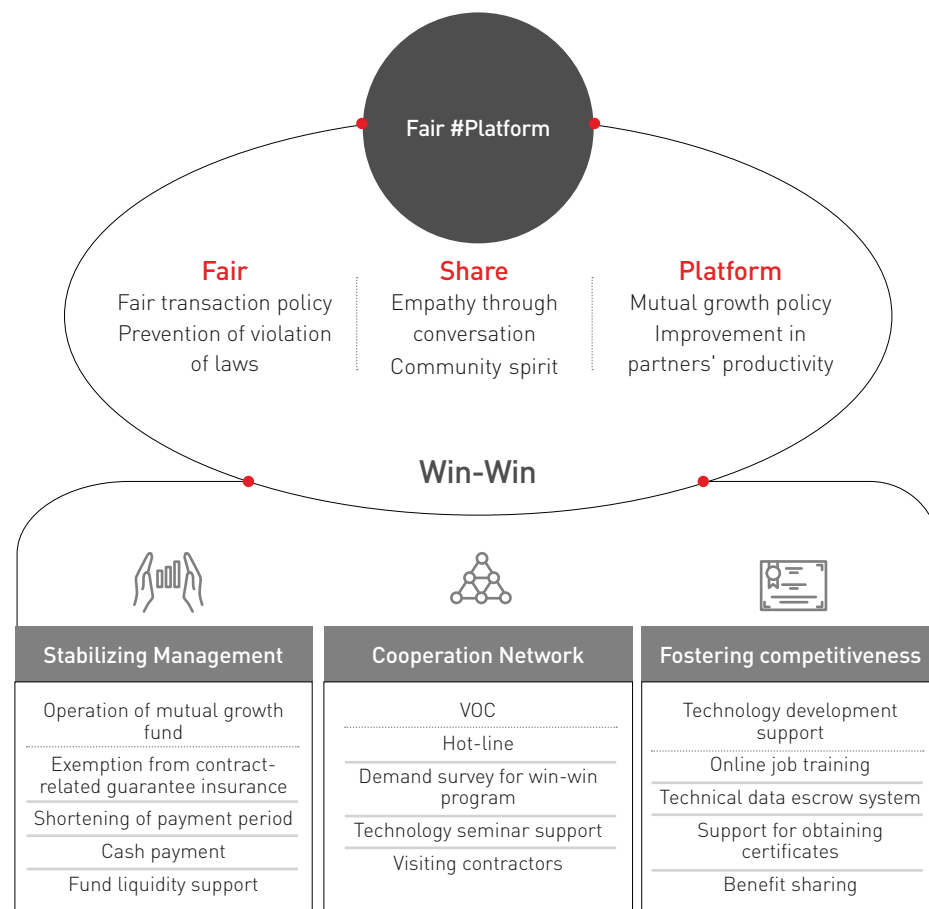
LOTTE Data Communication collaborates with suppliers based on LOTTE's corporate philosophy that considers true win-win as the best value. We will continue to share our vision and strengthen communication with our customers and society to lay the foundations for shared growth and become a global IT company.

Shared Growth

Shared Growth Policy

LOTTE Data Communication pursues shared growth through fair trade and win-win support systems, empathizing with supplier companies. We operate a cooperative network to stabilize the management of suppliers and expand various types of support such as finance, R&D, and education. In recognition of these activities, LOTTE Data Communication acquired an excellent grade in the '2019 Win-Win Index Evaluation'.

Direction of Shared Growth



Shared Growth Framework

LOTTE Data Communication manages subcontracting transaction guidance, shared growth systems, and activities through the 'Shared Growth office'. A Shared Growth team has been established under the ESG office, wherein a manager is in charge of shared growth initiatives. In this way, we are building a company-wide collaboration system for shared growth with suppliers.

Shared Growth Program

Financial Support | LOTTE Data Communication has created a mutual cooperation fund worth KRW 12 billion since 2018 to support activities from supplier companies to enhance mid- to long-term competitiveness such as operating fund support, R&D and investment in new businesses. In addition, we have created a mutual cooperation fund worth KRW 175 million for the Korea Industry cooperation foundation for Large, SMEs, Agriculture and Fisheries to support job training for supplier companies.

Technical Support | LOTTE Data Communication strongly recommends SMEs to register their core technologies with the Korea Industry cooperation foundation for Large, SMEs, Agriculture and Fisheries through the Technical Data Escrow System. We protect our suppliers' technologies and support their continued technological growth by fully supporting the cost for the Technical Data Escrow System. In addition, we support the development of new technologies and localized products through joint R&D activities.

Training Support | LOTTE Data Communication supports online training to strengthen supplier companies' competitiveness. We provide 540 training programs and support total amount of training expenses on a monthly basis. With a view to enhancing the competitiveness of our suppliers, we support their employees to acquire certifications. We make efforts to enhance competitiveness of SMEs by paying the cost of textbooks and certificate application fees required to obtain certifications. In 2020, 416 people from 31 suppliers completed job training to enhance their competitiveness.

Online Training Support for Suppliers Employees (540 programs)



Suppliers Communication

LOTTE Data Communication uses various shared growth win-win channels to promote two-way communication with suppliers.



Shared Growth Meeting

Discussion Meeting

- Shared growth agreement with supplier CEOs
- Working-level communication, collaboration, and sharing activities
- Supporting supplier companies to develop new markets through consultations on domestic purchase
- Each year, technical seminars for suppliers are held from time to time to introduce the key solutions developed by suppliers to people in charge of purchasing, sales, and related business departments.

SNS Communication Channel

- FAQ for major inquiries through chatbot
- Providing notification on the progress of purchase procedures, such as request for quotation, order, payment, etc.
- Promotion of key solutions of suppliers

Communication Channel for Suppliers

LOTTE Data Communication operates a variety of channels such as an account for communicating opinions with suppliers, surveys and meetings to listen to their opinions. In order to listen to suppliers' opinions, we operate the 'CEO Hotline' through corporate mobile phones for suppliers and 'GominPeggi (Remove Concerns)' Reporting on the website to receive their opinions on grievances and unfair practices during transactions.

Fair Transaction Practices

Fair Transaction Governance

In order to foster fair transaction relationships with suppliers, LOTTE Data Communication discloses the 4 Fair Trade Guidelines of the Fair Trade Commission on its website, and is actively implementing practices, such as checking purchase procedures on a frequent basis.

LOTTE Data Communication's Four Fair Transaction Practices

Guidelines for Suppliers	Guidelines for the Internal Deliberation Committee	Guidelines for the issuance and preservation of documents	Guidelines for best practices in signing contracts
<ul style="list-style-type: none"> - Transparency and fairness in the selection and operation of supplier companies - Guidelines for preventing violations of the Act on Fair Subcontract Transactions (Subcontract Act) 	<ul style="list-style-type: none"> - Self-deliberation on the fairness and legality of subcontracting transactions - Detailed instructions for prevention of violations of the Subcontracting Act 	<ul style="list-style-type: none"> - Specific standards related to the issuance and preservation of documents in subcontract transactions - Promotion of advanced practices for issuance of documents and establishment of fair subcontract transaction order 	<ul style="list-style-type: none"> - Specific criteria for signing contracts between large companies and SMEs - Detailed instructions for rational and fair transaction practices

In 2020, we reorganized the purchase management regulations to clarify fair transaction procedures, bidding guidelines, and private contract standards based on the Subcontracting Act, and enacted and announced evaluation guidelines for evaluators to ensure fair evaluation of supplier companies' proposals. In 2021, the purchase management regulations were supplemented with bidding-related standards and the requirements for cancellation of registration of supplier companies were also revised.

Compliance Manager | LOTTE Data Communication manages a Compliance Program (CP) for fair transaction practices. The Compliance Program is managed by a Compliance Manager with the approval of the Board of Directors. The Compliance Manager establishes the process for execution of the Compliance Program and reports the fair transaction performance and plan to the BOD on a semi-annual basis.

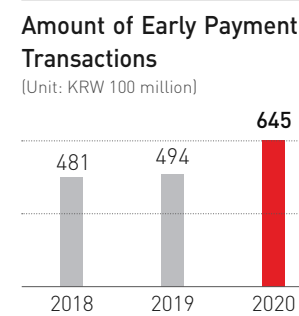
Fair Selection of Suppliers

Standard Subcontractor Agreement | LOTTE Data Communication signs subcontracts in conformance with the standard subcontractor agreement (seven types) recommended by the Fair Trade Commission to prevent unfair transactions. The subcontracts stipulate special agreements to protect the rights and interests of subcontractors. Furthermore, we adopted an electronic contract system through the supplier collaboration portal 'ePartner' and electronic contract site "ECS" to prevent verbal award of orders, unreasonable order cancellations, and other unfair transaction practices.

Code of Ethics | LOTTE Data Communication promises a fair and transparent transaction through the Ethical Management Declaration signed by its suppliers to eradicate unethical behaviors such as corruption and irregularity. In addition, a fair transaction pledge system has been adopted for suppliers participating in the bids to induce them to recognize risks of unfair corporate actions such as collusion between suppliers. Suppliers who violate these rules are prohibited from business with LOTTE Data Communication for two years.

Fair Transaction and Fair Contract

Early Payment Transaction | LOTTE Data Communication integrates an early payment program for suppliers during the Lunar New Year or Chuseok holidays. The program has been operated since 2008, in which early payments made in the past three years amount to KRW 162 billion. In addition to the early payment for the holidays, we have a management system to proceed emergency payment requests from suppliers and conduct additional early payments if necessary.



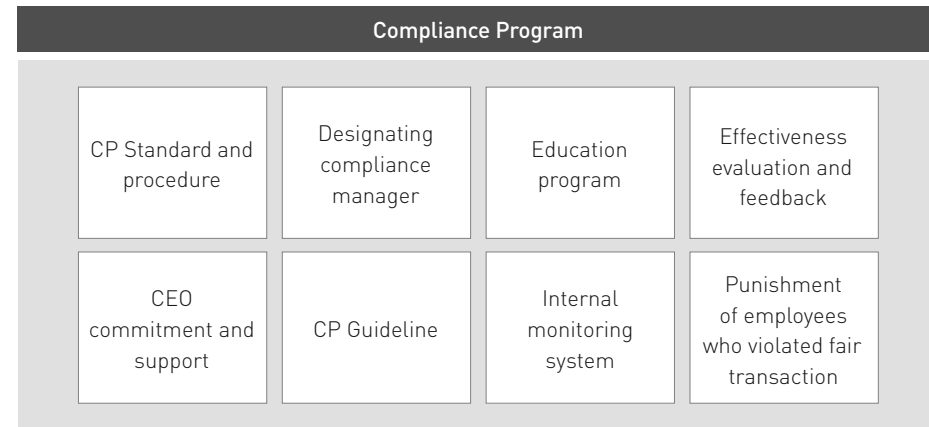
Evaluation of Suppliers' Sustainability Practice | LOTTE Data Communication has introduced a policy to consider the sustainability management level of suppliers in the evaluation and selection process. In doing so, we plan to make it mandatory for suppliers to submit statements on ESG management requirements such as protection of human rights, measures to address environmental pollution, and prevention of safety accidents when signing contracts and establish a system that promotes supplier companies' efforts to improve their ESG management system.

Fair Transaction Program

Compliance Program | LOTTE Data Communication operates the Compliance Program (CP) to carry out transparent and legitimate management activities. The Compliance Program is intended to establish a system to prevent violations of laws and comply with the guidelines. In July 2014, the Representative Director as well as all the directors and employees of LOTTE Data Communication worked together and voluntarily declared the CP to ensure compliance with the principles of fair transactions. In 2021, we implemented compliance activities such as revising the CP manual based on the latest laws, distributing contract checklists, and training and monitoring employees.

Fair Transaction Activities | LOTTE Data Communication is carrying out various activities to promote fair transaction management and the Compliance Program in line with related regulations.

Core Elements



Unfair Transactions and Unethical Conduct

Unfair corporate actions, unfair transactions with subcontractors, and other violations of the Fair Trade Act and Subcontracting Act

Acts involving the receipt of money/valuables or the demanding of money/values using one's position or rank

Unauthorized release or disclosure of trade secrets or personal information, etc.

Other illegal acts related to labor, knowledge assets, environment, and safety, etc.

Compliance Inspection | LOTTE Data Communication is carrying out company-wide compliance inspection activities. We prevent violations in advance through preliminary reviews by the compliance department whether there is any risk of law violation. We aim to promote a systematic culture of compliance by requiring a checklist to be prepared and attached when signing a contract. In addition, fair transaction education is provided to strengthen capabilities of the compliance manager.

Fair Transaction with Suppliers | LOTTE Data Communication conducts various fair transaction and mutual cooperation activities for suppliers every year, including supporting management stabilization, fostering competitiveness, strengthening employees' capabilities, and establishing cooperative networks. We continue to improve the transparency of the fair transaction system by standardizing the provisions on the protection of suppliers' rights and interests in transaction contracts and sending messages notifying contract progress to suppliers. The Subcontract Deliberation Committee reviews contracts and compliance with related laws every month and manages the process to prevent disadvantages to subcontractors.

Fair Transaction and Anti-corruption | LOTTE Data Communication operates an employee counseling center as part of the internal help desk at all times to encourage a voluntary compliance with the laws including on fair transaction, anti-corruption, and economic sanctions, and provides additional external advice. In addition, we operate a whistleblowing system supervised by the Compliance Manager within the ESG Office to identify unfair transactions and unethical conduct.

Fair Transaction Education for Employees

LOTTE Data Communication provides regular and frequent training to its employees on related regulations such as the Fair Transaction Act and the Subcontract Act, compliance matters, and the latest trends in compliance management.

Social Contribution

LOTTE Data Communication pursues shared growth with the local community through a wide range of regularly scheduled community service activities based on IT technologies, including the CharLOTTE Volunteer Group.

Corporate Social Responsibility Strategies

LOTTE Data Communication strives to build a better society under the slogan 'Small Gestures Change the World'. We conduct activities to donate talent, encourage employee participation, and promote collaboration with related organizations to create social value based on IT, which is the field of the company's specialization.

Slogan	Small Gestures Change the World		
Mission	Sharing experiences to create a world where everyone smiles together		
Activities	IT Talent Donation	Activating Employee Participation	Enhancing Value through Collaboration
Objective	Specialized ICT social contribution activities utilizing the IT capabilities of employees	Establishment of a sound corporate culture through a system of granting credits for volunteer activities, etc	Improving social contribution values and quality through collaboration with various

Achievements

LOTTE Data Communication carries out various social contribution activities with the participation from all employees.

2018-2021 Social Contribution Activities

Category	Program
IT education	<ul style="list-style-type: none"> Coding education for the underprivileged IT-related career counseling
Resolution of social problems	<ul style="list-style-type: none"> Weeding of the Siheung Stream Blood donation Organizing the graveyard for patriots
Services for the vulnerable and underprivileged	<ul style="list-style-type: none"> Kimchi sharing for the local community in cooperation with the Geumcheon-gu Office Charcoal briquette community service Making a muffler of love through the 'Heart Temperature 37' campaign Bead crafts for children T-shirt making DIY activities Making an ecobag (eco-friendly bag) of love Kimchi sharing event by the LOTTE Group Purification plants (Scandiamos) for children's centers "Happy" photo-taking volunteers Construction of tile wall painting at children's centers
Services for the disabled	<ul style="list-style-type: none"> Outing experience with the disabled Braille book for the disabled



1 Coding education for the underprivileged
 2 Organizing the graveyard for patriots
 3 Sharing briquettes



4 Sharing Kimchi with Love
 5 Activities with regional children's centers
 6 'Sharing Life' with blood donation
 7 Activities to remove harmful plants

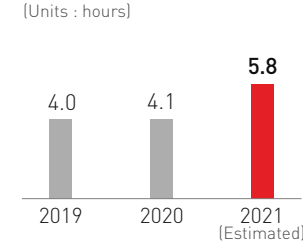


IT Supporters

IT Supporters is a volunteer group composed of employees who have completed professional training based on the company's IT capabilities. Through this group, employees conduct various IT social contribution activities for everyone to enjoy equal access to education and information. Prior to COVID-19, a total of 105 persons completed professional course (2019).

Children/ youth from underprivileged families	Person with visual impairments	Other NGOs	Local childcare center
Coding education/ IT related career counseling for the underprivileged	Making books for the blind Making and distributing books for the blind, an initiative started in 2020	PC support activities for vulnerable groups in a connection with various NGOs	Electronic equipment support and coding education at children's centers

Average hours of employee volunteers
 (Units : hours)



CharLOTTE Volunteer Group

The CharLOTTE Volunteer Group makes contributions to social values under various themes every month, including people, environment, and regional development. The group conducts social contribution activities every month for local communities such as residents of Geumcheon-gu. There were about 1,300 beneficiaries over four years.

LOTTE Data Communication plans to increase its funds and its number of participants by encouraging employees to participate in social contribution activities.

Governance

LOTTE Data Communication is laying the foundations for upright and sustainable corporate growth by building trust with stakeholders through a transparent and sound governance and a business environment that enables rational decision-making.



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97	Compliance and Ethical Management
101	Risk Management

Governance

LOTTE Data Communication systematically manages economic, social, and environmental risks based on a sound and transparent governance. In addition, we are working hard to consolidate the foundation for sustainable management and create future corporate value by continuously improving the governance.

Board of Directors (BOD)

BOD Governance

The Board of Directors for LOTTE Data Communication has been composed as prescribed by the relevant laws and the Articles of Association. The BOD has the authority to make decisions on key management issues as stipulated by the Commercial Act and the Articles of Association and delegated by the general meeting of shareholders. The BOD also reviews and confirms the basic company management policies and business execution, and the general principles concerning the execution of directors' duties.

LOTTE Data Communication ensures the independence of directors so that the BOD can supervise the company's business execution in an objective manner. As of the end of September 2021, the BOD maintains four executive directors and three non-executive directors, thus satisfying the target set in the Commercial Act in terms that non-executive directors should always make up at least 1/4 of the total number of directors. We appointed Jun-hyung Rho, Representative Director, as the chairman of the BOD to increase the efficiency of operation and decision-making by the BOD.

Members of the BOD [As of September 2021]

Position	Name	Position	Major Career	Tenure
Executive Directors	Jun-hyung Rho	- Representative Director - Chairman of the Board of Directors	- Director, DT Business Headquarters at LOTTE Data Communication - Director, Management Strategic Headquarters at LOTTE Data Communication	2017.11.02-2024.3.19 [Reappointment]
	Kwang-woo Oh	- Director, Cross Function Division	- Director, SM Business Headquarters at LOTTE Data Communication - Director, Platform Business Headquarters at LOTTE Data Communication	2017.11.02-2022.3.27 [Reappointment]
	Doo-young Ko	- Director, DT Business Headquarters	- Director, Smart System Division at LOTTE Data Communication - Executive, DT Business Headquarters at LOTTE Data Communication	2021.3.19-2023.3.19
	Kyung-yub Kim	- Director, Management Strategy Headquarters	- Head of Business Solution Division at LOTTE Data Communication - Head of Management Support Division at LOTTE Data Communication	2021.3.19-2024.3.19
Non-executive Directors	Sung-gyu Lee	- Chairman of the Outside Director Nomination Committee	- [Former] Commissioner of the Seoul Metropolitan Police Agency - [Former] Chairman of the Board, Police Mutual Aid Association	2017.11.02-2022.3.27 [Reappointment]
	Cheol-kyu Hong	- Chairman of the Audit Committee - Chairman of the Remuneration Committee	- [Present] Dean of College of Business & Economics, Chung Ang University - Ph. D of Accounting from London College of Economics	2020.3.27-2022.3.27
	Hong-suk Yang	- Chairman of the Transparent Management Committee - Chairman of the ESG Committee	- [Present] Dean of Center for Case Development, College of Business Administration at Seoul National University - Ph. D of Business Administration from University of Chicago	2020.3.27-2022.3.27

BOD Committees

LOTTE Data Communication operates five committees under the BOD. The committees are composed of members with expertise tailored to the characteristics of each committee to ensure the independence of committees in accordance with the requirements of Article 393, Paragraph 2 of the Commercial Act.

Committee	Chairman	Director Name	Roles
Audit Committee	Cheol-kyu Hong, Non-executive director	Hong-suk Yang, Non-executive director Sung-gyu Lee, Non-executive director	- Review of financial statements - Investigation on the performance of directors duties, the company's management and financial position - Appointment of the external auditor / Internal risk management and control
Transparent Management Committee	Hong-suk Yang, Non-executive director	Cheol-kyu Hong, Non-executive director Kwang-woo Oh, Executive director	- Approval of large-scale internal transactions under Article 11-2 of the Monopoly Regulations and Fair Trade Act - Approval of important internal transactions with affiliates and related parties.
Remuneration Committee	Cheol-kyu Hong, Non-executive director	Sung-gyu Lee, Non-executive director Kyung-yub Kim, Executive director	- Approval of remuneration limit for registered directors; to be submitted to the General Meeting of Shareholders - Approval of individual remuneration for registered directors
Outside Director Nomination Committee	Sung-gyu Lee, Non-executive director	Hong-suk Yang, Non-executive director Doo-young Ko, Executive director	- Recommendation of candidates for non-executive directors to the General Meeting of Shareholders
ESG Committee	Hong-suk Yang, Non-executive director	Cheol-kyu Hong, Non-executive director Jun-hyung Rho, Executive director	- ESG-based major investment decisions - Internalizing sustainability and managing key ESG risks and opportunities

Internal BOD [As of 2020]

Category	No. of meetings	No. of items discussed
Audit Committee	7	17 (No. of decisions: 7, No. of reports: 10)
Transparent Management Committee	6	9 (No. of decisions: 5, No. of reports: 4)
Remuneration Committee	2	2 (No. of decisions)
Outside Director Nomination Committee	2	2 (No. of decisions)
ESG Committee*	-	-

*Established in 2021

Independence of the BOD

LOTTE Data Communication appoints its directors, selecting candidates who meet the requirements for transparent corporate management at the General Meeting of Shareholders. Candidates for executive directors are recommended by the BOD, and non-executive directors are composed of candidates recommended by the Outside Director Nomination Committee. The Outside Director Nomination Committee verifies that a candidate has no disqualifying reason, meets the requirements prescribed by laws and regulations and the Board of Directors regulations, and is capable of promoting the interests of the company and shareholders. LOTTE Data Communication guarantees the participation of non-executive directors. The Audit Committee is composed of three non-executive directors to ensure independence and autonomy of the auditing process. In addition, the Audit Committee strengthens the control function of the management to induce responsible management and enhance the objectivity and reliability of audits. All committees other than the Audit Committee consist of a majority of non-executive directors in accordance with company rules and related laws.

LOTTE Data Communication restricts 'transactions between directors and the company' in accordance with relevant laws and operating regulations of the BOD to minimize the risk of conflicting interests in the decision-making of the BOD. If a director's interest in a particular matter is confirmed, that director cannot exercise his or her voting rights regarding the particular matter. The major transactions between a director and the company and the relationship between the director and the largest shareholder are disclosed in the business report.

BOD Meetings Held

 **9 times**

No. of Decisions

 **21 times**

No. of Reports

 **12 cases**

Average attendance rate of directors

 **95.16%**

Attendance rate of executive directors and non-executive directors

 **100%**

[As of 2020, Unit: times/cases]

Expertise and Diversity of the BOD

LOTTE Data Communication appoints directors with diverse backgrounds and expertise to respond to the rapidly changing business environment and support the BOD in making timely and effective decisions. The Representative Director is the best expert in the IT service domain and promotes responsible management as the chairman of the BOD. Outside Director Nomination Committee reviews and recommends candidates with expertise and experience in various areas such as management, accounting, and law as non-executive directors. The non-executive directors are appointed by the final determination of the General Meeting of Shareholders to ensure that the directors have the necessary skills and capabilities to supervise and advise the management. LOTTE Data Communication is committed to ensure that the BOD can make important decisions based on a broad perspective by considering the interests of stakeholders including shareholders and customers. We do our utmost to compose the BOD with directors from diverse backgrounds, without discrimination based on gender, age, educational background, religion, or political orientation.

BOD Operation Policy

The BOD holds regular and ad hoc board meetings presided by the Chairman of the BOD. Regular board meetings are held once a quarter, and ad hoc board meetings are held any time in case of urgent matters that require resolutions by the BOD. These resolutions are passed based on a majority of votes, but some decisions are made based on the approval of two-thirds or more of the total number of directors.

BOD Evaluation and Remuneration

The remuneration limit for directors is determined at the General Meeting of Shareholders based on the resolution of the Remuneration Committee in accordance with the Commercial Act and the Articles of Association. The total remuneration including basic salary and bonus is determined within the limit. Bonus is calculated considering leadership, ethical management, and other contributions to the company as well as the company's management performance, including sales and operating profit in accordance with the regulations regarding executives' remuneration. However, non-executive directors and members of the Audit Committee are not subject to evaluation and compensation, and are excluded from the performance-based payment to maintain their independence.

[As of 2020, Unit: KRW million]

Category	Number of Persons	Total Amount of Remuneration	Average Remuneration per Person
Executive Directors	4	2,410*	602
Non-executive Directors	3	232	77

*Including 1,318 (KRW million) of retirement allowance within the remuneration for executive directors

Strengthening Social Responsibility of the BOD

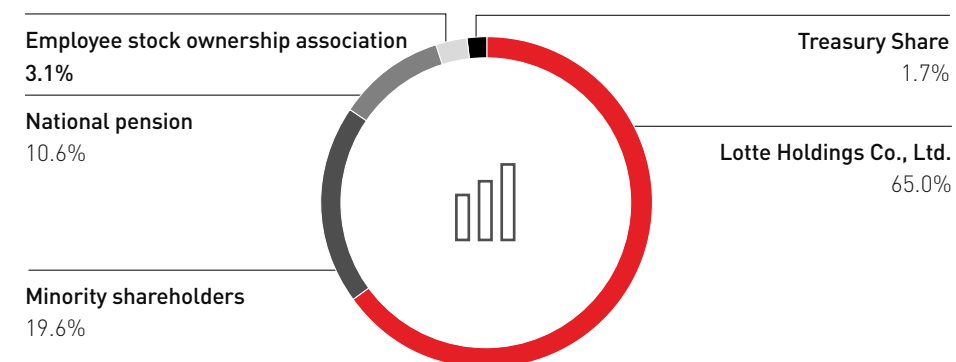
LOTTE Data Communication established the ESG Committee under the BOD in July 2021 to establish the direction of ESG management and make effective decisions. In addition, the ESG Office was established to support strategies and decision-making of the ESG Committee.

Shareholders & Investors

Stocks and Shareholders

As of December 31, 2020, the number of shares listed of LOTTE Data Communication was 15,396,331 shares, of which the number of outstanding shares was 15,129,367 excluding 266,964 treasury shares. No class shares were issued except for common shares, and the par value was KRW 5,000.

Shareholder Composition



Category	Ordinary shares	Par value in KRW
Number of shares listed	15,396,331	5,000
Treasury shares	266,964	
Outstanding shares	15,129,367	

Policies to Protect Shareholders' Rights and Interests

According to the Articles of Association, LOTTE Data Communication holds the regular General Meeting of Shareholders within 3 months after the end of the business year, and announces the date, place, and agenda of the Meeting 14 days in advance to ensure that shareholders can review the agenda comprehensively and exercise their voting rights. In addition, an electronic voting system was introduced at the regular General Meeting of Shareholders in March 2021, allowing shareholders to exercise their voting rights electronically without attending the General Meeting of Shareholders. We disclose quarterly results transparently through the data disclosed at the Financial Supervisory Service website as well as our website, and hold IR events from time to time to enhance shareholder value and expand communication with the market. In addition, we are actively implementing a stable return policy to improve shareholder value by maintaining stable cash dividends and dividend payout ratios.

Dividend Payout Ratio

Category	Unit	2018	2019	2020
Cash dividends per share	KRW	650	700	700
Total cash dividends*	KRW million	9,286	10,591	10,591
Dividend ratio	%	35.3	20.0	35.5

* All dividends are structured as cash dividends and the figures of dividend table are calculated based on the consolidated business report.

Distribution of Economic Values to Stakeholders

[Consolidated basis, Unit: KRW million]



Compliance and Ethical Management

Our highest priority in all our management activities is to uphold our strong sense of ethics. As part of this promise, we have set regulations that all employees are required to comply with.

Ethical Management

Ethical Management System

LOTTE Data Communication operates an ethics charter, Code of Conduct, and practice guidelines, and strives continually to consolidate its ethical management system by diagnosing compliance and identifying improvements.

Ethical Management System (3C)		
Code of Conduct	Consensus by Ethical Education	Compliance Check Organization
We have established specific and explicit guidelines and regulations for corporate ethics compliance.	We regularly and systematically conduct ethical education programs to improve awareness among all employees.	We operate a committee solely dedicated to the task of monitoring compliance and operating our internal compliance reporting system.

Establishment and Operation of Guidelines on Management Principles

LOTTE Data Communication strives to secure a sound development of the company and customer trust by operating its business fairly and transparently in compliance with laws, company rules and Code of Conduct.

Trust with Customers	Trust with Employees	Trust with Suppliers	Trust with Shareholders	Trust with Society
Providing the best products and services, honest marketing, protection of customer information, brand protection	Fair opportunity and treatment, mutual respect among members, gender equality, a safe working environment, protection of assets and intellectual property, prevention of information leakage	Compliance with fair trade laws, respect for suppliers, fair competition, lawful collection of information, and prohibition of corruption and solicitation	Improving shareholder value, preventing conflicts of interest, enhancing accounting transparency, and prohibiting insider trading	Environmental protection, social contribution and creation of social value, respect for human rights, respect for cultural diversity, compliance with laws and regulations of each country, separation of politics and economy

Internal Control System

The audit department of LOTTE Data Communication receives the annual audit plan approved by the Audit Committee and reports the performance. The audit department conducts major risk-based audits and conducts follow-up monitoring for audit activities, and systematically monitors issues related to unethical or illegal transactions and behaviors through a survey on violations of internal regulations (negligence, sexual harassment, workplace bullying, etc.).

We hold meetings for Subcontract Deliberation Committee once a month to check whether employees comply with the subcontract law in accordance with the 'Practices for Establishment and Operation of the Subcontract Deliberation Committee'. The Subcontract Deliberation Committee prevents compliance risks through prior deliberation on subcontracts, takes action on risks through payment and post-contract deliberations, and reviews implementation and operation of win-win policies.

In 2020, the Committee was held a total of 12 times to respond to suggestions and improve supplementary items based on reviewed results. The Subcontract Deliberation Committee's actions are posted on the LOTTE Data Communication's website for the benefit of partners. In addition, we have enacted internal accounting management regulations to reinforce the internal accounting management system. The operation results of the internal accounting management system are reported to the General Meeting of Shareholders, the BOD, and the Audit Committee every business year in accordance with relevant laws. In addition, members of the Audit Committee evaluate operation of the internal accounting management system every business year and report the results to the BOD, and continue to develop the internal accounting management system through external audits.

Ethical Management Activity

LOTTE Data Communication held the Ethical Management Proclamation Ceremony on November 8, 2019 to promote the Ethical Management Charter, while sharing the Ethical Management Pledge for all employees to promote compliance with related internal policies and systems. The Pledge consists of content on trust with customers, employees, suppliers, shareholders, and society based on the LOTTE employee's Code of Conduct. In addition, new employees are required to sign the Ethical Management Pledge through the HR system annually.

Anti-Corruption

Internal Regulations | LOTTE Data Communication has laid down the Ethics Charter, the Code of Conduct and the Code of Practice for ethical management to encourage employees to adopt proper value and behavior based on its management principles. We operate compliance control standards and operational regulations that include the requirements of relevant laws according to the Board of Director's resolution.

Integrity Practice Rules | In July 2021, LOTTE Data Communication established the Integrity Practice Rules based on compliance with anti-corruption laws and regulations regarding illegal solicitation and bribery. Accordingly, we have established a system for management of illegal risk and are continuously strengthening the level of management.

Corruption Reporting Channel

LOTTE Data Communication operates the Reporting Center to strengthen business transparency and accountability and to eradicate corruption that undermines customer value. We provide ethical management education on where and how to report corruption for

Number of Reports on the Reporting Center



Category	2018	2019	2020
Corruption	3	5	4
Public Complaints	3	1	4
Other	1	0	3

Whistleblower System Process



employees, and post regular updates on how to report corruption on the bulletin board on our website. In addition, we receive reports on irregularities and corrupt practices by employees from internal and external stakeholders such as employees, suppliers, purchasers, customers, and shareholders. We manage and disclose the progress and results of such reports received through various channels such as e-mail, telephone, and the Reporting Center on our website in accordance with internal regulations. Protection policy is implemented for reporters to ensure that they are not subjected to any disadvantage due to the reporting.

Informant Protection System

 Items subject to protection	<p>An informant is subject to protection when the informant submits accurate evidence with his or her real name. Information on reporter's stakeholders are protected</p> <ul style="list-style-type: none"> • Informant's identity • Evidence or information presented by the informant • Matters that may imply the person to be consulted • Follow-up measures after reporting
 Protection policy	<ul style="list-style-type: none"> • Information on the informant and reports are kept strictly confidential, and the reporting system is protected by a safe security system. A report is handled by a limited number of persons who have pledged to strictly adhere to the confidentiality of the contents of the report. • Informant's identity and the contents of reports are protected by means of a series of reporting process, including review, handling, and implementation. We strictly manage the rights, roles, and responsibilities of those with access to the information. In addition, we manage the process strictly to prevent any disadvantages or punishment against informants after the process.

Ethical Management Education

LOTTE Data Communication conducts ethical management education and PR activities for the benefit of employees. We provide online education for employees every year and require new employees to undergo mandatory compliance education, such as proper management of company assets, prevention of unfair transaction, and information protection. In 2020, a total of 2,803 employees participated in various educational programs on topics such as fair transaction, prevention of sexual harassment, ethical management, and human rights education.

Compliance Management

Compliance Management System

Compliance Management Policy and Direction | LOTTE Data Communication's employees are aware of the importance of compliance management. We establish and operate systems, standards, and organizations necessary to practice compliance management in relation to all stakeholders. In addition, LOTTE Data Communication reports major compliance management plans and performance to the BOD.

Year	Major Compliance Management Activities
2020	- Established compliance system for each sector, such as fair transaction and subcontracting, anti-corruption, employment, and labor (dispatching law), protection of personal information and trade secrets, etc. - Improved processes such as distributing guidelines to comply with the Fair Transaction Act and revising company rules
2021	- Distributed a contract review checklist and a fair transaction compliance manual based on amendments to the Fair Transaction laws

Compliance Management Organization

Category	Role of the Compliance Management Organization
BOD, CEO	Determination of the compliance management plan and direction of implementation, deliberation, and resolution on agenda items.
Mutual Growth Management Team	Preliminary risk review, education on compliance system and law, monitoring of subcontract transaction, reviewing policies for partners
Compliance Manager	Integrated operation of the compliance management system, revision of compliance management standards and criteria Implementation of compliance education and training programs, inspection of compliance control, and general management of governance

Compliance Management Activities

LOTTE Data Communication develops various activities to strengthen compliance management.

1 Improving Compliance

- Regular evaluation and improvement of compliance control standard process
- Establishing a compliance system based on the organization and computer system
- Seeking and disseminating best practices for compliance management

2 Establishing an Organizational Culture of Compliance

- Revising and disseminating fair transaction compliance manual
- Sharing information on major legal amendments and dispute case letters
- Daily Legal Test for related laws and regulations
- Employee expert for Compliance Management Q&A Advisory

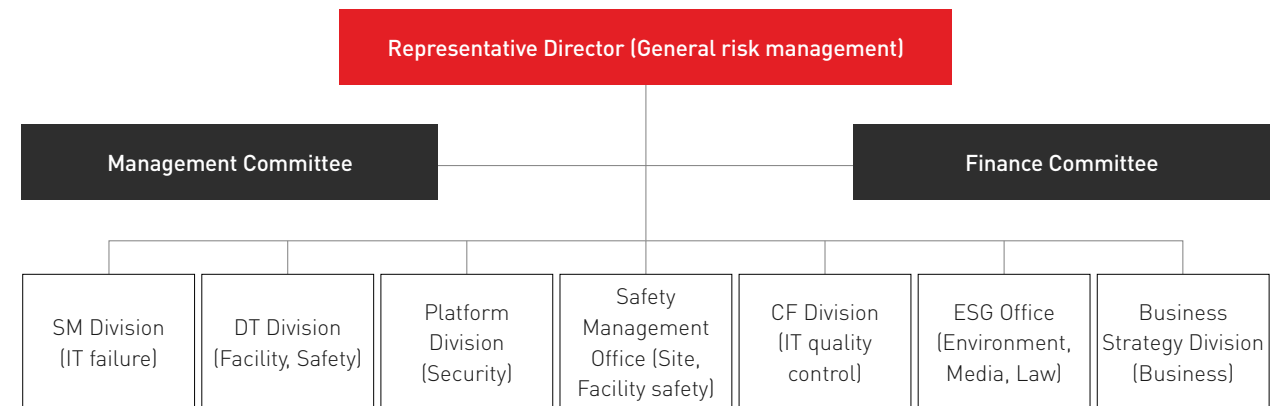
Compliance Education Program

LOTTE Data Communication provides education to employees every year on regulatory and compliance matters and the latest trends relevant to their duties to practice compliance management effectively and prevent legal risks. The education program is provided regularly and frequently, and divided into three categories: Legal education for all employees; Special education for employees related to compliance (Fair transaction and subcontracting, anti-corruption, personal information protection); and Introductory education for new and experienced employees.

Risk Management

LOTTE Data Communication manages financial and non-financial risk factors. In this regard, we have established a sustainable management system by analyzing and managing risk factors that can cause uncertainty in corporate management and adopting principles of sustainable management in corporate management and decision-making systems.

Risk Management System

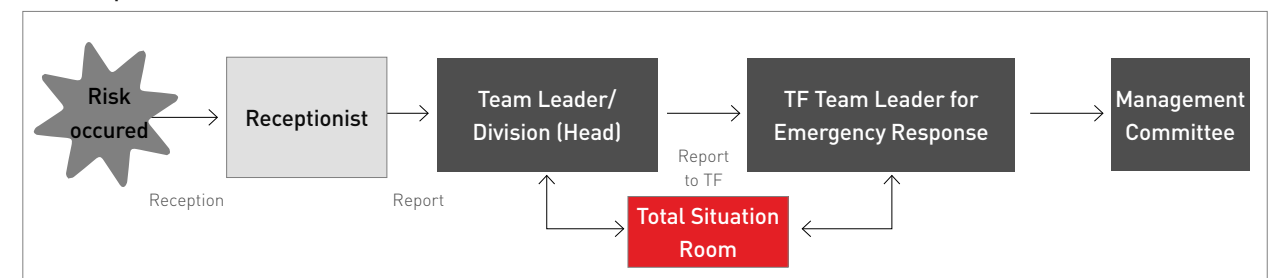


LOTTE Data Communication is carrying out various activities to identify potential risk factors that can affect financial performance and manage or avoid them at an acceptable level. These major risks include market risk (foreign exchange risk, interest rate risk, price risk), credit risk, and liquidity risk.

Financial risk management includes evaluation and reporting of risks on a monthly basis to control risk and respond to exchange positions in accordance with internal procedures. Credit risk management consists of periodic financial credit ratings in consideration of past data on customers and counterparties, and setting and managing customer credit limits. In order to manage liquidity, we establish and report short-term and mid- to long-term fund balance plans, and analyze and review the budget and actual cash flow to match the maturity structure of financial assets and liabilities. In addition, interest rate trends and debt ratio are analyzed and monitored for capital risk management. The Finance Committee is held every quarter to examine corporate financial risks regularly. The Management Committee plays a key role in responding to risks.

Non-financial risks are classified into IT failure, quality, safety, and the environment, and preventive and monitoring activities are carried out by the designated departments. For non-financial risks, a designated department organizes and operates Total Situation Room and TF in accordance with the risk response process. The Management Committee plays a key role in responding to non-financial risks. For IT failure, the level of failure is determined according to the standardized manual and, if necessary, the Total Situation Room takes measures to enable a company-wide response.

Risk Response Process



ESG Performance Data

Key Financial Performance

Category	Item	Unit	2018	2019	2020
Consolidated financial statements	Sales	KRW million	811,730	845,659	849,546
	Operating Profit	KRW million	38,978	41,114	38,751
	Net income	KRW million	23,370	53,000	29,873
	Total liabilities	KRW million	337,394	306,273	236,152
	Total assets	KRW million	703,890	696,683	649,501
Separate financial statements	Sales	KRW million	691,242	772,283	835,877
	Operating Profit	KRW million	40,786	43,051	38,836
	Net income	KRW million	31,421	36,888	30,047
	Total liabilities	KRW million	220,328	303,281	233,229
	Total assets	KRW million	599,459	692,199	645,473
Credit Rating	Korea Investors Service Inc.		-	-	A1
	Korea Ratings		A2+	A2+	-

Distribution of Economic Values (Consolidated Business Report)

Category	Unit	2018	2019	2020
Customers	KRW million	811,730	845,659	849,546
Employees	KRW million	211,906	229,609	246,852
Suppliers	KRW million	451,847	463,440	470,491
Shareholders & Investors	KRW million	12,513	12,073	10,796
Government	KRW million	11,233	-7,240	8,201
Local Communities	KRW million	330	465	83

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ENVIRONMENT

GHG Reduction Performance

Category	Item	Unit	2018	2019	2020
GHG reduction	Total	tCO ₂ eq	818.6	1,830.3	1,818.6
	Seoul	tCO ₂ eq	32.2	331.9	333.6
	Yongin	tCO ₂ eq	786.4	1,498.4	1,485.0
Power usage reduction	Total	MWh	1,755.7	3,925.7	3,958.6
	Seoul	MWh	69.0	711.9	726.1
	Yongin	MWh	1,686.7	3,213.8	3,232.5

GHG Emissions

Category	Item	Unit	2018	2019	2020
Total GHG emissions (Scope 1, 2)		tCO ₂ eq	64,158	72,300	80,618
Scope1 (Direct Emissions)	Total	tCO ₂ eq	393	449	431
	Seoul	tCO ₂ eq	323	355	341
	Daejeon	tCO ₂ eq	1	2	5
	Yongin	tCO ₂ eq	57	79	72
	Seoul_Former office building	tCO ₂ eq	12	13	12
Scope2 (Indirect Emissions)	Total	tCO ₂ eq	63,765	71,851	80,187
	Seoul	tCO ₂ eq	15,584	15,614	15,894
	Daejeon	tCO ₂ eq	2,044	2,110	2,730
	Yongin	tCO ₂ eq	45,475	53,515	60,960
	Seoul_Former office building	tCO ₂ eq	662	612	604
Scope 3 (Other Indirect Emissions)		tCO ₂ eq	0	0	5,219
By total floor area (GHG intensity)	Total	tCO ₂ eq/m ²	0.93	1.05	1.17
	Seoul	tCO ₂ eq/m ²	0.65	0.65	0.67
	Daejeon	tCO ₂ eq/m ²	0.51	0.52	0.68
	Yongin	tCO ₂ eq/m ²	1.70	2.00	2.28
	Seoul_Former office building	tCO ₂ eq/m ²	0.05	0.04	0.04
By sales (GHG intensity)		tCO ₂ eq/KRW billion	92.82	93.62	96.45

Energy Usage and Reduction

Category	Item	Unit	2018	2019	2020
Total energy consumption	Total	TJ	1,320	1,487	1,658
	Seoul	TJ	327	328	333
	Daejeon	TJ	42	43	56
	Yongin	TJ	937	1,103	1,256
	Seoul_Former office building	TJ	14	13	13
Energy consumption by intensity		TJ/KRW billion	1.91	1.93	1.98
Scope 1 (Direct emission, energy consumption)	Total	TJ	6.74	7.49	7.17
	Seoul	TJ	5.67	6.07	5.81
	LNG	TJ	3.58	3.30	3.08
	Gasoline	TJ	1.92	2.48	2.48
	Diesel	TJ	0.17	0.29	0.25
	Daejeon	TJ	0.01	0.03	0.08
	Diesel	TJ	0.01	0.03	0.08
	Yongin	TJ	0.82	1.13	1.04
	Gasoline	TJ	0.06	0.09	0.10
	Diesel	TJ	0.76	1.05	0.94
	Seoul_Former office building	TJ	0.24	0.26	0.25
	LNG	TJ	0.24	0.26	0.25
	Scope 2 (Indirect emission, energy consumption)	Total	TJ	1,313	1,479
Electricity		TJ	1,312.9	1,479.4	1,651.0
Seoul		TJ	320.87	321.49	327.25
Daejeon		TJ	42.08	43.45	56.21
Yongin		TJ	936.32	1,101.85	1,255.16
Energy savings	Total	TJ	16.85	37.69	38.00
	Replaced normal lights to LED	TJ	0.67	1.28	2.05
	Replaced EC-FAN of thermo-hygrostat	TJ	15.53	29.57	28.98
	Free cooling	TJ	0.66	0.66	1.05
	Operation effect of thermo-hygrostat	TJ	0.00	6.17	5.92

Exhaust Gas Emissions

Category	Unit	2018	2019	2020
NOx, SOx, other significant atmospheric gases	tons	0.150	0.110	0.095
NOx emission (intensity)	tons/KRW billion	0.00022	0.00014	0.00011

* Reduced gas emissions after installing a low NOx burner at the Seoul Center in the second half of 2020

Waste and Recycling

Category	Item	Unit	2018	2019	2020
Waste generated	Total	tons	149.22	157.90	166.27
	Seoul	tons	97.90	113.87	128.45
	Daejeon	tons	4.26	4.38	5.70
	Yongin	tons	47.06	39.65	32.12
Waste disposal	Total	tons	63.60	80.53	82.72
	General	tons	0	0	0
	Incineration	tons	63.60	80.53	82.72
Waste recycling amount		tons	34.30	33.34	45.73
Waste recycling rate		%	23.0	21.1	27.5
Waste disposal cost		KRW hundred million	0.27	0.32	0.35
Total amount of discharged waste (Intensity)		tons/KRW billion	0.22	0.20	0.20

Water Consumption

Category	Item	Unit	2018	2019	2020
Total water consumption	Total	tons	170,682	93,556	95,587
	Seoul	tons	95,988	25,231	24,375
	Daejeon	tons	280	395	457
	Yongin	tons	61,987	53,524	51,569
	Seoul_Former office building	tons	12,427	14,406	19,186
Water supply consumption	Total	tons	98,647	89,839	91,810
	Seoul	tons	23,953	21,514	20,598
	Daejeon	tons	280	395	457
	Yongin	tons	61,987	53,524	51,569
	Seoul_Former office building	tons	12,427	14,406	19,186
Groundwater consumption	Total	tons	72,032	3,672	3,672
	Seoul	tons	72,032	3,672	3,672
	Daejeon	tons	0	0	0
	Yongin	tons	0	0	0
	Seoul_Former office building	tons	0	0	0
Total water consumption (Intensity)		tons/KRW billion	246.92	121.14	114.36
Reuse/Recycling water consumption		tons	3	45	105
Recycling rate of water		%	0.002	0.048	0.110

SOCIAL

Current Status of Employees

Category	Item	Unit	2018	2019	2020
Total employees	Including expatriates	persons	2,638	2,784	2,803
	Domestic	persons	2,633	2,779	2,799
By contract	Regular employees	persons	2,464	2,686	2,728
	Contractual employees	persons	174	98	75
By age	Below 30 years old	persons	534	730	709
	Between 30 and 50 years old	persons	1,886	1,862	1,871
	Over 50 years old	persons	218	192	223
By gender	Male	persons	1,976	2,029	2,003
	Female	persons	662	755	800

Diversity of Employment

Category	Item	Unit	2018	2019	2020
Female leadership	No. of female managers (above manager level)	persons	167	200	217
	Ratio of female manager	%	14.8	16.6	17.3
	No. of female executives	persons	1	2	2
	Ratio of female executives	%	3.7	6.7	7.4
Employees with disabilities	No. of employees	persons	33	41	43
	Ratio of employees	%	1.3	1.5	1.5
Veterans	No. of employees	persons	50	50	54
	Ratio of employees	%	1.9	1.8	1.9

Fair HR System

Category	Unit	2018	2019	2020
Ratio of female basic wage to male basic wage	%	100	100	100

Education and Training

Category	Item	Unit	2018	2019	2020
Education	Total number of trainees	persons	21,651	26,985	27,792
	Training expenses	KRW million	3,714	4,226	2,724
	Training expenses per person	KRW thousand/person	172	157	98
Training hour	Total	hours	209,206	160,043	84,661
	Training hours per person	hours/person	79.3	57.5	30.2

Maternity Leave and Parental Leave

Category	Item	Unit	2018	2019	2020
No. of employees taking maternity leave	Total	persons	77	88	91
	Male	persons	51	59	71
	Female	persons	26	29	20
*Reinstatement rate after childbirth (within 12 months)	Total	%	94	93	89
	Male	%	94	97	90
	Female	%	93	88	87
No. of employees taking parental leave	Total	persons	99	106	108
	Male	persons	72	64	61
	Female	persons	27	42	47
No. of employees returning to work after parental leave	Total	persons	93	99	96
	Male	persons	68	62	55
	Female	persons	25	37	41
Reinstatement rate after parental leave	Total	%	94	93	89
	Male	%	94	97	90
	Female	%	93	88	87
Number of employees still on the payroll 12 months after returning from parental leave	Total	persons	86	98	86
	Male	persons	62	58	47
	Female	persons	24	40	39

* The reinstatement rate is 0% because employees who take maternity leave is converted to those who take parental leave. Therefore, the figure is replaced by the reinstatement rate of employees who returned from parental leave.

Performance Evaluation

Category	Unit	2018	2019	2020
Total number of employees subject to performance evaluation	persons	2,255	2,387	2,567
Performance evaluation rate	%	100	100	100

Quality Management

Category	Item	Unit	2018	2019	2020
R&D	Investment cost	KRW million	15,359	12,254	14,630
	Investment ratio to sales	%	1.9	1.4	1.7

Transaction with Suppliers

Category	Unit	2018	2019	2020
Number of suppliers	companies	968	1,204	1,257

Shared Growth and Mutual Cooperation

Category	Item	Unit	2018	2019	2020
Shared growth fund	Total amount	KRW million	12,000	12,000	12,000
	Investment from financial institutions	KRW million	6,000	6,000	6,000
	Funds spent	KRW million	4,927	7,679	11,715
Training support	Number of programs	sessions	14	6	540
	Number of trainings	times	6	10	12
	Number of completed trainees	persons	90	216	416
Technical Support	Technology data escrow	cases	0	3	5

Society Contribution Activities

Category	Item	Unit	2018	2019	2020
Donation		KRW million	330	465	83
Employee volunteers	Proportion of participants	%	12.8	30.3	11.5
	Number of participants	person	337	843	321
	Total participation time	hours	1,800	3,398	1,304
	No. of hours of voluntary work per person	hours	5.3	4.0	4.1

Workplace Safety and Health

Category	Item	Unit	2018	2019	2020
Number of work-related accidents	Employees	cases	0	0	0
	Partner company employees	cases	0	0	0
Number of work-related fatalities	Employees	cases	0	0	0
	Partner company employees	cases	0	0	0
* Lost-Time Injuries Frequency Rate (LTIFR)	Employees	%	0	0	0
	Partner company employees	%	0	0	0

*LTIFR (Lost-Time Injuries Frequency Rate) = Number of Injuries/Annual working hours×1,000,000

Information Security

Category	Unit	2018	2019	2020
Number of violations of product and service safety regulations	cases	0	0	0
Number of information security violations or cyber security incidents	cases	0	0	0
Number of violation and accident of information security related to customer personal information	cases	0	0	0
Number of customers affected by data leakage	persons	0	0	0
Total fine or penalty paid due to information security violations or cyber security incidents	KRW million	0	0	0

Human Resources Management at Overseas Workplaces

Category	Item	Unit	2018	2019	2020
Number of employees at overseas workplaces	Total number of dispatched employees	persons	9	8	9
	Total number of employees	persons	213	253	258
	Total number of managers	persons	40	35	54
Local worker	Number of managers	persons	31	27	45
	Ratio of managers	%	78	77	83
	Number of employees	persons	204	245	249

GOVERNANCE**Operation and Composition of the BOD**

Category	Item	Unit	2018	2019	2020
Composition of the BOD	Total	persons	7	7	6
	Number of executive directors	persons	3	3	2
	Number of non-executive directors	persons	3	3	3
	Number of other non-executive directors	persons	1	1	1
Operation of the BOD	Ratio of non-executive directors in the BOD	%	43	43	50
	Annual attendance rate of the BOD	%	94	96	95
	Ratio of female directors in the BOD	%	0	0	0

Executives Remuneration

Category	Unit	2018	2019	2020
Registered directors (excluding non-executive directors, members of the audit committee)	KRW million	1,151	1,179	2,410*
Non-executive directors (excluding members of the audit committee)	KRW million	-	-	-
Members of the audit committee	KRW million	152	197	232

*Including 1,318 (KRW million) of retirement allowance among executive directors' remuneration

Shareholders

Category	Number of shares (share)	Ratio of shareholding (%)
Lotte Holdings Co., Ltd.	10,000,000	65.0
National pension	1,635,199	10.6
Employee stock ownership association	483,994	3.1
Treasury share	266,964	1.7
Other	3,010,174	19.6
Total	15,396,331	100

Dividend Payout Ratio

Category	Item	Unit	2018	2019	2020
Stock	Issued shares	shares	14,286,000	15,396,331	15,396,331
	Outstanding shares	shares	14,286,000	15,129,367	15,129,367
Dividend	Total cash dividends	KRW million	9,286	10,591	10,591
	Dividend payout ratio	%	35.3	20.0	35.5
	Dividends per share	KRW million	650	700	700

Ethical and Compliance Management Education

Category	Item	Unit	2018	2019	2020
Ethical/Compliance management education	Number of programs	sessions	9	14	14
	Number of times	times	10	26	22
	Number of completed trainees	persons	5,178	7,532	8,735
	Ratio of completed trainees	%	100	100	100

Ethical and Compliance Inspection Activities

Category	Unit	2018	2019	2020
Number of inspections on ethical/compliance/corruption	times	6	11	13

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Independent Assurance Statement

To readers of LOTTE Data Communication 2020 Sustainability Report

Introduction

Korea Management Registrar (KMR) was commissioned by LOTTE Data Communication to conduct an independent assurance of its 2021 Sustainability Report (the "Report"). The data and its presentation in the Report is the sole responsibility of the management of LOTTE Data Communication. KMR's responsibility is to perform an assurance engagement as agreed upon in our agreement with LOTTE Data Communication and issue an assurance statement.

Scope and Standards

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

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

- GRI Sustainability Reporting Standards
- Universal standards
- Topic specific standards
 - Management approach of Topic Specific Standards
 - GRI 201: Economic Performance
 - GRI 305: Emissions
 - GRI 306: Effluents and Waste
 - GRI 401: Employment
 - GRI 405: Diversity and Equal Opportunity
 - GRI 418: Customer Privacy

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

KMR's Approach

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

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

Limitations and Recommendations

KMR's assurance engagement is based on the assumption that the data and information provided by LOTTE Data Communication to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry

and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

Conclusion and Opinion

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

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

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

Responsiveness | LOTTE Data Communication prioritizes major issues derived and reports activity performance, response cases, and future plans in a comprehensive and as balanced manner as possible, and the verification team has not found evidence that LOTTE Data Communication's response activities are improperly listed in the report.

Impact | LOTTE Data Communication identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

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

Competence and Independence

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

Nov 2021 Seoul, Korea

 **New today, Better tomorrow. LOTTE**



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