

Connecting People and Space with LX

2021 LX
Sustainability Report



To minimize impact on environment and maximize the use of natural resources, spot color printing and coating were avoided and soy ink was used for this report.



About This Report

In order to fulfill its social responsibilities as a public enterprise, LX has been issuing sustainability reports and sharing its innovative and inclusive growth with stakeholders. This is LX's tenth sustainability report since the first edition published in 2008.

Reporting Standards

This report was prepared in compliance with the core Global Reporting Initiative (GRI) Standards as well as fulfilling the requirements of ISO 26000 (international standards for social responsibilities) and the UN Sustainable Development Goals (SDGs). The financial information contained in this report are based on Korean International Financial Reporting Standards (K-IFRS).

Reporting Period and Boundaries

This report covers substantial business activities including key sustainability management activities and outcomes of LX's domestic and overseas offices from January 1 to December 31, 2021. For some quantitative achievements, details of the past three years are reported to enable trend analysis.

Cycle of Report

Annual report (last report published in March 2021)

Assurance of Report

To ensure reliability of the activities and outcomes reported, a verification was conducted by With Accounting Corp., an independent external agency, and the result is listed in the Third-party Assurance Statement (refer to pages 84 and 85).

Download Report

This report was issued in Korean and English and can be downloaded from LX website (<https://www.lx.or.kr/eng.do>).

Inquiry

Address: 120, Giji-ro, Deokjin-gu, Jeonju-si, Jeollabuk-do, 54870, Republic of Korea
Department in Charge: ESG Management Office
Tel. : +82-63-713-1142 | **Fax :** +82-63-713-1159

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CEO Message



President & CEO of LX

김정열

Thank you all for your steadfast support for LX.

Due to the COVID-19 pandemic, coupled with climate crisis, the clock of change has been ticking faster than ever. In the face of disruptions to global supply chains and recent economic crises, the establishment of a sustainable future has become more vital than ever before.

In response, LX has been actively adopting ESG practices. We have prioritized innovation and taking a significant leap forward as a company, as well as strengthening our system for promoting sustainability. Our ultimate goal for sustainability management is to provide people with wider access to smart land by utilizing drones, big data, and AI, hence realizing a society where everyone can be happy.

With this goal firmly set in our mind, LX is committed to our responsibility for environmental, social, and corporate governance, all while discovering methods of innovation and sharpening our future competitiveness.

First, we are striving to promote activities to achieve Carbon Neutrality by 2050.

To establish scientific ways of realizing carbon neutrality, we provide a variety of digital twin-based administrative services, such as water pollution monitoring and using eco-friendly materials in boundary signs used for cadastral surveys. This has led to a reduction of 90 tons of greenhouse gas emissions.

LX is also actively engaged in building hydrogen infrastructure. As part of these efforts, we have installed hydrogen charging stations and introduced hydrogen buses in Jeonju City, while also participating in the public commitment to carbon neutrality by launching a bicycle riding campaign. Furthermore, we held the Recycling Design Contest to develop cooperative projects for resource recycling.

Second, LX contributes to fulfilling social value commitments using national land information.

We are devoted to enhancing our ESG performance based on our cadastral capabilities. Drone maps were built using spatial information coupled with technologies including drones, AI, and the Internet of Things, and we also developed an integrated map for underground spaces. We believe this will further enhance public

safety and benefits. As the designated institution for the Digital Twin Land Pilot Project, LX contributes to resolving a wide variety of urban and social issues on the environment, transportation, and disasters.

This year is significant in that we have re-established our safety management promotion system. Having achieved a memorable record of zero serious or fatal accidents for 9 consecutive years, LX is focused on creating a safer and healthier work environment through hands-on safety management at our worksites and the phased introduction of a more stringent safety management system this year.

Third, LX conducts fairer and more transparent management together with the public.

Under the vision of Clean LX Trusted by the People, we have further strengthened our transparent and ethical management. In order to enhance transparency and reliability, we have identified and prevented risk factors through a review of areas prone to corruption and illegality, and have intensified the training of internal auditors. We have also engaged external experts in running the audit advisory committee, as well as the LX Ombudsman. Additionally, we have encouraged greater participation from the public and improved the effectiveness of our corruption reporting system through the operation of the integrity promotion consultative body, the Millennial Board, and the Anti-corruption Promotion Group.

LX, as a specialized national land information enterprise, is fully committed to our roles and responsibilities in creating a sustainable future. Moving forward, we will continue to innovate to ensure the happiness of the public and our stakeholders.

We ask for your continued support and interest in LX as we pursue innovation and take a leap into the future.

Thank you.

Kim, Jeong-ryeol,
President & CEO of LX

About LX




Overview

LX is a leading organization specializing in national land information. It was established on July 1st, 1977, in accordance with the Framework Act on National Spatial Information System, which was introduced to support the efficient establishment, holistic use, and management of a national spatial information system. LX fulfills diverse responsibilities such as support for the establishment of the national land information system, research in the field of geospatial information and cadastral systems, technology development, and cadastral surveys. Through providing trustworthy national land information to citizens, LX has been firmly establishing itself as a national land information platform that leads at the forefront of a smart society.

Status in General

Organization Name	Korea Land and Geospatial InformatiX Corporation (LX)	President & CEO	Kim Jeong-ryeol
HQ Address	120, Giji-ro, Deokjin-gu, Jeonju-si, Jeollabuk-do, 54870, Republic of Korea	Date of Establishment	Jul 1, 1977
Homepage	www.lx.or.kr	No. of Employees	4,569

Financial Performance

Business Revenue	Operating Profit	Credit Rating
 KRW 622.1 billion	 KRW 35.4 billion	 AA+




ESG Management Performance

Safety-Cap	Anti-corruption Policy Assessment
 CAP1 in 2020 → CAP3 in 2021	 7 consecutive years Excellent Level















Overview

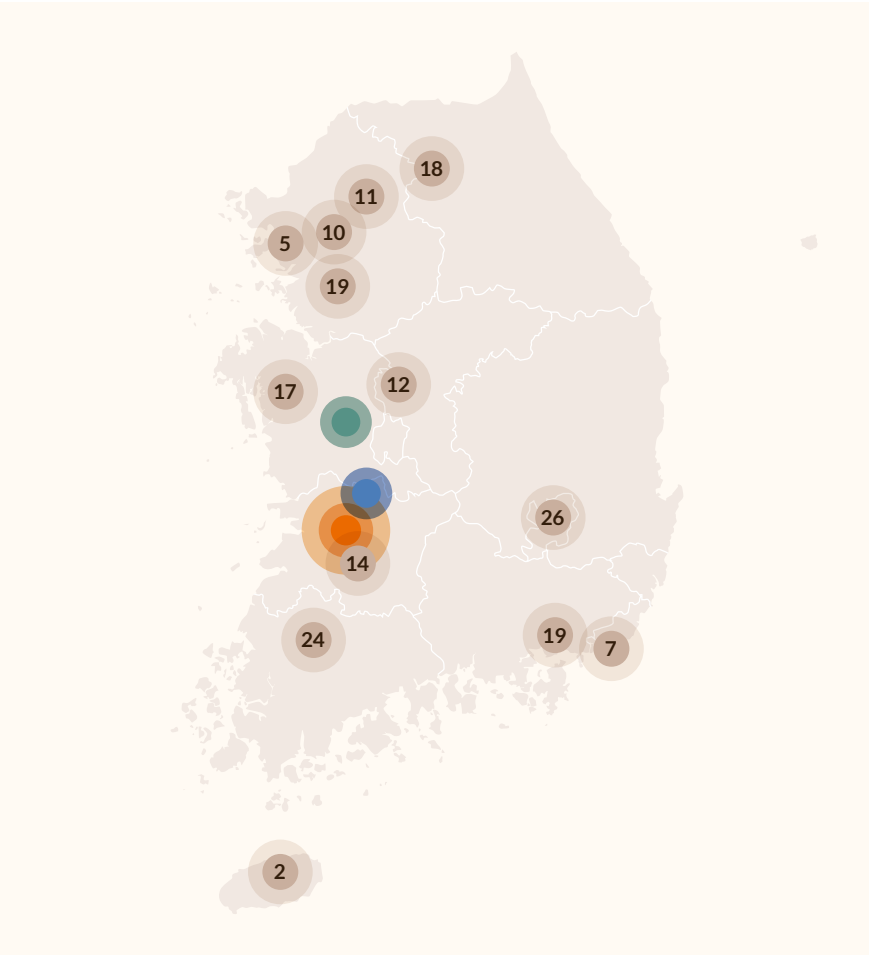
Organizational Network

HQ & Affiliated Institutes









 HQ	Jeonju, Jeonbuk
 LX Education Institute	Gongju, Chungnam
 Spatial Information Research Institute	Wanju, Jeonbuk

Regional HQ

 The number of Regional HQ
 10 Seoul Regional HQ
 7 Busan&Ulsan Regional HQ
 5 Incheon Regional HQ
 19 Gyeonggi Southern Regional HQ
 11 Gyeonggi Northern Regional HQ
 18 Gangwon Regional HQ
 12 Chungbuk Regional HQ
 17 Daejeon/Sejong/Chungnam Regional HQ
 14 Jeonbuk Regional HQ
 24 Gwangju&Jeonnam Regional HQ
 26 Daegu&Gyeongbuk Regional HQ
 19 Gyeongnam Regional HQ
 2 Jeju Regional HQ



History

 Foundation of the Korea Cadastral Survey Corp	 Selected as 'excellent service provider' 4 times in a row, the first among public org.	 Name change to the Korea Land and Geospatial InformatiX Corp.	 Launched the national land information basic map	 40th anniversary of LX	 Proclamation of Vision 2030	 Establishment of the Korean Digital Twin demonstration model	 Proclamation of LX ESG management
Jul. 1, 1977	Jan. 9, 2012	Jun. 4, 2015	Feb. 25, 2016	Jul. 1, 2017	2018.11.21	Feb. 15, 2020	Jun. 30, 2021

Business Overview

Cadastral Survey



Cadastrre is the foundation of the national spatial information business, which is at the forefront of Industry 4.0. It can be considered the ‘resident registration’ for land, recording all information on land in the country. LX is a trusted cadastral survey provider and records the latest land information in the cadastral register to effectively manage national land. It strives to provide a trusted service to protect the property rights of the people.

Efficient Management of National Land

Increasing values of national land use through continuous updates and by offering reliability in cadastral information

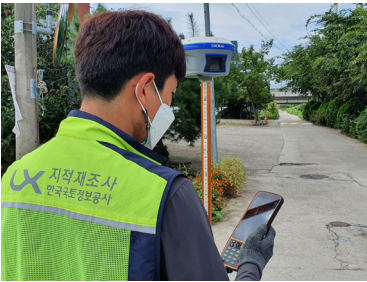
Protection of Property Right

Ensuring universal protection of the rights and interests of the people through provision of swift and accurate cadastral survey service

Cadastral Services that Form a Consensus Among People

Fulfilling social responsibilities to implement people-oriented values

Cadastral Resurvey



Cadastral resurvey aims to correct false boundaries, and digitally record them, using advanced technology to survey and measure cadastral mismatches* caused by damage to paper cadastral maps created 100 years ago. Leveraging cutting-edge equipment such as drones and GNSS, LX conducts cadastral resurveys on the 14.8% of Korea’s land (5.54 million lots) that exhibits cadastral mismatches, laying the foundation for the spatial information industry and enhancing the value of the nation's land.

Accelerate Digital Cadastre Establishment

Providing a driving force to promote cadastral resurveying and strengthening business execution capabilities through development of national policy projects and establishment of foundation for growth

Conversion of the World Geodetic System

Enabling development of various contents through convergence of cadastral and other spatial information

Implementation of Social Inclusion

Expanding business effects by discovering and resolving social issues, such as to resolve public complaints, implement government projects, and supporting winwin growth in private sector

* Mismatch of national land information: Land for which information displays a mismatch between the national cadastral records and the real boundary

Spatial Information



Comprised of national land information (topography and land use) and urban land information (roads and land), spatial information can now be recorded in the form of digital maps to include even the natural, social, and economic characteristics compared to the past when only the topographical shapes and information on natural features could be recorded in the form of paper. LX, through its spatial information businesses, is leading the country’s innovative growth by collecting and managing national land information in an efficient manner and also supporting the government’s decision-making process so as to improve the quality of life of the people.

National Land Enjoyed by All

Creating national land equipped with uniqueness and competitiveness through enhancement of activities to resolve pending issues

Strengthening of Foundation for Spreading Innovative Growth

Supporting innovative growth through securing of key technologies in preparation for social changes

Inclusive Growth through Cooperation

Strengthening cooperation for win-win growth with spatial information industry

Overseas Projects



Land is the direct cause of global poverty, which the international community is striving to resolve. In response, LX is contributing to the efficient use of land and establishment of responsible land policy by sharing the status and innovation cases of land management in countries around the world.

Land Information Consulting and Capacity Building

Empowering developing countries through transfer of land information system and education on land administration

Spatial Information Package

Establishment of comprehensive spatial information infrastructure by exporting individual projects as a comprehensive package

Spatial information Convergence

Development of spatial information convergence business based on topics that meet the strategic goals of each country

Education



LX Education Institute, Korea’s only training and educational organization specializing in national land information, provides national land information education on the convergence of time, space, and human by offering advanced technical programs according to the educational demand. Through practical and tailored educational planning, LX Education Institute is dedicated to fostering future-oriented human resources, leading technological development, and promoting the national land information industry.

Training and Education

Enhancing job competencies of employees (e.g., technical skills and knowledge)

Consigned Training

Providing customized education on national land information for government employees and the private sector

Remote Education

Strengthening employees’ capabilities through establishment of self-directed learning system

R&D



LX Spatial Information Research Institute supports national policies and the growth of spatial information industry through policy and institutional research and development of core spatial information technologies such as autonomous driving, drones, AI, big data, and IoT technologies. In addition, LX strives to revitalize the local economy by creating a foundation for win-win cooperation with academia and the private sector through industry-academic cooperation R&D. We will become a 'sink platform that drives the future value of spatial information' through continuous research and technology development.

Research planning and operation

Creating a future-oriented research environment to spread R&D outcomes and establish a research support system

Policy system research

Increase the effect of government/ construction policy support in accordance with the LX-type Korean New Deal project, and strengthen institutionalization through the diagnosis of construction projects and the enactment and revision of legal systems

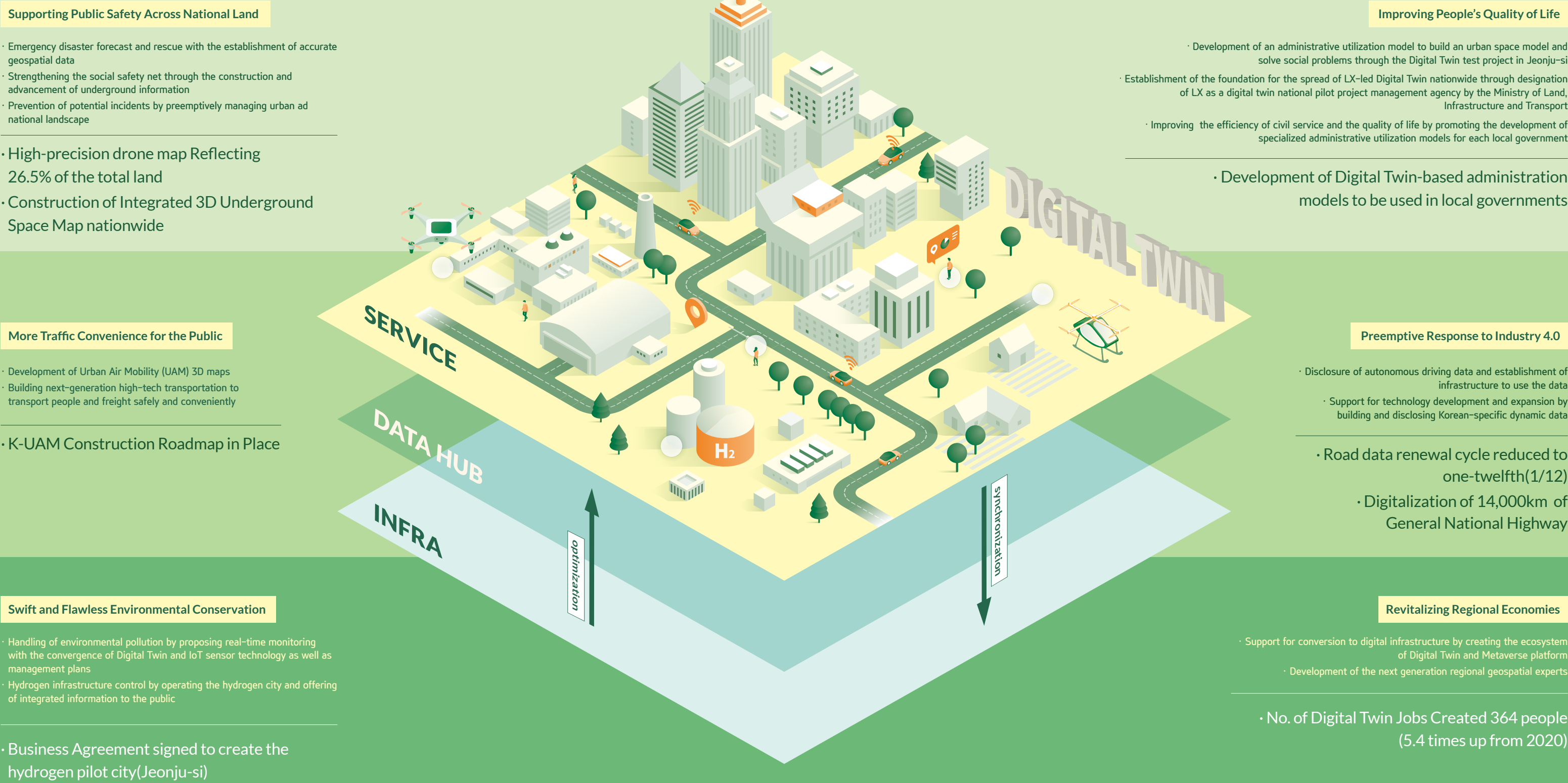
Spatial information core technology development

Establish a sustainable management foundation in the era of the 4th Industrial Revolution through the development and commercialization of core technologies for spatial information

Industry-Academic Cooperation R&D

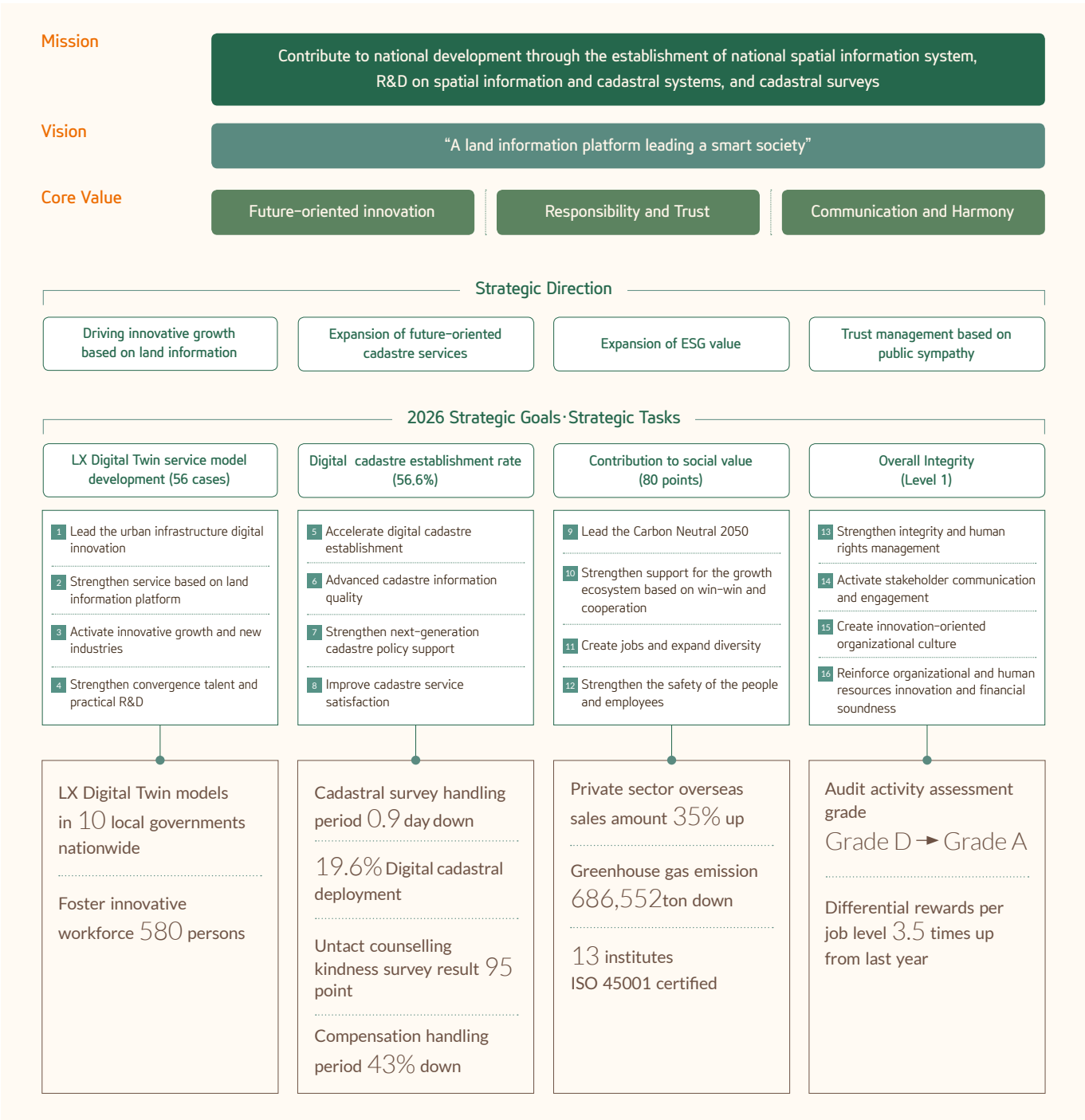
Develop spatial information technology and policies necessary for regional win-win and industrial development by supporting research and development of universities/enterprises/ academic societies

LX, Drawing the Future of Korea with Digital Twin National Land



LX Mid-to Long-term Management Strategy

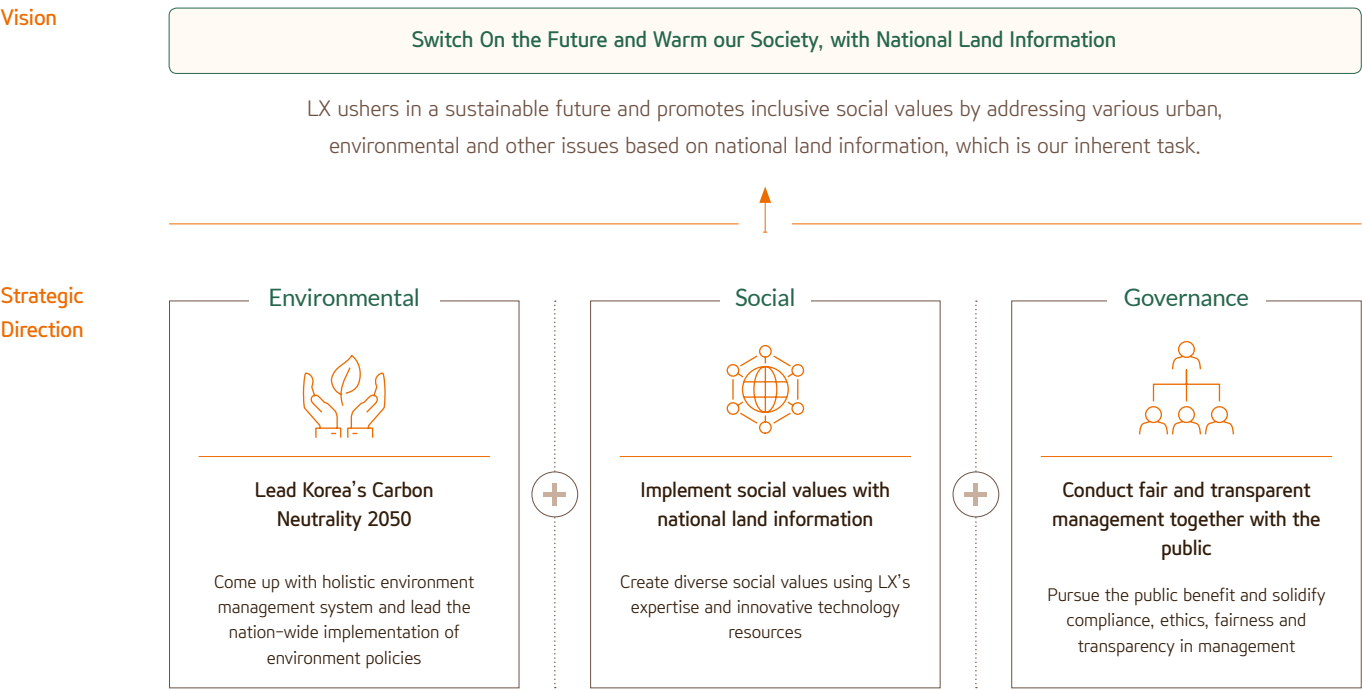
Under the vision of leading a smart society as the national land information platform, LX will improve citizens' quality of life and ultimately contribute to national development by promoting our three management goals: success of LX digital new deal projects, expansion of services beneficial to the public, and LX's growth into an excellent institution to implement social values.



LX ESG Management

ESG Management Strategy

As the call for sustainable management continues to increase from internal and external stakeholders and changes in the industrial structure accelerated in the era of the post COVID-19, LX announced its implementation of ESG management on June 30, 2021. With the vision of switching 'On' the future with national land information, we introduced three strategic directions for ESG management: leading Korea's carbon neutrality by 2050, implementing social values with national land information, and fair and transparent management along with the public.



LX Highlights

LX has established strategic tasks in accordance with the strategic directions for each ESG area: leading Carbon Neutrality 2050, implementing social values with national land information and conducting fair and transparent management together with the public.

Strategic Direction		Strategic Tasks	2021 Achievements	2022 Goals	UN SDGs
<div>E</div> 	Lead Carbon Neutrality 2050	<ul style="list-style-type: none">Develop environmental management plans	Diagnose the internal environment and conduct a fact-finding survey	Lay the foundation for environmental management system	<div>7</div> <div>AFFORDABLE AND CLEAN ENERGY</div> <div>13</div> <div>CLIMATE ACTION</div>
		<ul style="list-style-type: none">Replace all business vehicles with Green Mobility cars	91% achieved	100% achieved	
		<ul style="list-style-type: none">Hold a campaign for Zero carbon emission	Held three campaigns for bicycle donations and made a donation of KRW 70 mil.	Promote the LX Two Rounds around the Earth campaign	
		<ul style="list-style-type: none">Expedite the conversion to high energy efficient and eco-friendly materials	Reduce greenhouse gas emission by 5.7%	Reduce greenhouse gas emission by 34%	
		<ul style="list-style-type: none">Promote a plastic-free campaign and upcycling	Make boundary signs with eco-friendly materials	Establish an eco-friendly virtuous cycle of cadastral equipment	
<div>S</div> 	Implement social values with national land information	<ul style="list-style-type: none">Build geospatial information system to address urban and social issues and secure the public safety	Proceed with a project to build LX platform Digital Twin service	Complete the project to build LX platform Digital Twin service	<div>3</div> <div>GOOD HEALTH AND WELL-BEING</div> <div>4</div> <div>QUALITY EDUCATION</div> <div>5</div> <div>GENDER EQUALITY</div> <div>8</div> <div>DECENT WORK AND ECONOMIC GROWTH</div> <div>9</div> <div>INDUSTRY, INNOVATION AND INFRASTRUCTURE</div> <div>10</div> <div>REDUCED INEQUALITIES</div> <div>11</div> <div>SUSTAINABLE CITIES AND COMMUNITIES</div> <div>17</div> <div>PARTNERSHIPS FOR THE GOALS</div>
		<ul style="list-style-type: none">Expand win-win programs for job creation and shared growth	Sales of KRW 11.7 billion by companies settled in the Geo-Dream Center	Raise and create funds for the geospatial information segment	
		<ul style="list-style-type: none">Revitalize the local community and nurture talent	Subdivide and reform educational courses for geospatial information	Promote contact-free education utilizing metaverse platform	
		<ul style="list-style-type: none">Assume the role of an international hub for geospatial information	Submit UN-GGIM-AP session resolution	Support activities to attract a geospatial information service center	
		<ul style="list-style-type: none">Set up and run the geospatial information collaboration center for developing countries	Establish an innovation center for Africa hub geospatial information	Expand the establishment of collaboration centers overseas	
		<ul style="list-style-type: none">Construction of 3D Underground Information for Public Safety	Establishment of Integrated Underground Space Map for 33 Local Governments	Integrated map of underground space completed nationwide	
		<ul style="list-style-type: none">Operate liability insurance system to minimize the violation of the people's right	Run liability insurance system	Increase the compensation limit of liability insurance	
<div>G</div> 	Conduct fair and transparent management together with the public	<ul style="list-style-type: none">Strengthen expertise of audit activities	Hold the Audit Advisory Committee four times	Expand the participation of external experts in the Audit Advisory Committee	<div>16</div> <div>PEACE, JUSTICE AND STRONG INSTITUTIONS</div>
		<ul style="list-style-type: none">Solidify a system of representing the public's rights and interests	Hold 4 regular meetings of LX Ombudsperson and 9 external advisory meetings	Increase the members of LX Ombudsperson for better and more active operation	
		<ul style="list-style-type: none">Publish reports with ESG items more enhanced	Win the Gold prize in the 2020 sustainability management report category sponsored by LACP	Publish sustainable management reports in compliance with the global standards	

Stakeholder Participation

LX strives to communicate with our internal and external stakeholders on a regular basis and reflect the results in our management activities. As part of our efforts, we have conducted interviews with experts and carried out surveys on our stakeholders regarding social value creation. LX’s internal and external stakeholders are comprised of LX employees, customers, the central and local governments, local residents, suppliers, and the press. By establishing communication channels with each stakeholder to understand their needs and demands in detail, LX is reflecting them in our management activities.

Communication Channel



Local residents, civic group,
sector-specific experts

- Idea contest for innovation and social values
- ‘Community mapping’ a map created together
- Local community win-win development forum
- Team of citizens to promote innovation
- Round-table conference of citizens at local governments
- LX Creative Interview
- LX website and social media



Central/local governments,
relevant industries

- Spatial information forum
- Consultative body for road name address at local governments
- Address-based industry creation contest
- Shared growth workshop
- Consultative body for overseas market entry by spatial information service providers
- Talk with enterprises at Geo-Dream Center
- Startup contest using spatial information



Employees, labor union,
prospective employees

- Mutual Respect Day campaign
- Millennial Board
- ‘Value of Being Together’ communication activities
- LX new communication program
- Discussion to improve work conditions
- Mobile recruitment fair
- LXTV

Stakeholder Interview

Local resident



As a public institution, we believe that we have an important role to fulfill because the impacts of ESG management can be felt across society. We think it is positive to promote region-specific ESG management by utilizing the unique characteristics of LX, which operates branches in cities, counties and districts across the country. With socio-economic impacts increasing due to COVID-19 and climate change, we hope to realize healthy coexistence with local communities by utilizing core technologies related to the key work undertaken by LX.

Supplier



Contributing to job creation while coexisting with small businesses by focusing on technology development that converges intellectual and other fields is a great example for the industry. I hope that the efforts to collaborate with related organizations such as industry, government and academia to discover core businesses that satisfy the value of ESG will continue. Developing solutions to solve social environmental problems based on spatial information will maximize the positive impact on the environment across the industry.

Employee



As part of the eco-friendly and environmental cleanup campaign, I think that it is a great environmental conservation activity to replace business vehicles such as surveying vehicles, in the city with electric vehicles and to use drones to monitor the local environment, including environmental monitoring and fish farms. I hope that employees will keep suggesting on environmental improvements and management will continue to make concerted efforts to reflect such proposals.

For ESG management to be trusted both internally and externally, it is essential to transform the organizational culture and individual perceptions of mutual respect and equal relationships, regardless of rank. This can be achieved in the process of connecting visions, goals, and tasks between the head office, headquarters, and branch offices. It should be accompanied by a management system that emphasizes public and social-centered thinking and public relations.

A safe working environment is an important value that we should constantly pay attention to. A safety management system reflecting the characteristics of each branch was a good opportunity to strengthen the expertise of local personnel in safety management. I think that establishing a system that fosters managers with extensive on-site experience, in order to respond to crisis situations, is a good way of strengthening standards of health and safety at LX.

Customer



The land surveying procedure looked complicated at first, so I was concerned about whether it could be handled properly. However, the survey consultation service provided by LX was easy and convenient, and all necessary information was provided. The decrease in the number of days to process information disclosure also helped to speed up the schedule.

Expert

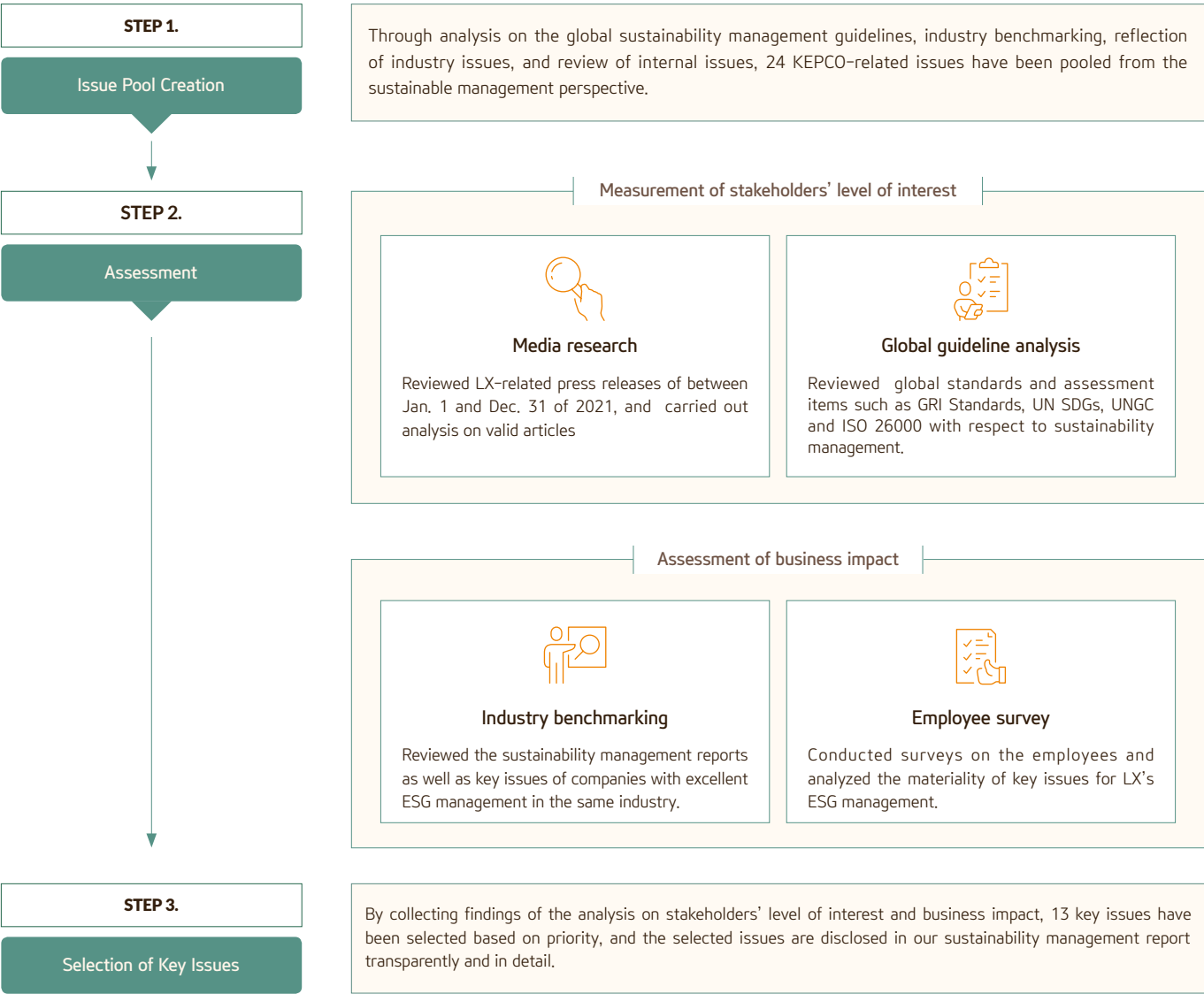


It is impressive that LX is actively striving to establish ESG management. It is important to select sustainable and effective tasks among the various attempts to identify a representative policy of LX. I hope that diverse public relations activities will be actively carried out in line with the positive direction currently being pursued.

Materiality Assessment

LX selects key issues by analyzing the interests of major domestic and global stakeholders and their impact on our business. The materiality assessment has been conducted by comprehensively considering international standards for sustainable management, such as GRI Standards, UN SDGs, UNGC, etc. as well as social issues in the media, and ESG trends of our peers and the industry. In 2021, we derived a total of 13 key issues. This report discloses LX's management approach and major achievements regarding these issues.

Materiality Assessment Process





01.

Leading Carbon Neutrality 2050

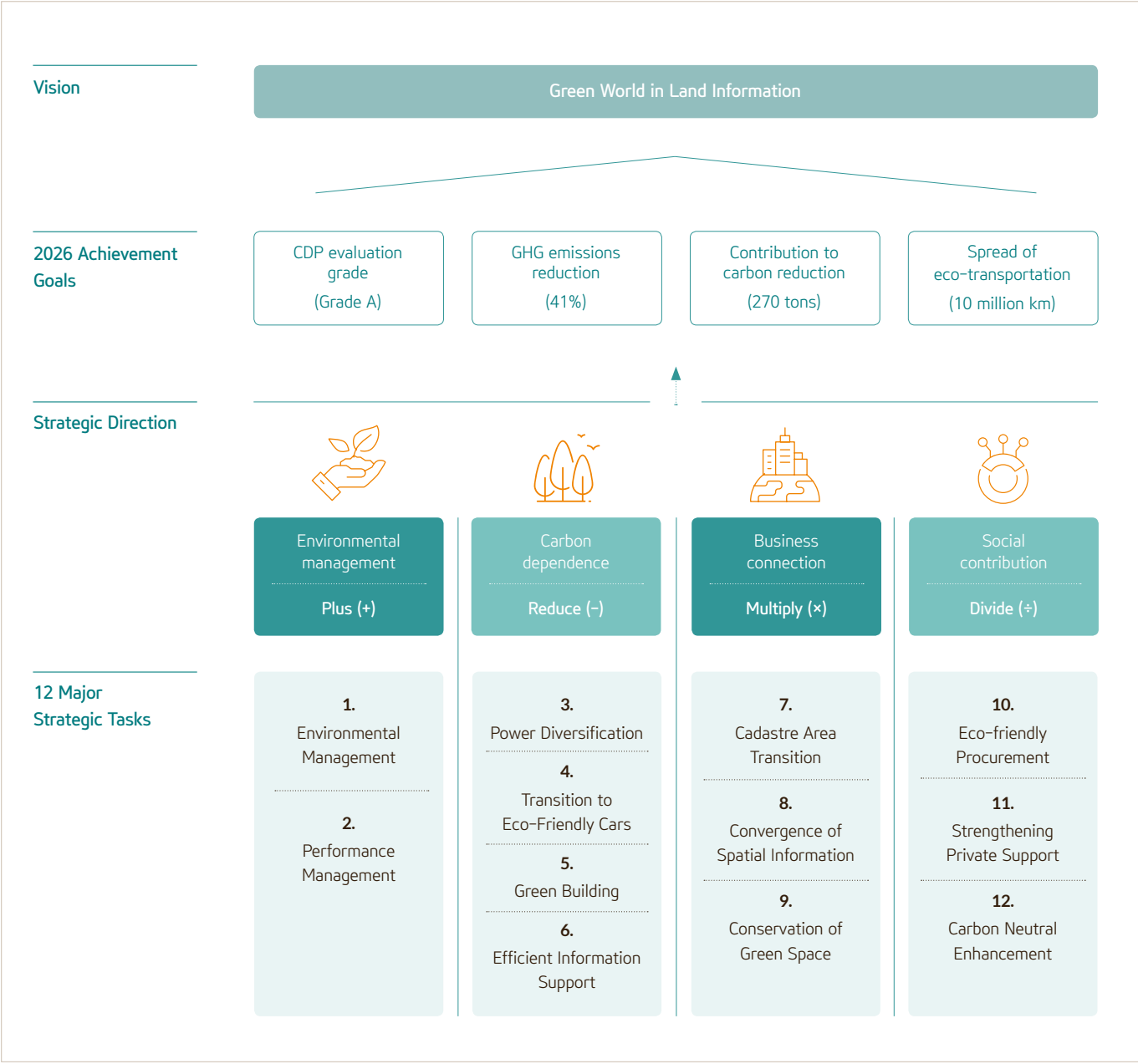
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Environmental Management

Direction of Environmental Management

In June 2022, LX established a comprehensive environmental management plan to lead the implementation of national environmental policies based on its businesses. We plan to strengthen the company-wide environmental management foundation, secure a carbon-neutral roadmap and accelerate the transition to low-carbon management infrastructure. In addition, we will contribute to the spread of environmental protection awareness by implementing green innovation linked to industry. We will achieve this through green transformation and digital and green convergence in the national land information area, as well as by promoting eco-friendly activities based on cooperation and participation.

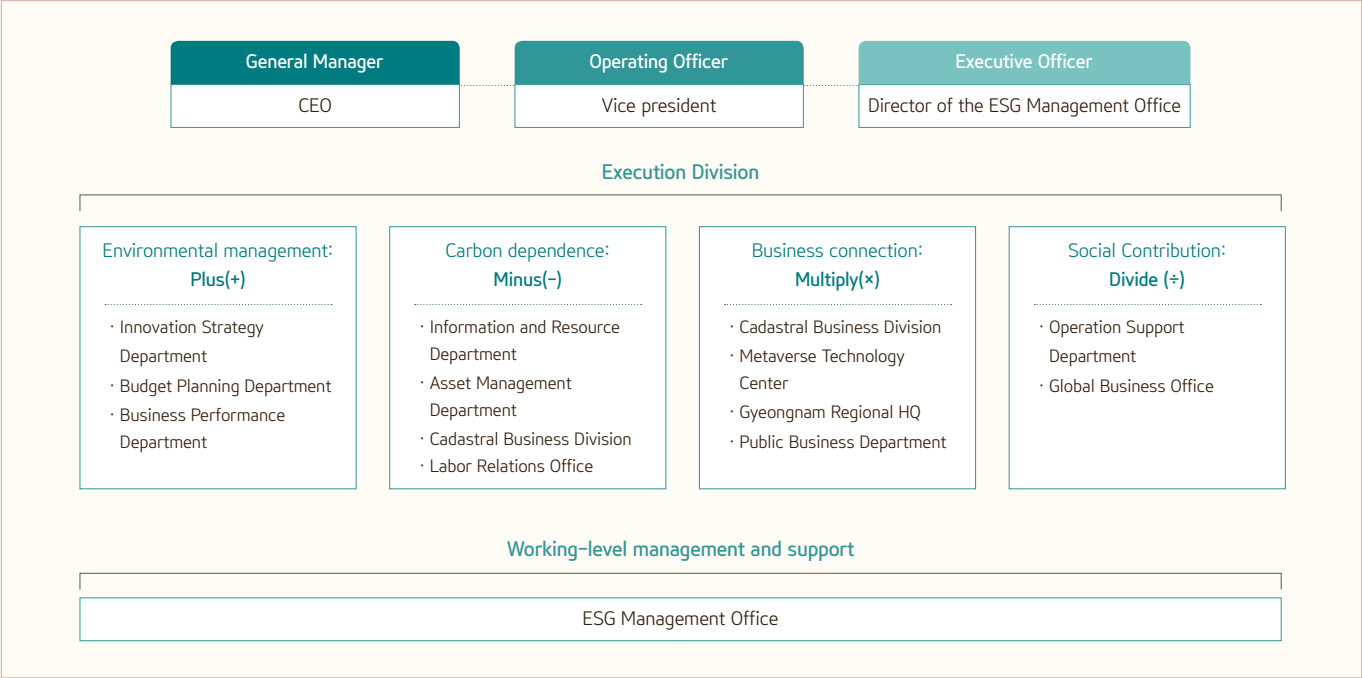
Comprehensive Environmental Management Plan



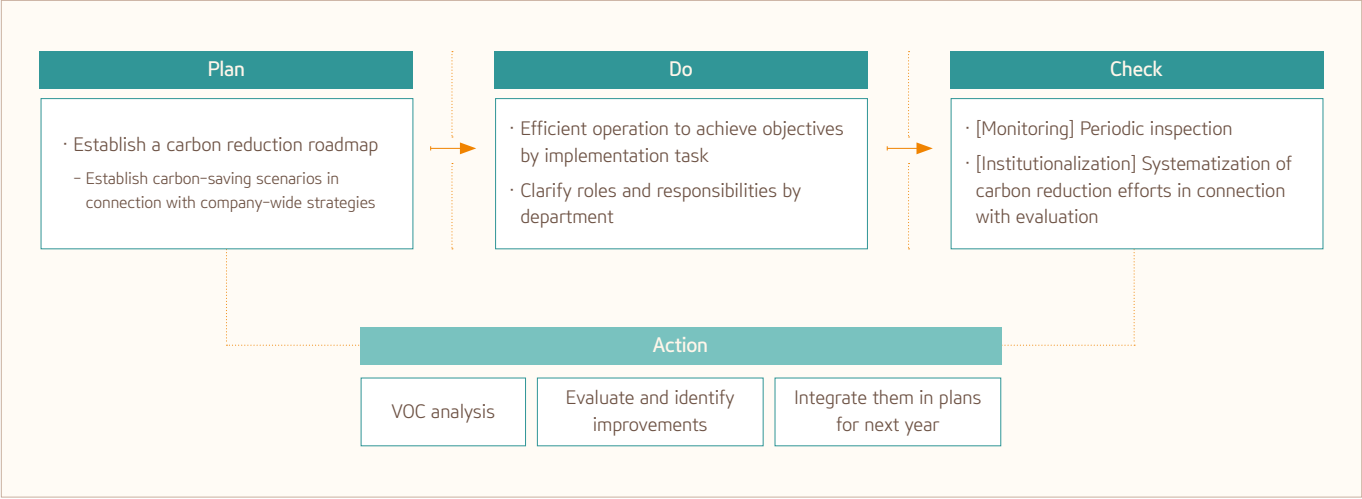
Environmental Management System

LX reorganized its environmental management promotion system in accordance with a comprehensive environmental management plan. The CEO, the vice president, and the head of the ESG management department are in charge of general management, implementation responsibility, and practical responsibility, respectively. Four key strategic directions are assigned to and implemented by departments, with the ESG management department providing practical management and support. We strive to achieve our ‘Carbon Neutral 2050’ target by establishing a company-wide environmental management system, which includes creating a carbon-saving roadmap and implementing and monitoring implementation tasks.

Organization



Execution System



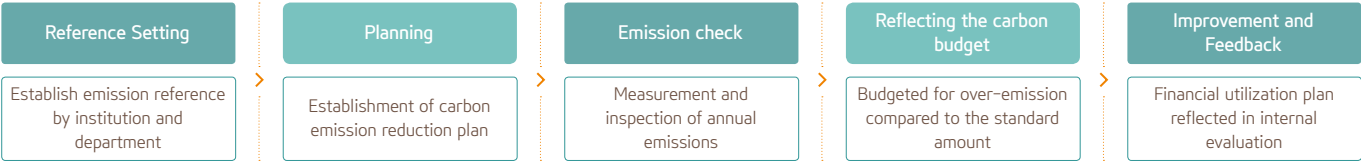
+

Environmental Management: Plus

Introduction of ‘In-house Carbon Tax’ Policy

LX is introducing a policy to impose a carbon tax on excesses in connection with carbon emissions by each department and institution. GHG emissions are measured using consumption data for each source, such as electricity, gas and oil, and internal data such as commuting, business trips, working hours, and server usage. The ‘In-house Carbon Tax’ will be used to invest in eco-friendly facilities and vehicles, purchase green power, and support carbon offset.

‘In-house Carbon Tax’ Operation Process



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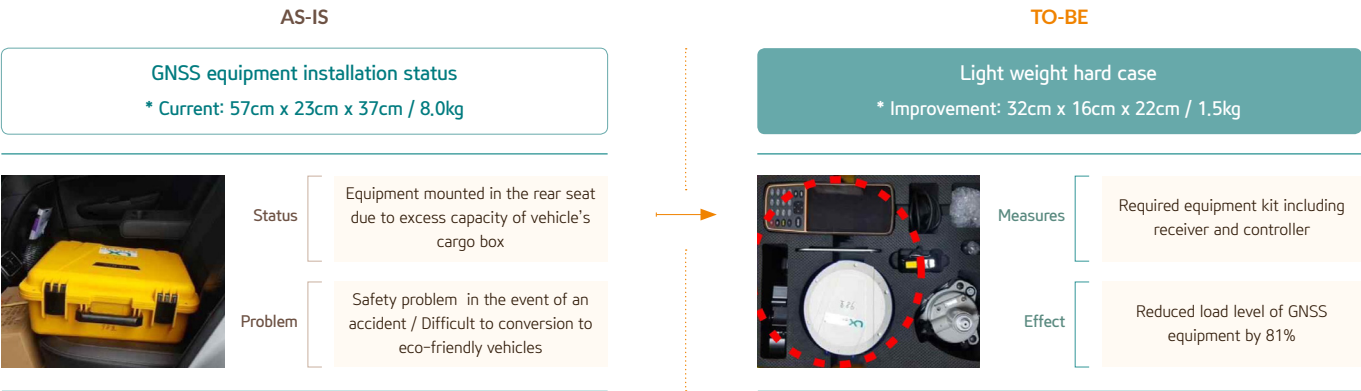
Carbon Dependence: Minus

Conversion to eco-friendly vehicles

LX is converting its business vehicles into low pollution vehicles. In 2021, we introduced 12 additional electric vehicles and have a total of 120 electric vehicles. We have expanded the charging infrastructure for electric vehicles by adding 6 charging stations.

In the process of converting to eco-friendly vehicles, LX discovered a limitation in their loading capacity for equipment and supplies. To resolve this, we reduced the weight of on-board equipment. By 2022, we plan to simplify equipment on eco-friendly vehicles by making the hard case of GNSS equipment lighter and to reduce the weight of surveying equipment by adjusting the weight, thickness, and length between tables.

Lightweight On-board Equipment



Introduction of and Conversion to Renewable Energy

LX strives for eco-friendly energy management to maximize the energy efficiency of new and existing buildings. We are introducing renewable energy facilities such as solar and geothermal power, reducing standby power, and utilizing high-efficiency equipment such as LED lighting equipment and energy storage systems (ESS). In addition, we plan to continuously identify and improve energy use and problems in existing buildings, as well as install additional solar power generation facilities.



LX Pyeongtaek Branch : Introduction of Photovoltaic System and Geothermal System



LX Goyang Branch : Green Building Design

Convenient Facility Conversion and Management Improvement

LX is taking the lead in implementing eco-friendly government policies through various energy management activities. In 2022, we will continue to improve energy efficiency by converting amenities such as heating and cooling and cleaning system air conditioners.

Achievements in implementing eco-friendly government policies

Classification	Description	Performance
<div><div></div><div>Energy management</div></div>	<ul style="list-style-type: none">Install heat insulation film in aging company buildings (Heat loss reduced by 30%)Delete e-mails and lower HW capacity (CO₂ 14g per 1MB)Install an energy saving timer on the 'electricity guzzling' hot & cold water dispensers	<ul style="list-style-type: none">Installed by 9 branches, saving 16,200KwDelete 1.33 mil. MB, reducing 19 tons of CO₂77 vehicles×0.5Kw×days(10h), saving 2,518Kw
<div><div></div><div>Environment Protector</div></div>	<ul style="list-style-type: none">Report complaints to environmental pollution safety 'Sinnungo (an e-venue for the public participation)' and make improvementsHave all institutions and employees participate in cleaning up public facilities	<ul style="list-style-type: none">Carried out 45 cases of improvements in the environmental pollution areaConducted 1,369 instances of environmental cleanup, collecting 9.1 tons of waste



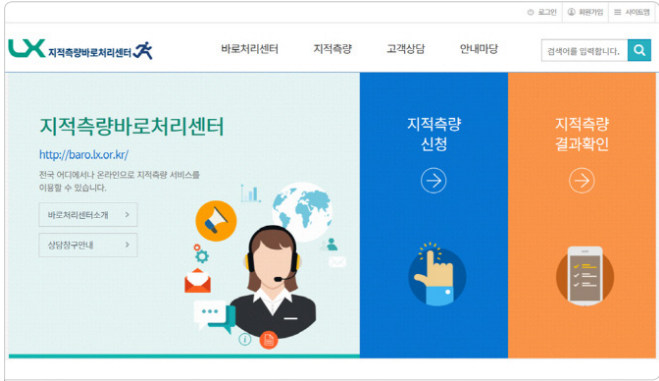
Business Connection: Multiply

Accelerating the Transition to Green Materials

In order to prevent environmental pollution, LX deleted the painting regulations for boundary sign marks (wood) used in cadastral surveys and resurveys and replaced more than 3 million plastic caps per year with recycled plastic, thereby reducing greenhouse gas emissions by about 90 tons. We reduced 110 tons of greenhouse gas by transitioning to an online cadastral survey performance test to reduce paper usage.



Replace boundary sign marks to eco-friendly marterials



Launch online cadastral survey

In order to establish an eco-friendly consumer culture, LX has introduced work clothes with domestic recycled materials, and contributes to creating a green environment and preserving the environment by promoting the use and purchase of green products, as well as implementing mandatory purchases and continuous monitoring.



2021 Upcycling Design Competition Winner Exhibition



Environmental Preservation with Digital Competence

LX effectively dealt with environmental pollution in the Jeonju Stream by converging the technologies of Digital Twin and IoT sensors. Leveraging these technologies, the institution analyzed dissolved oxygen content and hydrogen ion concentrations and installed a real-time monitoring system to identify the path of water pollution inflow and respond accordingly. In addition, for the prevention of illegal occupation and further development within green belt zones, we have established a real-time damage detection environment by introducing an AI/drone automatic monitoring system to detect and film unlawful damage to land and determine illegality.

Digital Twin-based Water Quality Control



Green belt protected by AI-drones

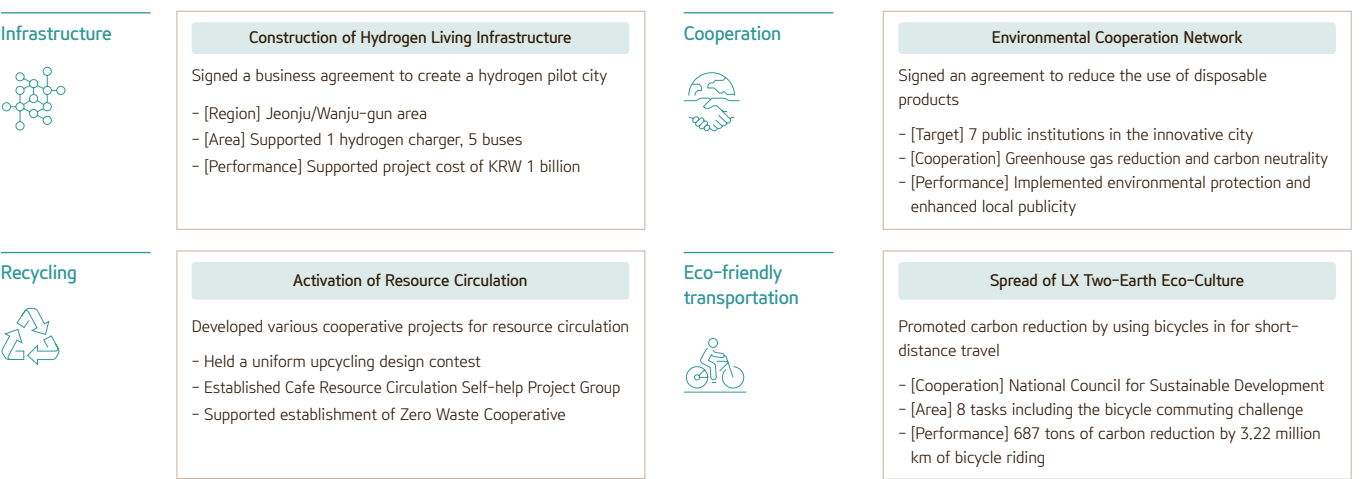


Social Contribution: Divide

Expanding Carbon Neutrality

Alongside social value creation networks, such as the Jeonju Sustainable Development Council, LX has conducted various carbon-neutral activities in the four key areas of infrastructure, recycling, cooperation, and eco-friendly transportation to create a carbon-neutral culture together with citizens.

Activities to create a carbon-neutral culture



Expansion of the Two Wheels for the Earth Campaign

Creating a culture

- Support for the spread of bicycle clubs
- Bicycle commuting exercise
- Citizen's bike riding

Supporting Infrastructure Deployment

- Improving Bicycle Mobile Apps
- Shared Bicycle Borrowing
- Repairing a Citizen's Bicycle

Strengthening cooperation

- Bicycle Donation Challenge
- Ecological Transport Conference
- Construction Cycle Team Talent Donation

LX Two Wheels for the Earth

Two Wheels for the Earth refers to LX's 'Two Wheels to Save the Earth' bicycle campaign. Through this campaign, LX encouraged local residents to use bicycles more, aiming to contribute to the reduction of greenhouse gas emissions. In 2021, participants biked a distance of 3.22 million km, reducing 687 tons of emissions. In addition, a free bicycle repair event was held for residents to spread the bicycle culture.



LX Two Wheels for the Earth Campaign

LX Forest

LX recognizes the need to offset carbon emissions from overseas business trips and accelerates the expansion of sustainable ecological environments by creating LX forests in domestic and overseas workplaces. We have set a goal for forest creation and are actively supporting recovery from forest fires in connection with our total flight distance for business trips. As a pilot project, we selected a rural elementary school to in a rural area to donate companion trees through the 'Classroom Forest Creation Project'.



Creation of Classroom Forests

2021 Achievement of upcycling activities

President of the National Sustainable Development Council

Commendation Award

LX Upcycling Activities

LX developed various cooperative projects for resource circulation, including a work uniform upcycling design contest, the establishment of a self-supporting business unit for café resource circulation, and the foundation of a zero-waste shop. In recognition of our commitment to fulfilling sustainable development goals, we have received a citation from the Chairman of the Local Sustainability Alliance of Korea.

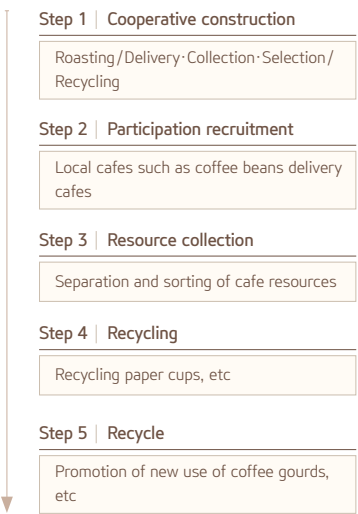


Zero Waste Shop, 'Jigusalim (Save the Earth)'



Donate Upcycling Goods

Step-by-Step Processes



Circular Economy for Cafe Resources

LX has prepared a stepwise process to create a circular economy for cafe resources in cooperation with the 'Youth Self-Sufficiency Project Office' in Jeonju-si and Gimje-si. We will promote the recycling and upcycling of cafe resources by collecting, separating, and selecting paper cups, PET cups, milk packs, ice packs and coffee foils from local cafes delivered by the Youth Self-Sufficiency Project Office. Paper cups, PET cups, and milk packs are delivered to existing recycling companies while ice packs and coffee foils are supplied to the Youth Self-Sufficiency Project Office for recycling (upcycling).



Recycling of Coffee Foil



02.

Implementing Social Values

with National Land Information

Safety and Health	32	Human Resource Management	50
Information Security	38	Win-win Cooperation	53
Human Rights Management	40	Social Contribution	56
Customer Satisfaction	44		



Safety and Health



Safe Living for the People

Safety Management Promotion System

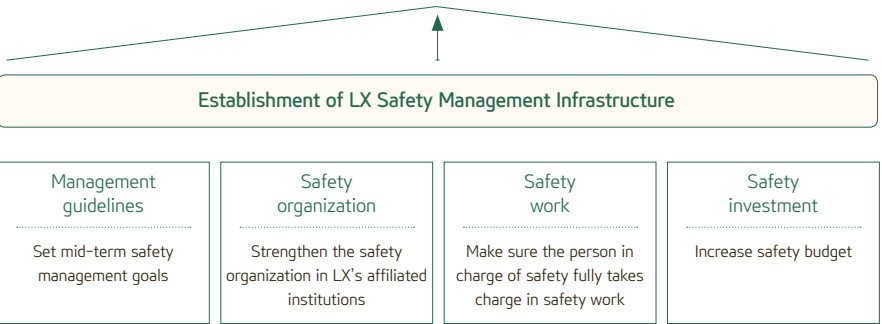
Vision

“Safety management with life and safety of the people and the employees as a top priority”

Safety Goals

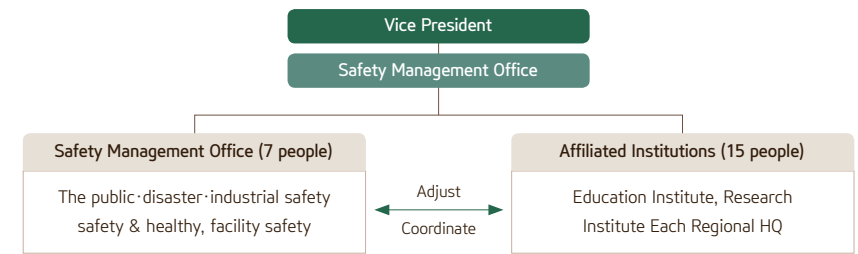
Achieve ‘A’ Grade in the safety management level assessment of the public institutions

Areas



Strengthening the Safety Management Promotion System

In order to enhance the LX safety management infrastructure, LX has expanded the safety and health management system (ISO 45001) institution-wide, further strengthening our capabilities for safety first management. In 2021, as part of these efforts, 11 regional HQs acquired the ISO 45001 certification for the first time, with the corporate HQ and Gyeonggi regional HQ subsequently certified – resulting in the certification of 13 institutions in total. In addition, we have newly established a department charged with safety. Before, safety work was divided by area and led by the head of the management support department. Now, however, this responsibility has been assigned to the Safety Management Office, unifying safety management work and enabling fast decision-making. Furthermore, the existing budget of KRW 8.11 billion was increased to KRW 13.55 billion, securing the driving force for safety first management.



* ISO 45001 : International standards for occupational safety and health management system

Performance of the enhanced safety management promotion system

11 Regional HQs

ISO45001 certified

New installation and reinforcement of a department in charge of safety

Year-on-year to 2020

60% ▲

Disaster management performance

2021 safety awareness level assessment

Achieved Excellence

Safe working environment

45 improvements

Safety risk areas

41 improvements

Safety risk factors in the public's life

519 improvements & removals

Site inspection and improvement activities



Safety Diagnosis
Checking · inspection

Safety inspection on office buildings and daycare centers

- Replace 29 safety devices (Emergency lightings and fire extinguishers)
- Install non-slip stair trades in 10 spots
- Clear up things piled up around the emergency exit
- Install emergency exit lines and repair pavement



Safety Sinmungo App
Reporting · improvement

Reporting on risk factors in the life of the public

- Improve risk factors in the public safety: 409 cases ▲ YoY to 2020

LX, Securing public safety through just 1 minute of attention to detail

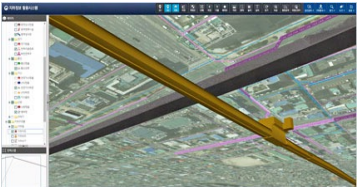
Safety risk factors which we can carelessly pass by will be prevented if we spend just 1 minute on closely looking at our surroundings. So, LX is encouraging the public to spend even just 1 minute, which could be short or long depending on who you ask, on inspecting their site, in order to preemptively detect risk factors potentially harmful to the public safety and to make improvements for the protection of the people.



Integrated map for underground spaces



Ground view of the integrated underground map



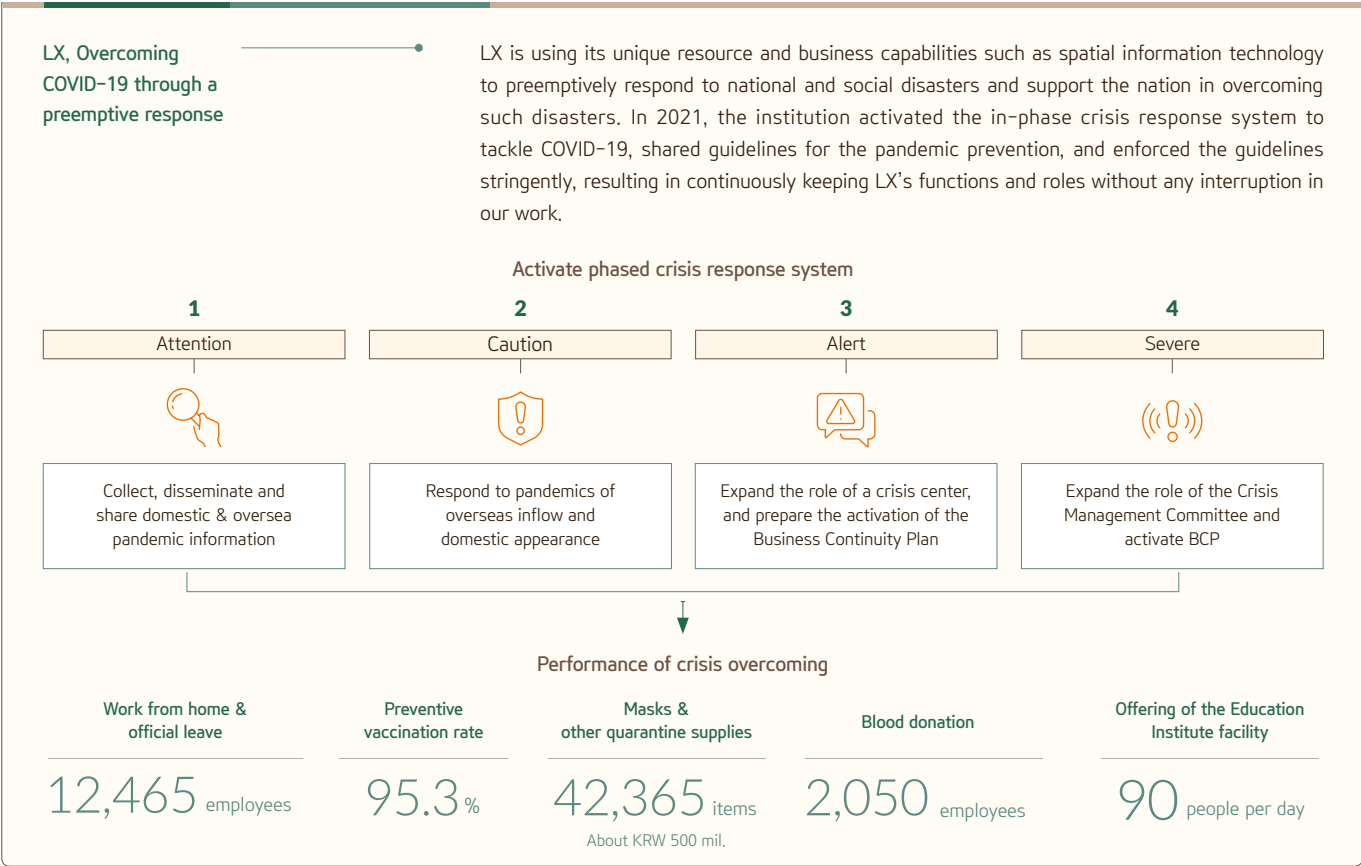
Underground view for the integrated underground map

Securing Public Safety through LX's Business

To prevent underground disasters and conduct recovery activities, LX supported the construction of a 3D underground information map for 152 local governments, which account for 410,000 km among the total 470,000 km of all national underground facilities, based on an analysis of underground incidents as well as on the operation and management of underground information systems. The findings of the underground incident analysis indicated damaged and obsolete underground pipelines as a key cause for the incidents, and indicated that each institute's separate underground information system made it difficult to conduct management systematically. Therefore, LX built a 3D-based underground information map which integrated and inter-connected underground information, and provided accurate underground information to the Ministry of Land, Infrastructure and Transport and the local governments. This helped them make use of such information during the development, recovery and management of underground information, and thus enabled them to take prompt initial actions and speed up recovery activities, contributing to the protection of the people's safety and properties.

Minimizing Damage from Natural Disasters

LX is involved in taking care of the weak and the elderly who were victims of national disasters such as heat or cold waves. In the summer, 2021, the institution installed 64 external heat wave shelters nationwide, considering the challenges posed by the COVID-19 pandemic for the weak and the elderly who suffered fatigue due to sweltering heat. The shelters were used by a total of 1,192 people and engaged in 444 safety activities, including recommending people to return home or take a rest, offering bottled water and masks, and providing farming support. In addition, we found a missing citizen suffering from hypothermia in the severe cold in Paju and reported it to an emergency rescue agency after emergency measures to protect the precious lives of the people.



Direction for on-site safety promotion

1. Reinforce prevention
2. Improve potential risk factors
3. Prevent recurrence

Key performance of three-fold management system for safety incident reduction

Near-miss incidents

4,548 cases registered at DB

Near-miss incidents

158 cases improved internally

Risk prediction activities by all institutes

85,165 cases

Performance relating to two-fold safety inspection promotion

Among 59 sites that emit Class A carcinogens

16 inspected and removed

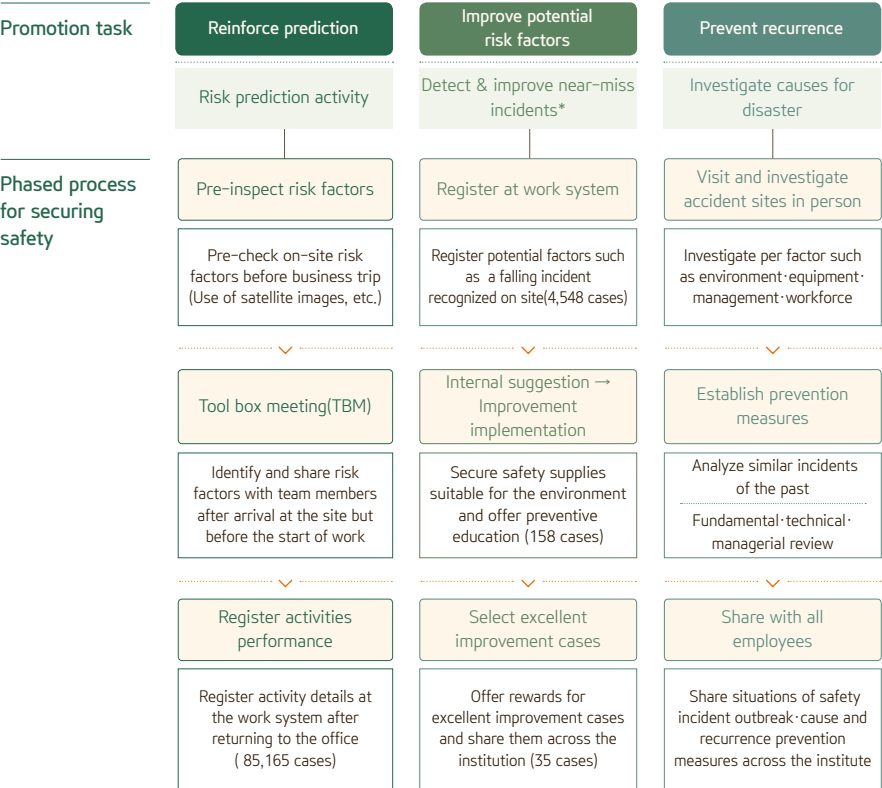
Obsolete & vulnerable facility repair

Budget of about KRW 2.1 billion executed

Safe and Healthy Workplace

Incident Prevention Process

LX has analyzed safety incidents from the last 3 years, deducing key causes for these incidents. Based on the findings, the institution is striving to prevent damage such as industrial accidents affecting employees, including indirectly employed workers and subcontractors, as well as to improve the working environment. According to the strategic direction for on-site safety promotion, we have also established and are running a three-fold management system for safety incident reduction, centering around prevention reinforcement, near-miss incidents* and recurrence prevention.

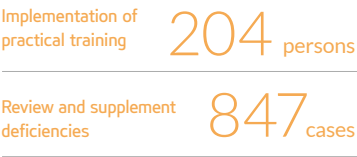


* Near-miss incident: A condition that the risk of potential outbreak of an incident is there, but did not lead to actual injury

Enhanced Maintenance and Management of Facilities

LX is enhancing the maintenance and management system for facilities including national infrastructure, multi-use facilities, and government office buildings, improving the working environment. In 2021, the institution established mid-to long-term plans for real estate supply and demand as well as for safety management for preemptive maintenance and management and performance improvement. Following approval from the BOD in January 2022, the institution is also taking safety measures by prioritizing facilities that were graded C in accordance with the results of safety assessments. Furthermore, to secure facility safety, we established a two-pronged safety inspection system which connects LX's internal safety inspection conducted by our employees with expertise in this area with safety checks performed by external institutions specialized in safety diagnosis. We are also executing the safety budget for vulnerable facilities through investment in safety and creating safe and healthy workplace where the people and employees feel safe through environmental improvements such as facility remodeling.

2021 Performance of strengthening safety management capabilities



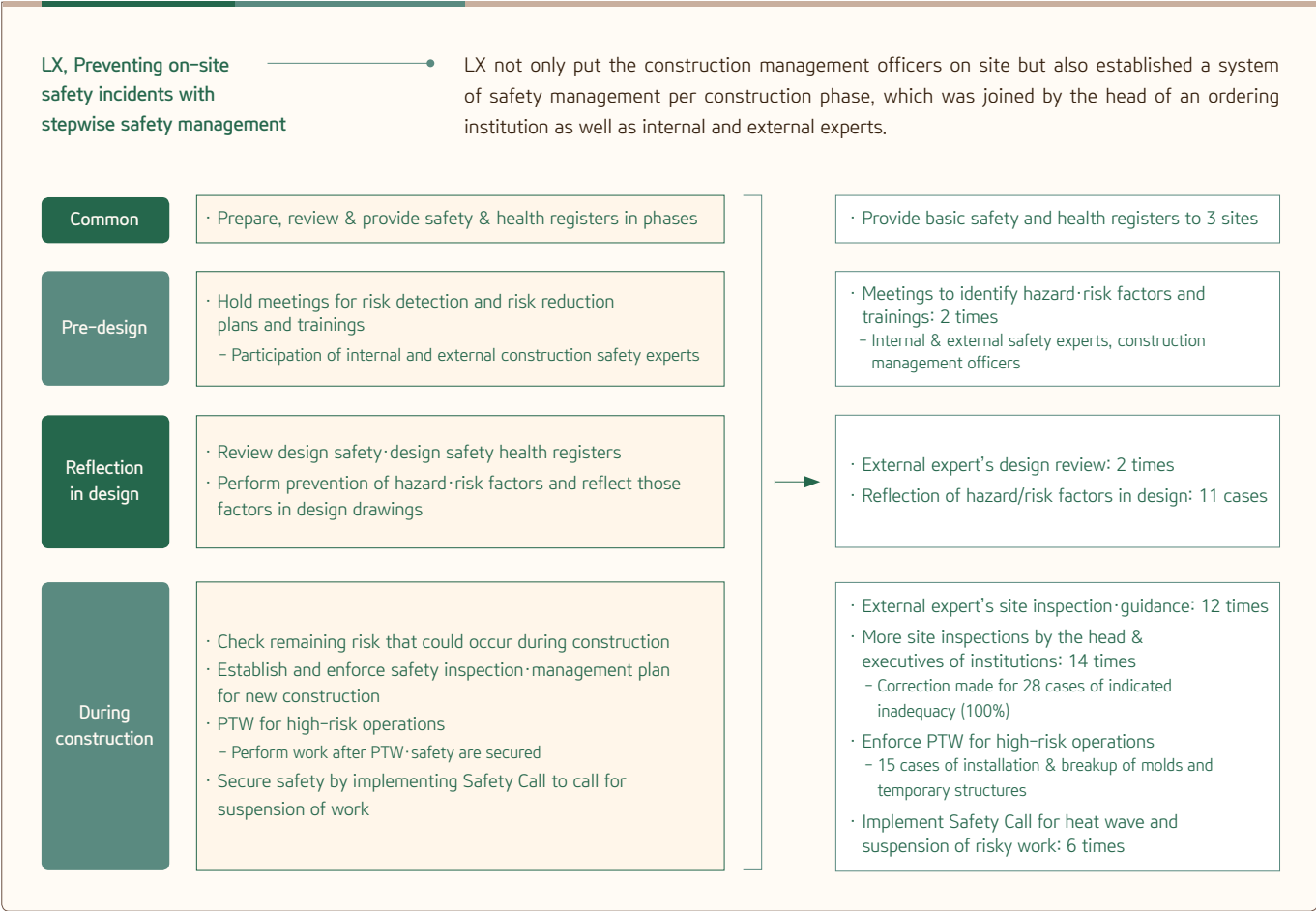
Enhancement of Safety Management Capability

LX is performing capability reinforcement activities for employees in charge of safety management in order to prepare for regular safety risk assessment. With the aim of resolving discrepancy in the levels of safety management between institutes, LX is enhancing expertise of the relevant personnel by inviting external experts and offering trainings tailored to each regional staff and offered working-level training to 204 staff from 184 institutes in 2021, striving to establish the safety management system reflecting branch-specific characteristics. In addition, we reviewed and supplemented 847 cases of deficiency.

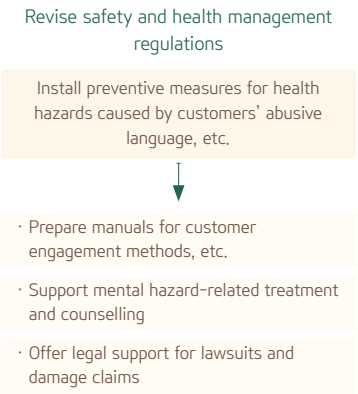
Strengthening Onsite Safety Management

LX is running an on-site construction management officer system in order to prevent severe accidents, such as fatal accidents, at new construction sites and create conditions for sound construction, securing safety in facility construction. In 2021, the institution put specialized construction management officers at construction site from the design to the completion phases, considering safety factors as top priority in making decisions on design change. In addition, we strengthened safety management by designating safety and health coordinators with expanded roles, and held a coordinator-led inspection meeting 12 times, taking safety actions subsequently. Thanks to such efforts made, the construction of 3 new facilities has been completed without any safety-related incidents.

2021 Safety management performance



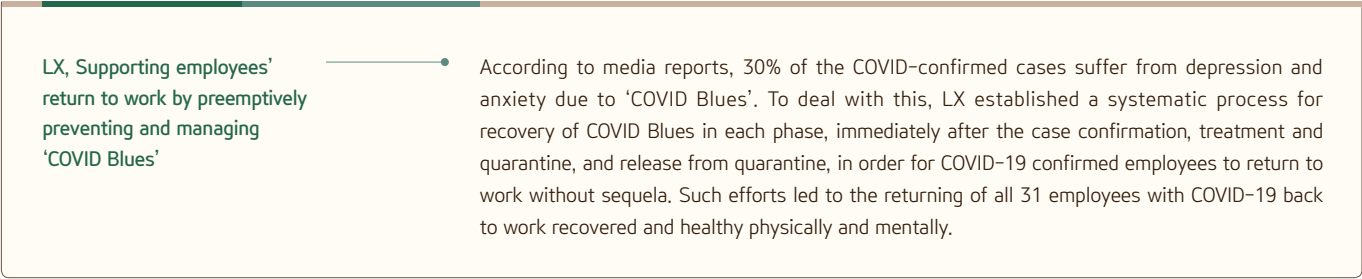
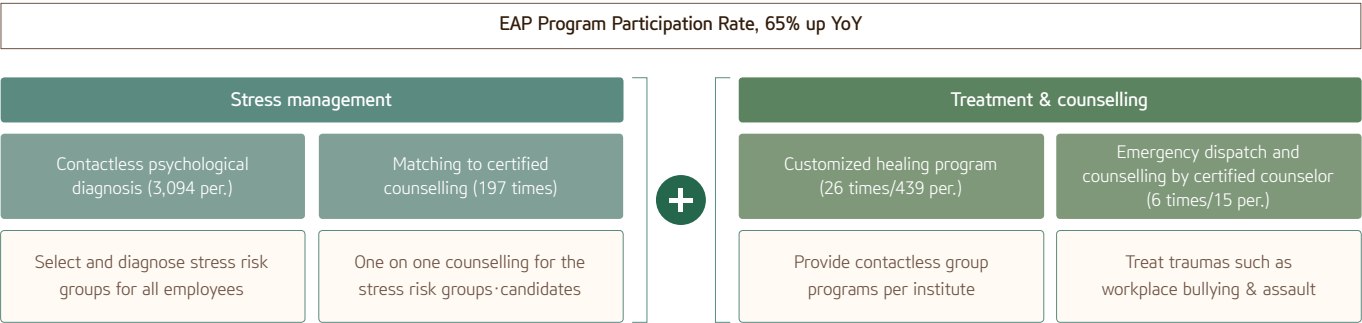
Regulatory improvement for protection of customer service employees



Improving Health Protection Infrastructure

Starting 2021, LX expanded our health enhancement program to cover not only LX's employees, but also employees of our partners. We conduct on-site health management activities at each institute. Through basic medical checkups, the institution offers customized counselling, prevention and management of muscular skeletal disease, diagnosis and counselling for stress, follow-up of people with symptoms. In addition, to manage the mental health as well as physical health of every employee, we have revised the regulations for health and safety management, prepared a health protection manual for employees with customer engagement jobs, and are offering legal aid for employee protection. Furthermore, the Employee Assistance Program (EAP) is in operation to provide specialized programs and certified counselling for the stress management of all employees.

EAP operation structure and performance



Safety and Health Together with Suppliers

To fulfill its role and responsibility as a public institution, LX strengthened safety and health support for subcontractors and suppliers. The institution manages major safety and health issues of its subsidiaries and suppliers and improves working environment accordingly, by operating the Safe Work Council and the Consultative Body between parent and subsidiary companies. In addition, we assess the safety and health condition at subcontracted and new construction sites including those from suppliers, support inspection for workers at site, and expand the health enhancement program to cover the employees of partners, firmly establishing the safety and health system for both LX and the partners.

Information
Security



Information Security Management System

Strategy for Information Security Management

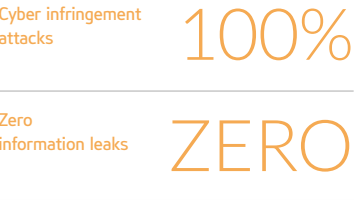
Goal		
Achieve 'Zero Cyber Infringement Incident' & 'Zero Personal Information Leak Incident'		
Strategy		
<div></div> <div>Respond to cyber threat</div> <div>Build safe work environment</div>	<div></div> <div>Prevent security incident</div> <div>Strengthen the security incident prevention system</div>	<div></div> <div>Comply with national security policy</div> <div>Implement national security policy</div>
Execution task		
<div>· Build up managerial· technological security</div> <div>· Set up AI-based integrated security control</div>	<div>· Preemptive actions for cyber security</div> <div>– Information security, privacy protection</div>	<div>· Improve based on external institute's assessment results</div>
Performance target		
Zero incidents in information security·leakage	100% blocking of cyber attacks	Zero security incidents such as hacking

Enhancing the Cyber Threat Response

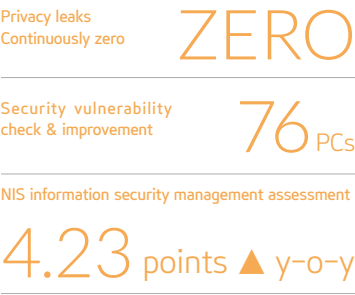
Tougher Security Measures

To better respond to cyber threats and ensure the safety of information, LX has bolstered managerial, physical and technological security measures. Based on these, a mid-term operation plan and detailed sub-plans were newly prepared, existing disaster recovery training – which focused on IT equipment – was expanded to cover the cyber security area, and CCTV operation manuals were revamped, centering on on-site operators. In addition, a detection system for malicious code and abnormal activity was newly introduced to the institution, and the issue of system deterioration which could affect security function was resolved, by installing three-types of security software and upgrading solutions to prevent personal information leak.

Performance of enhanced security measures



Performance on privacy protection



Bolstering Security Check·Training & Security Environment

As part of its efforts to strengthen information security, LX is performing a status check for security information management, trainings for cyber attack response, and relevant cyber education. In November 2021, we assessed the performance of each institutes' information security management, and checked on the security status of 8 business sites, further enhancing our emergency response capability. In addition, we bolstered the initial response capacity to prevent cyber infringement incidents through training on how to respond to email hacking, computer network penetration and DDoS attack, and provided all employees with remote trainings, improving the security awareness further. The institution also took preemptive security measures, such as dual authentication processes and internet blocking during video conferences, in order to protect security in the contact-free landscape and ensure business continuity.

Strict Management of Personal Information

LX is making efforts to protect personal information completely in all stages from use to destruction. Access to records are confirmed and check every month in the stage of personal information use. To manage the information, LX conducts a quarterly check on changes in the registered data of personal information files, and immediately deletes any customer information whose retention period expired. Furthermore, security vulnerabilities are checked and follow-up measures are implemented in order to enhance the prevention system for privacy infringement and leak incidents, and a 4-phase security violation handling process is in operation, toughening up security violation standards. Through this, we are making great progress in successfully preventing privacy infringements and avoiding information leaks.

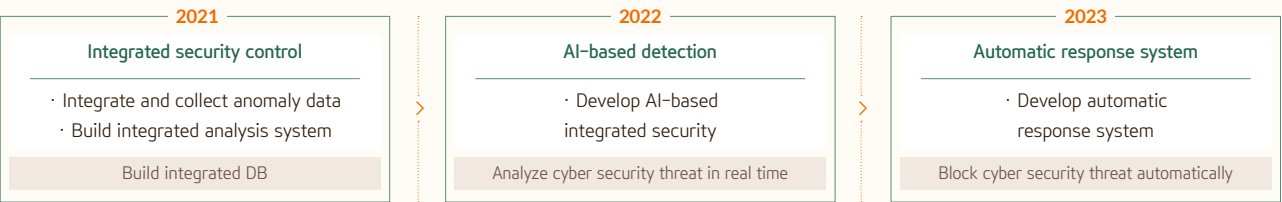
Embedding a Culture of Security Awareness

LX is securing information security capability through trainings on how to respond to cyber infringement incidents as well as specialized security trainings, and preventing security incidents through security trainings on malicious codes and web vulnerabilities in a virtual landscape.

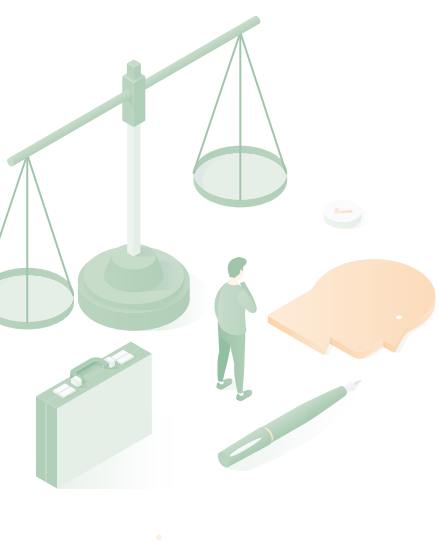


LX, Enhancing cyber security by installing a cutting-edge AI-based integrated security control system

Aiming at conducting integrate management of hacking and other cyber security threats, LX built the integrated security control system to collect anomaly data and perform comprehensive analysis in 2021. Through this, it now became possible to carry out the automatic detection of and real-time response to cyber attacks, which were detected and responded to all manually. Going forward, LX is planning to build the AI-based integrated security detection system and the automatic response system in order to reinforce a more stabilized information security system.



Human Rights Management



Human Rights Management System

Human Rights Implementation System

To take human rights into account in the overall management of the institution and to embed human rights firmly in the organization, LX has installed and is running a department dedicated to human rights. In addition, LX established regulations for human rights management as well as for human rights violation investigation and relief, and is resolving employees’ predicaments related to human rights through counselling. The Human Rights Management Committee, the institution’s top decision-making body for human rights, deliberates and determines on major policies to protect and improve human rights based on the ‘human rights regulations.’

Strengthening a Foundation for Human Rights

As we are in an advanced stage for human rights promotion, LX has overhauled human rights implementation regulations to enhance the foundation for human rights management. First, the human rights management officer was elevated to an executive-level position, and the regular enforcement of human rights impact assessments was stipulated in the regulations. In addition, LX granted the head of a department a right of statement to allow him/her to exercise the right in the Human Rights Management Committee, and added visions and global standards to the human rights declaration, enhancing the executive ability of human rights management. Furthermore, to upgrade the code of conduct centering around victims, channels for reporting and receiving human rights violation were unified, laying a firm foundation for human rights management.

Mid- to Long-term Roadmap for Human Rights Management

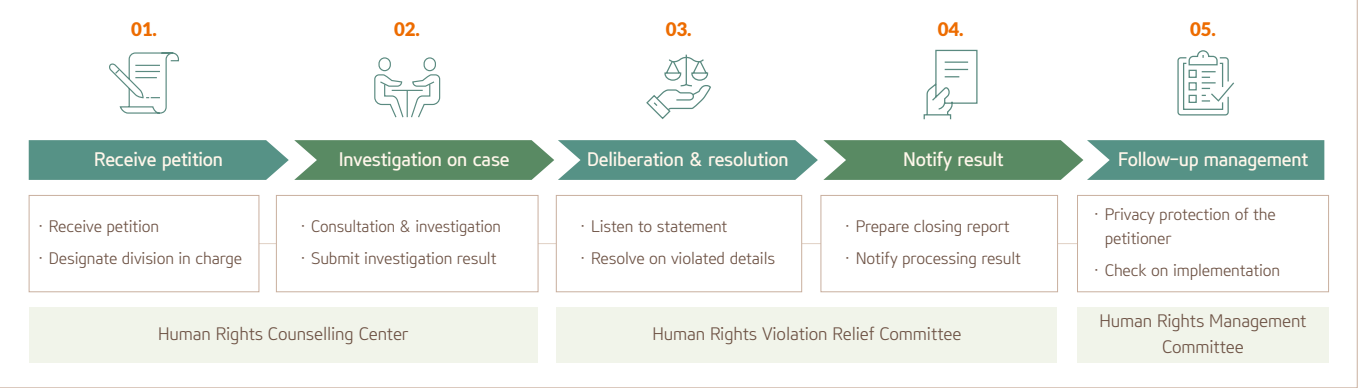


Identification & Management of Human Rights Risks

Remedying Human Rights Violations

LX thoroughly investigates human rights violations through its human rights relief system and manages human rights risks by monitoring how the remedial measures are implemented in accordance with investigation results.

Human rights violation remediation process



2021 Human Rights Impact Assessment

Institution operation items

2.3 points ▲ YoY

Key business items

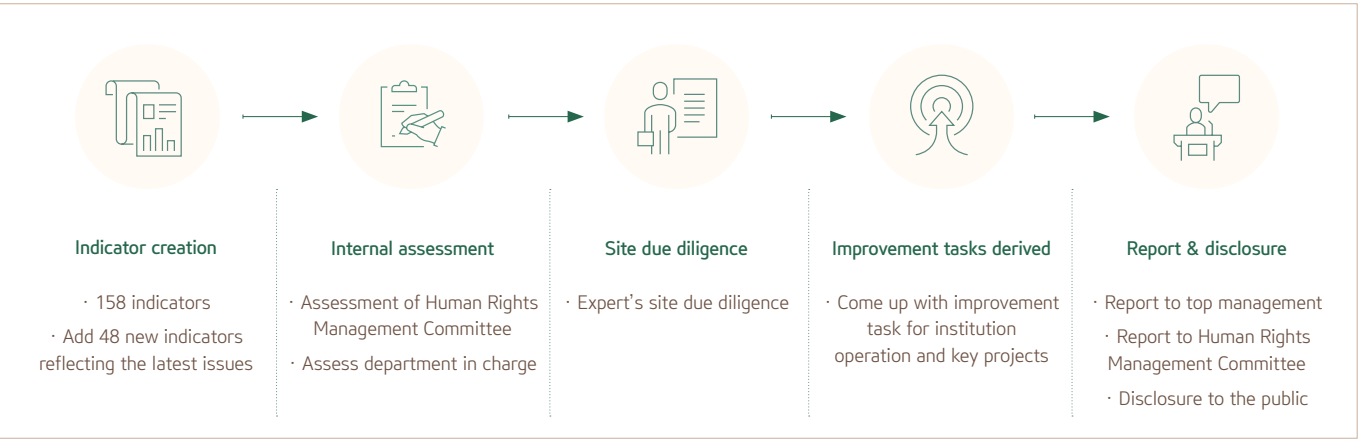
8.2 points ▲ YoY

Human Rights Impact Assessments

LX performs the human rights impact assessment once a year according to human rights management regulations. Based on the human rights management manual set forth by the National Human Rights Commission of Korea, the institution compiled the checklist of 158 indicators in 10 areas and then added 48 new indicators reflecting the latest human rights issues in 4 areas in accordance with our cadastral business. Among with this, assessment was conducted on relevant departments in charge, and experts’ due diligence was carried out on site.

The human rights risks identified through the assessment are addressed by preparing improvement tasks and conducting response activities. The identified risks from the 2021 assessment includes suppliers’ human rights violations, industrial safety management, and protecting the human rights of the disabled. According to this, we investigated suppliers’ standards with respect to human rights, checked for submission of written commitments for human rights protection, improved standards and regulations for protective gear management, and provided education and training tailored to the physically challenged.

Human rights impact assessment process



Establishment of a Culture of Respect for Human Rights

On-site Human Rights Improvement with Suppliers

Aiming at becoming a human rights friendly institution through improved human rights on-site, LX is engaged in various human rights activities covering not only the institution but also its suppliers. In 2021, we promoted human rights communication activities, paying a visit to regional HQs and branches, and opened a counselling and reporting channel for human rights violations by suppliers’ personnel in charge of contracts. In addition, we entered into a business agreement with LX Partners, our subsidiary, and set up a cooperative system to enhance the capability to implement human rights management. Based on this, LX provided support for LX Partners’ establishment of the human rights management system such as the composition of the Human Rights Management Committee, human rights impact assessment, and relief process, as well as for human rights education to operate institute-specific laws and regulations and improve sensitivity for human rights.



Special training on human rights management

Diversification of Human Rights Education Programs

To enhance human rights awareness, LX diversified human rights education programs, spreading a culture of respect for human rights. In 2021, the institution proceeded with the human rights education by dividing it into internal and external human rights protection, job expertise build-up, special education. Going forward, we will continue to do our utmost to have human rights management firmly embedded in our institution, by promoting the diversification of these programs.

Direction for the diversification of human rights education programs

Internal

Mandatory education for all employees
Education on human rights management and 4 serious assaults
- Human rights: 4,138 employees, 4 serious assaults: 4,364,
- bullying: 4,141

External

Human rights education for suppliers
Education on power overuse prevention, and safety and health
- 23 employees of LX Partners (LX Education Institute)

Expertise

Enhance expertise of personnel in charge of human rights
Equip staff in charge of human rights·sexual harassment with more expertise
- Counsellor training: 23 employees, OJT: 60 employees

Special

Special training for high-level managers
Create workplace culture of mutual respect
- 189 of senior team leaders or higher manager

Card news release on workplace bullying



Campaign for culture of respect for human rights



2021 Human Rights Management Index

82.93 points

Protection of Stakeholders’ Human Rights

To protect human rights of internal and external stakeholders and strengthen communication for human rights management, LX is implementing participative human rights activities and promotions. In 2021, the institution held the Human Rights Success Case Contest and gathered various ideas and opinions from internal and external stakeholders, and hosted the Meeting Human Rights with Book Exhibit to help enhance human rights awareness among local residents and employees. In addition, as part of a campaign by the public institutions’ human rights consultative body, we carried out an initiative to spread the culture of respect for human rights, drawing a consensus between the institutions on reinforcement of the human rights management system and the spread of the culture. Along with such participative activities, we also disseminated latest trends regarding human rights through publications and our intranet platform. Moreover, 18 hidden cameras were distributed to the HQ and regional HQs to prevent digital sex offenses, and an informative card on workplace bullying was produced and released.

KPI for Human Rights Management

LX has developed and is operating a comprehensive human rights management index, implementing the mid- to long-term management system for human rights management. LX’s Ethics Management Center and external experts led the development of this index, which is divided into three categories: human rights management implementation level, performance, and internal culture. Through this, the institution has successfully ensured reliability and transparency in its human rights management performance. The index is utilized as a performance indicator for its mid- to long-term management strategy, further upgrading the systems for human rights management.

Human Rights Management Index

Human Rights Impact Assessment
Industrial safety, non-discrimination in employment, protection of human rights in the workplace, etc.
30 questions in 8 areas

Human Rights Survey
Level of awareness concerning respect for human rights, mitigation of human rights violations, etc.
30 questions in 5 areas

Quantitative Performance Indicators
Employment rate of persons with disabilities, number of disciplinary actions for human rights violations in national statistics
40 questions in 3 areas

Customer Satisfaction

Customer-centered management promotion system

LX strives to enhance the public interest, convenience, and customer value of cadastral surveys and spatial information projects, through Consumer-Centered Management (CCM) based on LX's Customer Service Charter. The institution is actively expanding its R&D infrastructure to secure business competitiveness and future growth engine while quality management and the Voice of the Customer (VOC) are used to keep improving the customer satisfaction service process and also to reflect customer opinions to the process, providing accurate spatial information and cadastral survey services.

LX Customer Service Charter

We will provide the best national land information service by strengthening our professional capabilities.

We will find out customer needs in advance and offer tailored customer service.

We will think and behave from a customer's perspective with an open mind.

We will follow the principles and standards to implement reliable and trustworthy service for customers.

Customer Satisfaction through Innovation

Digital Innovation

Through future-oriented research and development, LX is pursuing digital innovation in the overall cadastral survey business. The institution is currently developing an electronic communication system without any restriction on time and space by integrating three-dimensional data such as 3D VR images, drone images and light detection and ranging, for the first time in Korea, and is planning to complete the development and verification by 2022. In order to develop cadastral survey business regulations based on 3D drone image technology, LX will also establish drone use regulations, as well as process-specific image use standards, through procedures such as reviewing drone-related rules, combining new technologies, and expert consultations and verification. Along with this, RPA, an automation solution, will be introduced to the manual repetitive, periodic and standardized work in order to dramatically reduce manpower, time cost, and potential human errors and to achieve digital work innovation through the pilot application of RPA in 2022.



LX Digital Twin Experience Zone

What is RPA?

RPA, an abbreviation for Robotic Process Automation, refers to technology for automating work processes using software robots

Performance of 2021 cadastral survey quality improvement

International standard benchmark

550,000 points installed
additionally (190,000 points ▲ YoY)

Basic cadastral infrastructure 12%▲ YoY

Ratio of installation to the whole benchmark 52.5%

Ratio of error correction to total errors 46.9%

Cadastre Advancement Mid- to Long-term Roadmap

Demonstrated Possibility (~2020)

- [Research] Reorganization of land category system (Busan-si)
- [Demonstration] Land census project (Yangpyeong-gun)



Laying the Foundation (2021 to 2022)

- Development of Integrated Cadastre Management System
- Establishment of data management and utilization process



Advancement and Expansion (2023~)

- Expand advanced cadastre information to 229 local governments
- Provide advanced cadastre information to private industries, and the public

Drone and aerial image linkage and survey data 8.3 million

Spatial data 0.48 million

Advancing Cadastral Service Quality

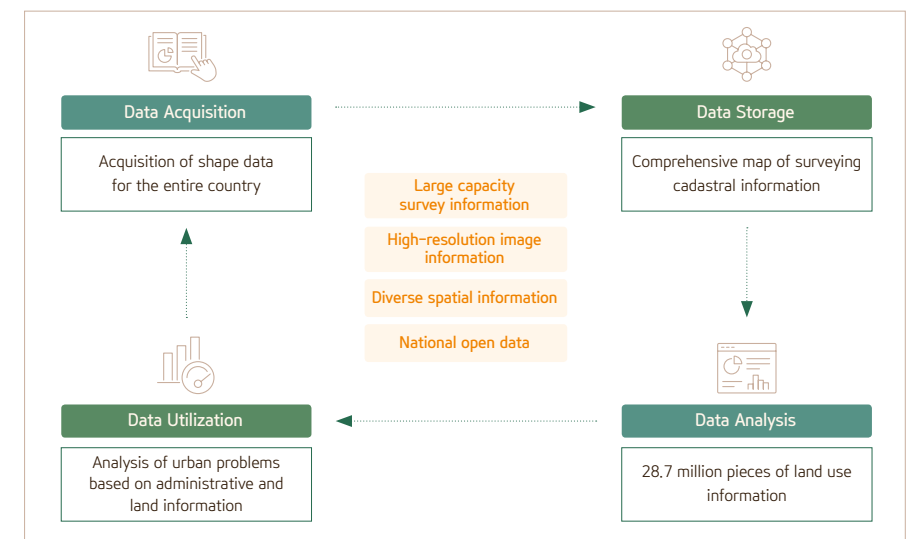
LX has established the 2030 Future Strategy for Cadastral Business, centering around the idea that convergence technologies such as Digital Twin, drone and autonomous driving are to be utilized in road, postal address and city planning, and is promoting quality advancement to realize a cadastral future led by LX. To this end, the institution is developing basic infrastructure which guarantees the accuracy of cadastral surveys by monitoring international benchmarks in real time and securing dedicated surveyors. It is also improving the error correction process for cadastral records by ensuring good governance with respect to the government and public bodies. In the future, we are planning to offer integrated information with high usability, based on more advanced cadastral information, and thus aim to lay the foundation for the integrated management of standardized national land information.

Advancement of Cadastre Information

LX has established a mid- to long-term roadmap for advanced cadastral information to respond to internal and external environmental conditions, such as the Korean New Deal 2.0 policy, and the development of high-precision imaging technologies, such as aviation and drones. In 2020, we identified the advancement of cadastre as a top-priority task. In 2021, we made efforts to lay the foundation for data-oriented cadastre information digitization. We aim to provide advanced cadastre information to 229 local governments, private industries, and the public throughout the country from 2023.

The top priority for cadastral advancement is the lack of a management system for the entire life cycle of cadastral data and the process of linking large amounts of existing and new data. To solve this problem, LX has established a data-oriented integrated system.

Data-oriented Integrated Cadastre Information System



LX will strive to ensure the stable operation of the data ecosystem and the consistent spread of digital cadastre property.

Cadastral Survey Service Improvement Performance

Cadastral Surveys Completed

40,000 cases year-on-year▲

Site observation time

20 minutes▼

Survey shaded areas*

23% of on-site work hours▼

* Refers to areas of very low site accessibility with many obstacles, requiring a lot of equipment movement.

Survey processing period

0.9 days from the previous year▼

Customer-oriented Cadastral Survey

Rapid Cadastral Survey Service

LX has established three improvement tasks to provide a prompt cadastral survey service. First, we improve flexibility to handle tasks. We monitor the workload by region and team in real-time and immediately assign nearby urgent work to the relevant team if a work gap occurs due to a cancellation request. In addition, the smart work environment-based urgent work processing system used in some branches has been expanded to 169 branches nationwide. Second, we improve the speed of surveying, performance. We have introduced an observation equipment hybrid solution* to receive multiple survey data through simultaneous observations and improved mobility by replacing survey equipment with mobile devices from on-site PCs. Third, we improve accessibility to survey sites. We have developed a domestic drone specialized for cadastral surveys that can be used for on-site verification in dense forests or in mountainous areas with steep slopes. The survey processing period was reduced by 0.9 days compared to the previous year.

* Hybrid solution: A system that integrates various observation equipment (total station, GNSS) with on-site PCs, mobile devices, etc.



Cadastral Survey of Mountainous Areas

Sharing the Difficulties of the COVID-19 Crisis

LX operated the LX fee fast track to help those who are tired of increased utility rates and the prolonged economic recession caused by COVID-19. In January 2021, additional exemption and exemption of charges was implemented for survey re-requests, which have the highest customer demand within the reduction system*, followed by implementation of charge reduction policy from June to October. We frequently consulted with the Ministry of Land, Infrastructure and Transport regarding the overall policy for service charge reduction, and we agreed to expand the benefits of charge reduction for the first time.

* Reduction system: Agricultural infrastructure government subsidy project, rural housing improvement project, survey re-order, national merit and disabled persons , return service re-order etc.

Reduction of Survey Fees

Reduction in charges

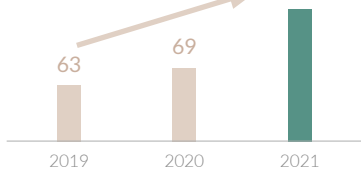
KRW 34 billion

Reduction for re-requests

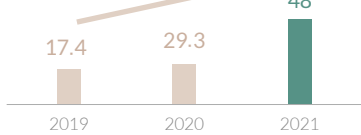
KRW 900 million year-on-year

Implementing Social Values with National Land Information

Disclosure rate of requested information (Unit: %)



Disclosure rate of original copies (Unit: %)



Performance of 2021 communication with customers

No. of cadastral complaints

36▼YoY

Customer satisfaction index

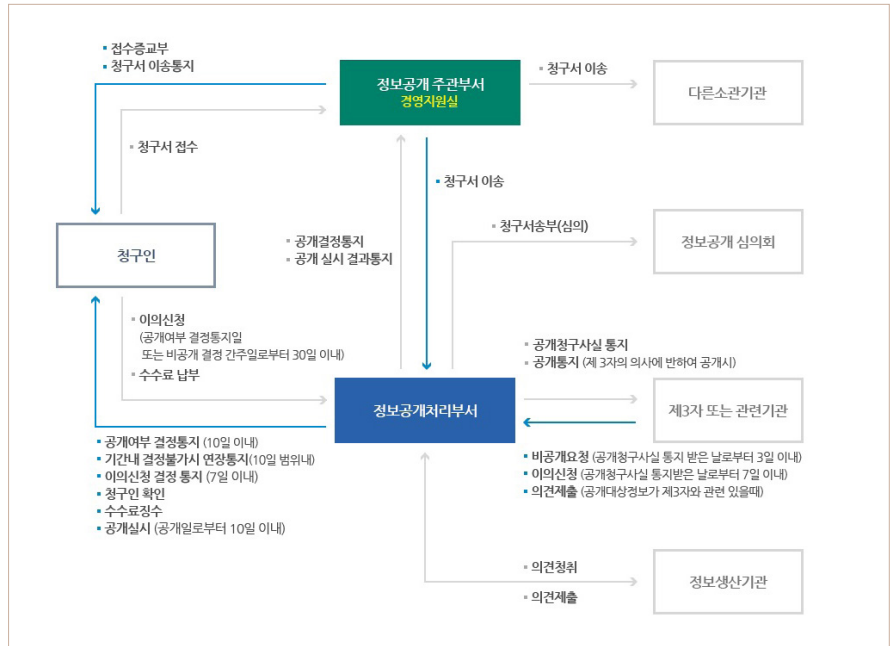
Goals, 3 yrs. in a row 100% achieved

Communication with Customers

Expansion of Information Disclosure

LX is trying to ensure the public's right to know and expand information disclosure on demand. To provide information highly demanded by the people quickly and conveniently, the institution improved the way of information disclosure, by visualizing information and providing easy-to-understand commentaries. It also enhanced the legal procedure for the disclosure as well as information processing for disclosure of original copies, which led to a reduction in the number of days required for legal procedure from 10 to 4.7, and to disclosure of 318 closed documents to the public. In addition, we provided digital information on land, safety and living which is close to the public life to public data portals, apps, and websites, disclosing 24.43 million pieces of information to the public in 2021.

Information Disclosure Process







Providing Contactless Survey Consultations

LX is striving to improve customer service satisfaction, by enhancing contactless services with which consultation on cadastral survey can be provided in a simple and easy manner whenever and wherever. For this, the institution expanded its existing Consultation DB to offer a fast and accurate service while providing expertise in various fields, including the survey consultation, complaint and lawsuit. In addition, LX performs in-depth interview with customers in order to address their inconvenience. In this process, we listen to customers' opinion and make subsequent improvement in all phases from consultation and reception of complaints to follow-up management, while enhancing consultation service quality by building up the certified counsellors' competency. Furthermore, LX built a customer relation management system through which the whole process is open to the public and customers who filed a complaint can voice their opinions, and also revised internal regulations to allow customer participation in the compensation process when there is a cause attributable to the institution, accelerating enhancement of customer communication and satisfaction.

Channel Operation In Accordance with the Communication Direction of Stakeholders

LX operates communication channels that correspond to the characteristics of each stakeholder.

	Main Stakeholders	Communication Channels	Description	Communication Outcome
<div>Public Engagement</div> <div></div>	<div>· Survey applicants</div> <div>· Civil petitioner requesting information disclosure</div> <div>· Young people interested in employment</div>	<div>Customer complaint channel (CRM, etc.)</div> <div>Public Engagement Innovation Group</div> <div>National supporters</div> <div>National Branch Number Keeper</div>	<div>· Improvement of integrated customer management system for civil complaints</div> <div>· Free legal consultation with the Anti-Corruption & Civil Rights</div> <div>· Participation and reflection of experts and the public in policies</div> <div>· Sharing of LX's policies and business</div> <div>· Investigation and proposal of national branch number plates (2,640 cases)</div>	<div>· Service satisfaction: 3.8 ▲</div> <div>· Implemented legal counseling in remote areas (Cheongyang-gun, etc.)</div> <div>· Policy participation and innovation strategy 142 cases</div> <div>· Content production and spread in 2021 143 times</div> <div>· 62 cases of labeling errors such as damage and non-verification</div>
<div>Shared Growth</div> <div></div>	<div>· Community networks</div> <div>· Associations and other related industries</div> <div>· Supplier (private business)</div>	<div>Overseas expansion center</div> <div>Win-win development forum</div> <div>Jeonbuk social value network</div> <div>Integrity cluster</div>	<div>· Cooperative expansion of overseas business through collaborative communication</div> <div>· Communication activities with all walks of life, including local residents</div> <div> - Improving the living conditions (culture) of the innovative city</div> <div>· Promotion of cooperation projects with related institutions such as relocated public institutions</div> <div>· Communication through the Integrity Nuri Cultural Festival</div>	<div>· Private company revenue: 35% year-on-year ▲</div> <div>· Hold LX Busking (April to October)</div> <div> - Participating residents' satisfaction: 94%</div> <div>· Establishment of Gochang Youth Shouting Center</div> <div> - Revitalization of youth → Prevention of population outflow</div> <div>· Achieved 2nd level of integrity through diffusion activities</div>
<div>Cooperation on Policy Implementation</div> <div></div>	<div>· National Assembly, Government (Local Government)</div> <div>· Relevant institutions (public institutions)</div> <div>· Press, influencer</div>	<div>Spatial information forum</div> <div>Spatial information policy advisory committee</div> <div>Press conference</div>	<div>· Discussion of data standardization and quality improvement plan</div> <div>· Held an advisory committee for the development of spatial information industry and creation of a convergence market</div> <div>· Held press conferences by Ministry of Land, Infrastructure and Transport and Jeonbuk Provincial Office Correspondents (6 times)</div>	<div>· Establishment of Plan for International Standardization of Domestic Standards</div> <div>· Development of policies and proposals in connection with DT and Metaverse industries</div> <div>· Media reports on national safety and new growth industries 1,756 arthices</div>
<div>Vision Sharing</div> <div></div>	<div>· Employee</div> <div>· Union</div>	<div>We Land</div> <div>Millennial board</div> <div>Healing Talk</div>	<div>· Improvement of in-house intranet forum communication</div> <div>· Strengthening communication management with the MZ generation</div> <div>· Online communication interview with LX's executives and heads of organizations</div>	<div>· Employee posts: 360 ▲</div> <div>(264 in 2020 → 951 in 2021)</div> <div>· Metaverse talk concert</div> <div> - In-house Intranet participation (1,600 times)</div> <div>· Value system internalization index: 0.4 points ▲</div>

Human Resource management

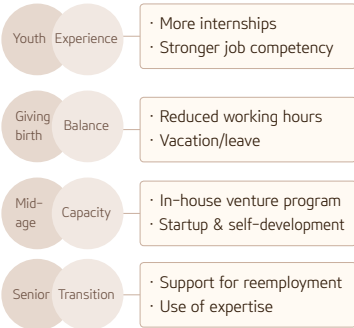


2021 job creation performance

No. of jobs created

2,281

Job creation model tailored to life cycle



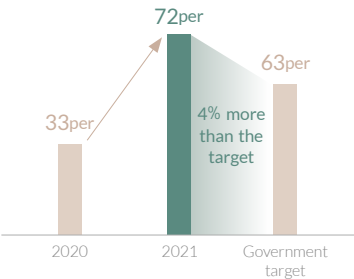
2021 fair employment performance

Audit result

Zero unfair hiring

ZERO

2021 local talent recruitment performance



Creation of Decent Work

Strategy for Job Creation

Vision

National Land Information New Deal Job Creation to Connect Smart Society

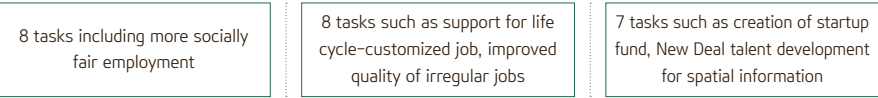
Goals2025

Public 1,390 jobs Private 13,720 jobs creation

Strategy direction



23 tasks



Fairness and Transparency in Employment

To promote fair and transparent employment practices, LX pursues open recruitment, centering on job competency. Since 2013, the institution has adopted the NCS-based employment system and been evaluating applicants' job competency based on job relevance, by presenting job-related questions, and added a blind interview to the system, ensuring fairness and objectivity in the recruitment process. In addition, we are 100% complying with the fair employment process, by verifying the process and making interviewers' disqualification report mandatory.

More Diverse Employment

LX continues to increase employment opportunity for women, high school graduates, talents from local regions, the physically challenged and other groups disadvantaged in employment. The institution ran the LX Open Campus, a campus recruitment drive, for students from 5 universities in the Jeonbuk region to help the students receive training for cadastral surveying certificates, an essential qualification to join LX, which resulted in the recruitment of the most talented regional workforce ever. In addition, we hired 6 people with physical challenge in 2021, after providing OJT and other customized training to applicants with disability through LX GOGO Package, a job training program with possible recruitment afterwards. Besides, special recruitment and preferential programs are implemented to support the social groups disadvantaged in employment such as families of low income or multiple cultures, and an employment quota system for gender equality is utilized to further expand a pool of female talent.

2021 Institution-wide human resource development performance

Education·on-site training applied to field work

0.3 points ▲ YoY

National human resource consortium assessment

Excellent 4 yrs. In a row

Employee training satisfaction

3.7 points ▲ YoY

Enhancement of Employee Competency

Direction for Competence Development

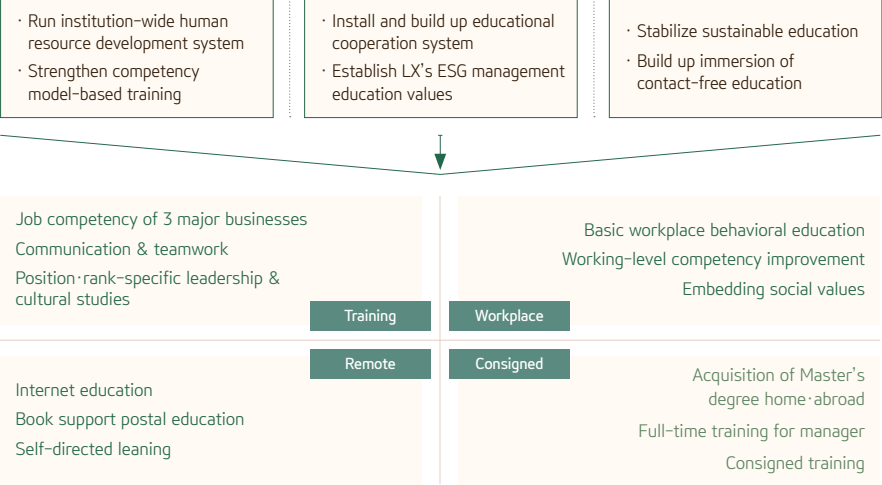
Vision

Foster Future Talent to Add Value to National Land Information

Goals2025

Nurture core talent for national land information Establish win-win cooperation training function Stabilize education in response to COVID-19

Key task



Professional Training & Education per Competency Model

LX is establishing a competency-oriented talent nurturing program, by running professional training and education in connection with LX's key business. For better performance in cadastral survey and spatial information business, the institution is actively promoting vocational competency training such as hands-on work experience program for knowledge-based convergence as well as a national land information expert course, and is providing education programs to cultivate common capabilities including report writing and communication skills. In addition, trainings are also offered at each job level from the newly hired to high-level managers in order to enhance leadership capacity, and workshops are held for capacity building of female managers. In addition, as part of the internalization of social values tailored to the declaration of ESG management, we are spreading ESG management such as preventing violence and improving awareness of the disabled to all employees.

LX, Nurturing next-generation cadastral experts

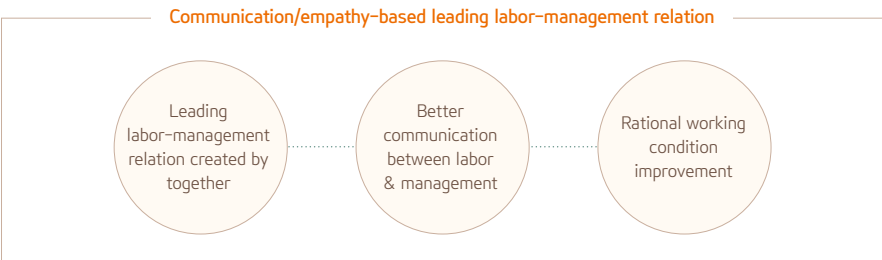
By diversifying training and education methods, LX has been nurturing cadastral experts equipped with working-level competency, from survey basics to application of new technologies, and providing accurate survey performance. The institution provides customized education programs which cover from principles of cadastral survey to specialized training applied with new technologies, and offers online contactless hands-on training using Virtual Reality and other new technologies, cultivating core personnel to conduct next-generation cadastral survey business. Furthermore, consultants' 1-on-1 mentoring is provided during the programs as well as the site visit, and immediately applied in problem solving. As a result, we produced 225 cadastral experts and 200 drone experts, covering all stages of the programs, in 2021.

Good Environment for Work

Open Labor-Management Communication

LX performs surveys and diagnosis on the win-win index of labor and management and improves areas of weakness in order to spread more open and innovative labor-management culture through cooperative labor-management relations. In 2021, the board of directors observation system was implemented to enhance labor-management communication and involvement, and promotion channels using social media are in constant operation to strengthen communication between all ranks and all ages.

LX labor-management strategy



2021 Good Environment for Work
Performance

Annual average
working hours per
worker

40 hours
down

Ministry of Gender Equality & Family

Family-friendly certified

Use of parental leave

27.8% ▲ YoY

Use of selective working hours

29.4% ▲ YoY

Improvement of Work Environment and Culture

To make a happy workplace for all employees, LX is currently running several systems to improve ways of working and keep balance between work and life. We have cut down on the time for conducting cadastral survey and handling administrative affairs, by upgrading our cadastral equipment and systems as well as introducing the online administration system, and have in place systems more inclusive for individuals and family, through extension of paternity leaves and ease of childcare leave policies. In addition, a variety of working policies has been adopted, including change of working shift, selective and flexible working hours, and flexible quota system, which led to the establishment of a work environment where employees' work and life could strike a balance.

Fair Performance Evaluation System

LX established a personnel management system based on competency and performance, and operates a fair performance evaluation procedure to collect opinions from employees. We operate a blind evaluation to exclude educational background and regional connections during promotion screening to conduct fair and transparent personnel arrangements. In addition, performance management indicators are managed based opinions from all employees through in-house SNS and discussions between labor and management. Training and coaching based on competency diagnosis analysis are provided to low performers to improve their performance.

Win-win
Cooperation

2021 SME Support Program Performance

Low-interest rate fund for SMEs(accumulated)

KRW 23.35 bn to 170 SMEs

2021 Support for Growth of Private
Enterprises Performance

Private enterprises
participated in
cadastral resurvey

92

Sales of private
sector in cadastral
resurvey

KRW 14.4 bn

2021 Joint R&D Promotion of Industry-
Academic Cooperation Performance

No. of joint R&D
projects

28

Continuous investment in private R&D sector

KRW 10.08 bn accumulated

Shared Growth

SME Support Program

LX runs various SMEs programs to promote win-win cooperation with SMEs and create jobs in the private sector. The existing low-interest rate fund, which was previously provided to SMEs involved in spatial information cooperation or located in the Jeonbuk region, was expanded to include startups with low credit scores and ESG companies, and the size and limit of the fund were increased, offering the accumulated total of KRW 23.35 billion to 170 companies in 2021. Furthermore, LX organized a group of companies to participate in a new technology development project, a joint R&D investment, of which the institution offered the total of KRW 1.4 billion to 5 SMEs. We also provided KRW 1.2 billion to 2 SMEs from the land and transportation commercialization support project. In addition, LX operates the LX Space Dream Center, a start-up support center. We have selected 10 companies through competitions every year, and we build a growth environment for companies by providing LX start-up programs such as commercialization funds, (free) start-up space, education, consulting, and domestic and foreign sales development programs. As of February 2022, the corporation is discovering and fostering a total of 62 startups, taking the lead in creating a shared growth culture in which LX and venture companies grow together.



On-site visits to win-win growth between public institutions and SMEs

Support for Growth of Private Enterprises

In September 2021, LX designated one of its institute to implement diverse support programs, with an aim to revitalize the private market for cadastral survey services through the private sector's more participation in cadastral re-survey business. The institution established a regular channel of communication for the public, private and community consultative body, and supports working-level projects at site through on-site consulting and mentoring programs. In addition, we offered the on-the-job training to 115 people as well as the online content for the private-sector expert training course. As a result, the number of private-sector enterprises taking part in the re-survey business stood at 92, and the net sales at KRW 14.4 billion, up 360% year on year.

Furthermore, as part of our efforts to reinvigorate ta win-win environment for the private sector, LX promoted a business-academic joint R&D, which included spatial information analysis such as the technologies for AI-based autonomous driving delivery robots as well as future convergence studies related to the smart city. To strengthen R&D capabilities of the private sector, the institution kept investing in 13 research projects regarding the 4th industrial revolution with its accumulated total investment amount reaching KRW 10.08 billion in 2021.

Rural Community Mutual Growth Fund

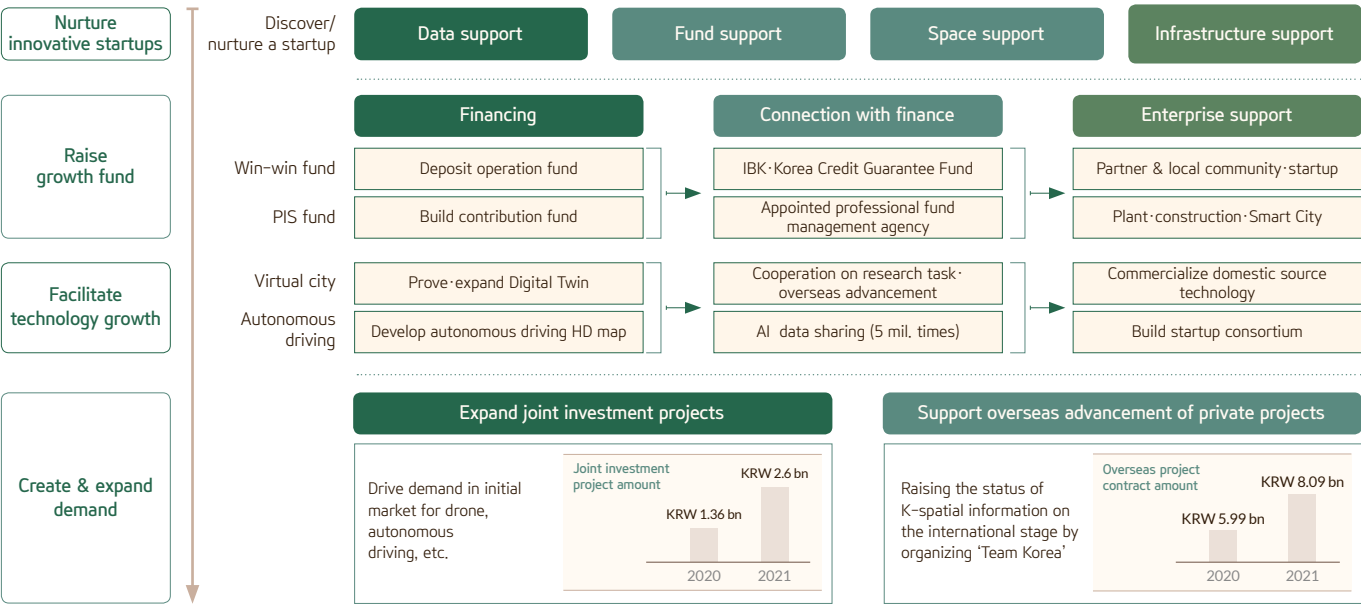
LX signed an agreement with the Rural Community Mutual Growth Fund with farming and fishing villages to pave the way for sustainable growth, and has donated KRW 100 million every year since 2017. In 2021, the fund was used to promote medical volunteer activities for medical vulnerable groups in Jinan-gun in 2021. We provided personalized medical consultation, western and oriental medicine treatment and prescription, individual health consultation services to help maintain a healthy life for the elderly who are suffering from underlying diseases and health care due to old age.



Technological Growth Path for Innovative SEMs & Startups

LX built a Growth Ladder in connection with New Deal projects such as Digital Twin, drone and autonomous driving and promoted implementation tasks tailored to each growth path in order to develop next-generation Unicorn companies.

Develop innovative SMEs/startups customized to each growth path



2021 Space Information Application Software Expert Training Course

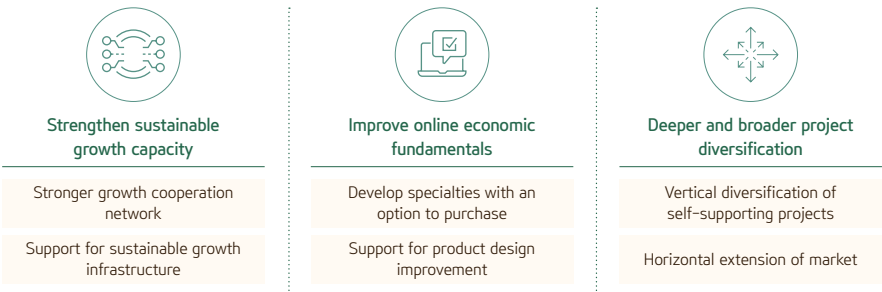
Geospatial Information Academy

LX has strengthened the job competency of the incumbent and fostered customized creative talents through the space information industry customized human resource training project. In addition, we are contributing to the creation of youth jobs through employment linkage along with the development of a curriculum that reflects the latest technologies in the field of spatial information. In recognition of these achievements, we achieved the best A grade for four consecutive years in the performance evaluation of the joint training center of the National Human Resources Development Consortium.

Expansion of Social Buying

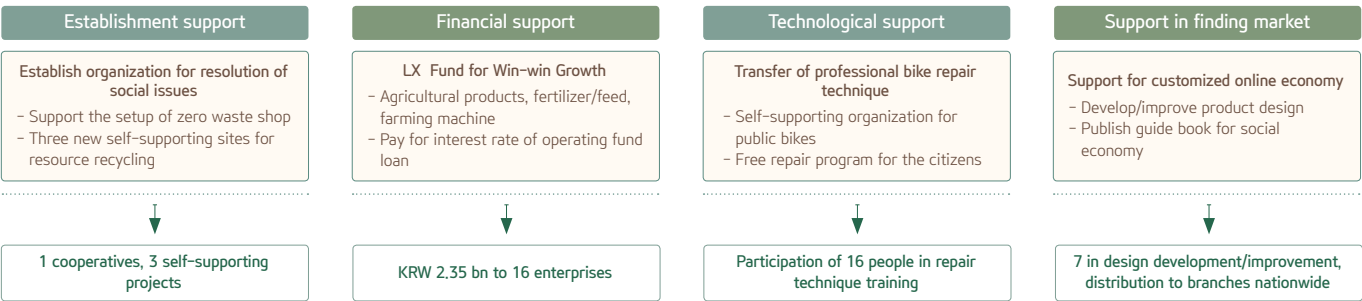
LX is expanding support for social economy enterprises such as social enterprises, cooperatives, village enterprises, and self-supporting companies, striving to 'reinvigorate a broad, new and unique social economy.'

Direction and task



In 2021, there were 2 rounds of public procurement of the social economy and 7 rounds of product development/improvement, and LX also supported a sustainable multi-disciplinary growth infrastructure from establishment to sales.

Establish social economy organization·infrastructure for farming and fishing sectors



2021 Support for Social Enterprises and Rural Areas Performance

Public purchase consultation

KRW 0.18 bn in purchase, marketplace 2 times

Expansion of self-service standards

Agricultural product → expanded to processed goods

Flea market at mothers' social community

Total of 4 flea markets held

Local community gift card

43%▲ YoY

To solidify product competitiveness tailored to an online economy, LX provided support to social enterprises to help them adapt to the growing online economy thanks to the elongated the COVID-19 period. For instance, we manufactured and sold specialty goods with an option to purchase together with social enterprises, by using local specialties such as Jeonju sweet red bean jelly and wooden cutting boards. Also, we improved the packaging quality of such products as white lotus leaf tea, sesame and perilla oil, rice, and Korean traditional cookies, all local specialty products from 5 areas of the Jeonbuk region. Furthermore, LX expanded its support in finding more markets for cooperatives and micro businesses to help them overcome the pandemic-induced reduction of sales, by holding a public purchase consultation, expanding operation of self-service stands, hosting flea markets in online social communities for mothers, and issuing local community gift certificates.



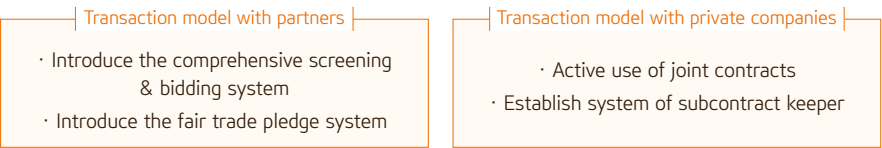
The 3rd Innovative Resident Love Festa with LX

Establishment of Fair Economic Order

Introduction of LX-type Best Transaction Model

LX introduced the LX-type best model for fair economy settlement. The LX-type best transaction model was introduced through four steps: collecting prior opinions-analyzing demand-reviewing characteristics of each organization-developing applicable best transaction model.

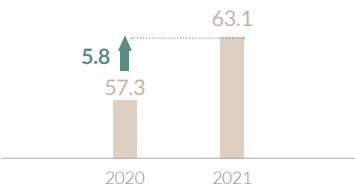
LX-type best transaction model



In 2021, LX expanded the fund settlement route management to our contractors and established fair order by increasing the down payment rate for smooth business execution of partners while achieving a 'no problem' response rate of 99.7%.

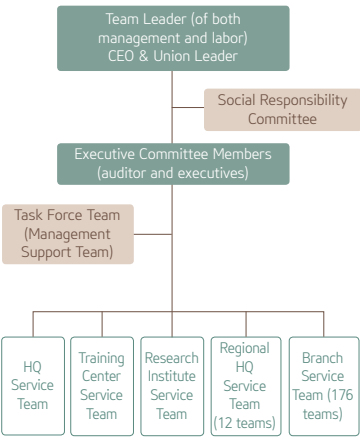
Advance payment rate for partners

(Unit: %)



Social Contribution

Social Service Organization Chart

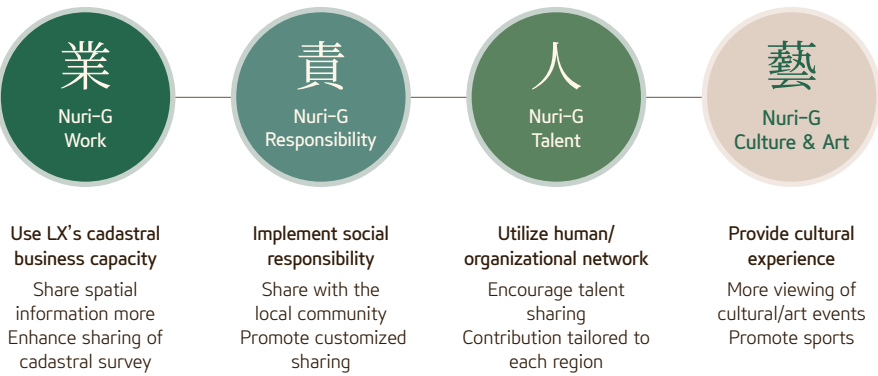


Social Contribution System

Nuri Cadastral Service Team

Under the vision of ‘creative social contribution to give hope to the people’, LX established strategies for social contribution and launched the Nuri Cadastral Service Team. Furthermore, the institution carries out systematic management of such systems as the social contribution mileage system and institute-specific activity sharing in order to encourage more participation from employees in the service team. With continuous social contribution through the team, we will enhance our social contribution to make it closer to the public, and promote socially responsible management, by using the regional footholds of the institution.

Social Contribution Strategy



Happy LX, Sharing of work competency

Among sharing activities promoted using LX's work and capability of cadastral nature are the Survey Nuri-G through which cadastral survey is provided free of charge and survey commission is discounted to the isolated and vulnerable, and the Land Information Nuri-G where useful spatial information is provided via LX's e-Notice for Land app, further expanding our activities for sharing.

Knowledge LX, Sharing expertise

With LX's expertise sharing, we are sharing knowledge using national land information through the Talent Sharing Nuri-G which utilize our technological prowess in the areas of cadastral survey and spatial information.

Companion LX, Sharing human resource

It refers to activities where LX reaches out to people fallen into the dead zone of social welfare and offer them with hope, by tapping into its cross-national network. The sharing activities are divided into two tiers, HQ-specific and branch-specific, and received a citation and an appreciation plaque from the government and the Korea Mecenat Association in recognition of the institution's contribution.

Emotional LX, Sharing cultural experience

With a high regard for the power of culture and art, LX carries out the Culture and Art Nuri-G and Sports Promotion Nuri-G. Among the key art-sharing activities are operation of the outreach ballet storytelling and classes as well as of the LX cycling team.



Social Contribution Activities

Happy LX, Sharing of Work Competency

Happiness Sharing Survey

Happiness sharing survey is LX's most representative social contribution activity where it provides free cadastral survey for residential stability of the isolated and vulnerable people. The free survey is provided either through recommendation from the public agencies in the area where LX's Regional HQs or branches are located or through direct discovery of the households in need by the institution. Through this activity, the happiness sharing survey was provided nationwide in 2021. The Seongju branch shared its survey service to the households in disaster areas of Seongju-gun which were selected for the Gift House Season 7 modular housing support project implemented by the Korea Disaster Relief Association. In addition, the Yeonggwang branch offered free survey service to a multicultural family who is the grand prize winner for its filial behavior, awarded only to residents of Yeonggwang-gun, Jeonbuk, for the land slated for construction of a new house for the winning family. The happiness sharing survey was also provided to the area of Hwasun-gun, Jeonnam to support a new house construction project for the single elderly households in the low-income bracket. Going forward, LX will continue to contribute to expansion of the sharing culture, by promoting our public services of cadastral survey further.



LX Hwasun Branch Happiness Sharing Survey

Knowledge LX, Sharing of Expertise

Sinmungo on the Go

LX signed an MOU with the Anti-Corruption and Civil Rights Commission for resolution of land and cadastral civil petitions, working cooperatively to address civil complaints in the cadastre and survey fields and help the marginalized people in the dead zone of welfare. The Sinmungo on the Go is a program to gather requirements of regulatory improvement including residents' opinions or suggestions, by paying an on-site visit. In 2021, with the program, we visited 3 places in the Honam region and held on-the-spot consultation sessions to handle various questions and difficulties from the residents regarding real-estate and cadastral regulations. Recently the number of civil complaints filed with the Commission is on the rise. To tackle this, LX paid a visit to the cadastral re-survey project district together with the Commission to receive complaints and listen to opinions from relevant organizations, expanding the operation of the Sinmungo on the Go.



'Sinmungo on the Go'

2021 Happiness Sharing Survey Performance

Disaster residents in Seongju-gun,
Gyeongsangbuk-do

Site for a Multi-Family Housing in
Yeonggwang-gun, Jeollanam-do

A New Housing Project for Low-
income Elderly Living Alone in
Hwasun-gun, Jeollanam-do

2021 Sinmungo on the Go Performance

3 locations in
Honam area

Cadastral resurvey business
district

2021 Sharing Briquette & Kimchi with
Love Performance

Delivered 7,500 briquettes

Delivered 730 households
of kimchi

Companion LX, Sharing Talent

Sharing Briquette & Kimchi with Love

Together with public agencies moved to the Jeonbuk Innovation City, LX promoted social contribution activities such as the holding of a ceremony for briquette sharing for a warm winter and for Sharing Kimchi of Love in 2021. A total of 7,500 briquettes was delivered to 30 households in the Jeonju and Wanju areas, the kimchi was handed to 730 households in need about Seongdeok-dong, Deokjin-gu, in Jeonju.



Sharing Briquette & Kimchi with Love

Social Contribution Activity Tailored to Each Region

Each Regional HQ of LX is engaged in diverse social contribution activities customized to the characteristics of its own region. The Seoul Regional HQ carried out volunteer work called ‘Helping Hands for Famers’ to help farming families suffer from sluggish domestic demand and shortage of labor due to the aftermath of COVID-19. The Incheon Regional HQ, for its part, performed a DIY volunteer work without contact through which they donated mask necklaces and mood lights they made themselves, and the Gwangju/Jeonnam Regional HQ promoted the activity of plogging, a combination of jogging and litter-picking, which is part of the regional effort to make clean environment.

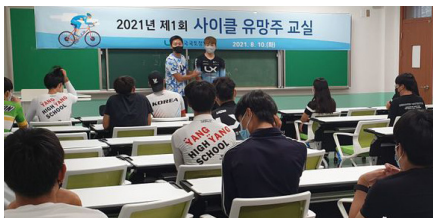
Emotional LX, Sharing Cultural Experience

Ballet Class

In cooperation with the National Ballet Company, LX runs an outreach ballet program on a national scale to expand culture and art. In 2021, we paid a visit to various elementary schools such as Danyang Elementary School in Chungcheongbuk-do, Taegam/Jangyu Elementary Schools in Gyeongsangnam-do, Hwanghwa/Baekseok Elementary Schools in Nonsan, Chungcheongnam-do, and Moonhye Elementary School in Cheorwon, Gangwon-do. Members of the ballet company taught students about ballet knowledge and motions in person, and practiced ballet movements together with the students, helping them think that to become a ballerina or ballerino could be one of their dreams. In addition, ballet shoes and souvenir t-shirts were given to those who participated in the ballet classes in Gyeongsangnam-do and Jeolla-do.

LX Cycling Team

Founded in 2006, LX Cycling Team held the first Cycling Rising Star program in 2021 where the cycling team from Yangyang High School in Gangwon-do took part. In the program, students learned about the mindset and training tips as a high school cyclist, and a question-and-answer session was opened during which LX instructors and cycle racers with various experience answered to the students’ questions, providing advice and know-how customized to each student.



Cycling Rising Star program



Outreach Ballet program

LX-specific talent development

Career path experience	Hands-on experience in LX in connection with 'dream path' - Visit of 113 high schoolers in the regions
Open campus	Run credit course associated with the Education Institute - 23 students from 5 universities
Specialized training for expertise	Education of practical skill offered to those who successfully passed written exam of national qualification - 6 times of training to 61 people
Hands-on internship	On-site internship connected to open campus - 31 interns from open campus, 3 recommended from the province
LX scholarship	Run scholarships of hope, cadastre, & Yi Gi, named after a scholar of Joseon period - KRW 29 million granted to 29 students

Narae Start for high school seniors	Support for high school seniors choosing a regional university - Recruitment fair for regional talent in 8 institutions
Innovative campus	Run regular & special course during vacation - 4 courses to 112 students from 6 universities in Jeonbuk and Jeju
Employment mentoring	Offer employment mentoring service from public agencies - 6 times of mentoring to 15 students who acquired qualification
Build-up of incumbent competency	New digital technology training offered to worker in IT sector - A total of 30 workers from 7 companies in Jeonbuk received the training.
R&D support	Enhance regional universities' 4th industry R&D capacity - KRW 1 bn provided to 5 tasks in convergence filed

2021 Awards for community participation

Win-win cooperation project for faming & fishing village

Win Award from Minister of Agriculture, Food and Rural Affairs

Development of Jeonbuk Innovative City

Win citation from Governor of Jeollabuk-do

Participation in Local Community

Nurturing Local Talent

LX provides the training and education infrastructure in phases in order to foster local talents regarding national land information and strengthen digital capabilities of workers in the spatial information field. The infrastructure covers from career path experience (Promotion room), specialized training for recruitment (Innovative campus and scholarship), education on new technologies (Spatial Information Academy), to R&D build-up (Spatial Information Research Institute). Thanks to a deep pool of regional talents cultivated based on cooperation as well as phased support using the LX infrastructure, we hired 72 regional talents, which accounted for 31% of the total new recruits of 232 in 2021, exceeding the government target by 27%. Furthermore, in January 2022, we were awarded with a certificate of merit from Jeonbuk University in recognition of our effort made to nurture local talents as a public institution assigned to develop regional leading universities.

Resolution of Local Issue

To deal with local issues of youth exodus and senior poverty raised from the win-win development forum, LX operates the Jeonbuk social value network in cooperation with public institutions in the Jeonbuk Innovative City. In 2021, we signed an MOU to turn unused space into a space for the young people, and provided a budget for the project, aiming to nurture startups for local farm products. In addition, a delivery and pickup system was built for café resource recirculation, and 28 people were hired to work at the self-supporting business unit for resource recirculation in Jeonju, Gimje, and Gunsan. Furthermore, 28 seniors aged 65 or older in the areas were offered with the solar energy generation village pension for seniors in poverty, and cooperation was forged to develop regional specialties such as red bean jelly and wooden cutting boards with an option to purchase, selling souvenirs worth KRW 74 million.

Holding Cultural Event

LX hosts a variety of cultural events to bolster corporate social responsibility management and reinvigorate local business in the innovative city.

Innovative city's cultural event

LX busking on every Wednesday <ul style="list-style-type: none">· Seven-month event held at promenade around Kiji-je in the city· Chance for local artists to show their performance	LX picnic concert <ul style="list-style-type: none">· Korea's top-tier singers invited for special consolation· 100 people from nurses' families, 51,000 watching online
Local business dream festival <ul style="list-style-type: none">· Voucher to use at local business given to participating residents· Held in 2 places within the city	LX Love Festa <ul style="list-style-type: none">· LX's space opened for exhibition of art works· More participation of residents with exhibition, market and plogging



03.

Fair · Transparent Management

Together with the People

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Governance

Board of Directors

Under the principle of autonomous and responsible management, LX has formed and operated the board of directors, the top decision-making body within the institution, in accordance with the Board of Directors operations manual, and non-executive directors make up for the majority of the total number of directors according to the Act on the Management of Public Institutions. As of May 2022, the BOD consists of 5 executive directors including the CEO who also serves as the chairperson (female members by 20%) and 6 non-executive directors (female members by 50%). In addition, three committees, each in charge of policy, technology and management, is running within the BOD and strengthening transparency through the trade union observation system.

BOD Status

(As of May, 2022)

Category	Name	Gender	Position and Division	Term of Service
Chairperson	Kim Jeong-ryeol	Male	CEO	Sept. 8, 2020 - Sept. 7, 2023
Executive Director	Choi Kyu-myung	Male	Vice President	Mar. 1, 2022 - Feb. 29, 2024
	Kim Yong-ha	Male	Head of Cadastral Business HQ	Nov. 26, 2020 - Nov. 25, 2022
	Oh E-ri	Female	Head of Management Support HQ	Nov. 26, 2020 - Nov. 25, 2022
	Choi Seung-uk	Male	Head of Spatial Data Infrastructure Division	Mar. 2, 2021 - Mar. 1, 2023
	Park yong-hun	Male	Current CEO of Infra Service Research Center	Feb. 1, 2021 - Jan. 31, 2023
Non-executive Director	Song Yeong-seo	Female	Current professor at Ajou University Graduate School of Scientific and Technological Policies	Feb. 1, 2021 - Jan. 31, 2023
	Je Ah-reum	Female	Current representative lawyer at Cheongryul Law Firm	Feb. 1, 2021 - Jan. 31, 2023
	Kang Mi-hyun	Female	Current CEO of Architectural firm	Dec. 1, 2021 - Nov. 30, 2023
	Lee Kuk-hyung	Male	Vice Chairman at Korea Daesung Asset Management	Dec. 1, 2021 - Nov. 30, 2023
	Kang Ju-yup	Male	Director General for Territorial Information Policy of MoLIT*	Jan. 3, 2022 - End of Term of Office

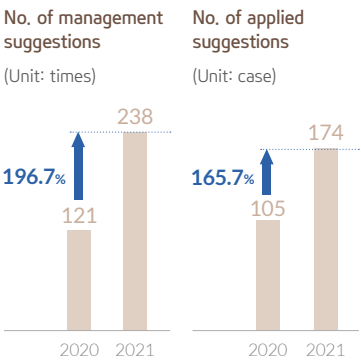
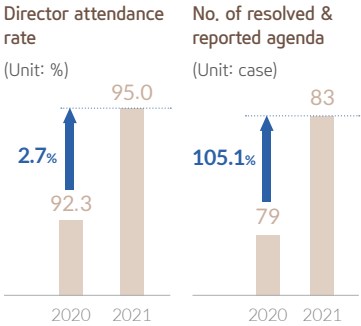
* According to Article 18 (4) of the LX Articles of Association, the Director General for Territorial Information Policy of the competent ministry (MoLIT) shall be an ex-officio non-executive director.

Diversity in the BOD

LX appoints experts in the field of traffic safety, law, spatial information, architecture, policy, etc. as non-executive directors in order to secure expertise and diversity of the BOD. Prior to holding a BOD meeting, consulting sessions are held in various areas including safety, human rights management, policy, and architecture based on professional competencies of non-executive directors so as to result to reasonable BOD decisions, and finally, successful management performance. In addition, LX sets no limit on gender, age among others when it comes to recommendation of non-executive directors. In 2021, we increased the proportion of female candidates in the total candidates proposed by the Executive Recommendation Committee and diversified methods for employment notice, resulting in hiring 3 female non-executive directors.



Hold a board meeting



Efficiency of the BOD

LX strives to keep the operation of the BOD more open and strengthen its support system in order to achieve implementation objectives for the board's autonomous and responsible management. In 2021, a total of 26 BOD meetings was held, including 13 regular meetings, 12 steering committees, and 1 board innovation roundtable, and the members' average attendance rate stood at 95%, for those meetings, representing their full participation in the decision-making process.

LX has revised its BOD operation manuals such as clarifying the legal force of the board's contactless meetings so as to invigorate its operation. In addition, we have our non-executive directors participate in sub-committees of their specialized field, the management policy committee, and the public construction deliberation committee as an examiner, actively tapping into their expertise to preemptively respond to current management issues with their policy advice and managerial proposals. As the public sector's social responsibility for safety and transparency became more stringent, the board shared the occurrence of safety incidents as well as preventive measures on a monthly basis and made improvements accordingly, and also served as a member of LX Ombudsperson in order to improve our transparency further.

Moreover, LX supports more active communication through hands-on onsite management. LX listen to the voices of citizens through free legal consultations, donation events and participation in local festivals for the socially vulnerable, and direct communication between employees and directors through cadastral surveying field experiences. LX also supports efficient communication internally, by posting eco-friendly management materials and safety data on the BOD's dedicated website on a regular basis.

Subcommittees and Performance

Category	Composition	Activity	Key Performance
Sub committee	Policy committee	Executive(2), non-executive(2) · Frequent proposal of management · project planning & establishment	· Enhance driving force to enact construction act · Designate an institution as agency in charge of re-survey
	Technology committee	Executive(2), non-executive(2) · networking between the government and experts of the private sector	· Set up Digital Twin standard model · Shorten cadastral survey processing period
	Management committee	Executive(1), non-executive(2) · Regulatory improvement advice · Onsite visit to branches	· Win a ministerial award for contribution to ESG management · Expand certification of safety & health management system

Director Assessment and Compensation

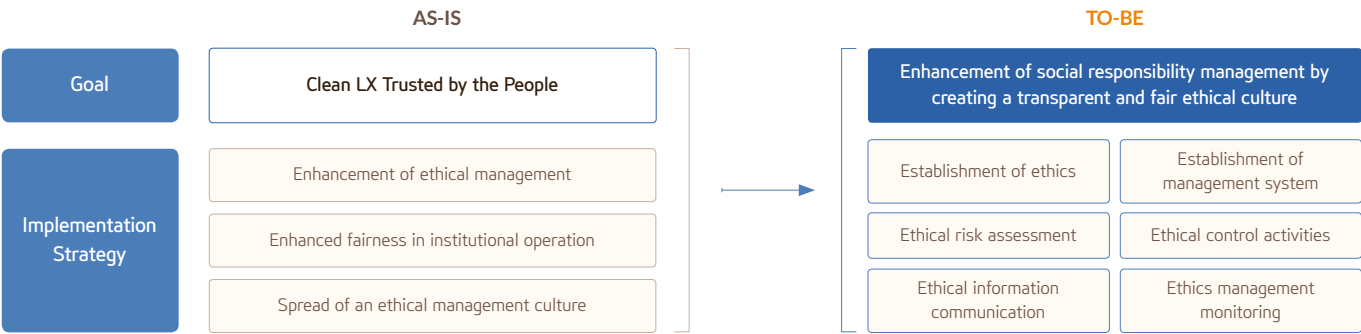
LX assesses the BOD activities and provides compensation in order to prevent corruption and strengthen responsibility of directors. The assessment and compensation are executed fairly and transparently according to the related law and the prescribed procedures. The head of organization receives performance evaluation according to the fulfillment of management goals and key tasks specified in management contracts that have been concluded with the Minister of Land, Infrastructure and Transport. Executive directors are evaluated for their job performance and receive bonuses within the limits of executive salary regulations. Non-executive directors are compensated in accordance with the 'Guidelines for Remuneration of Public Institutions'.

Ethical Management

Ethical Management Promotion System

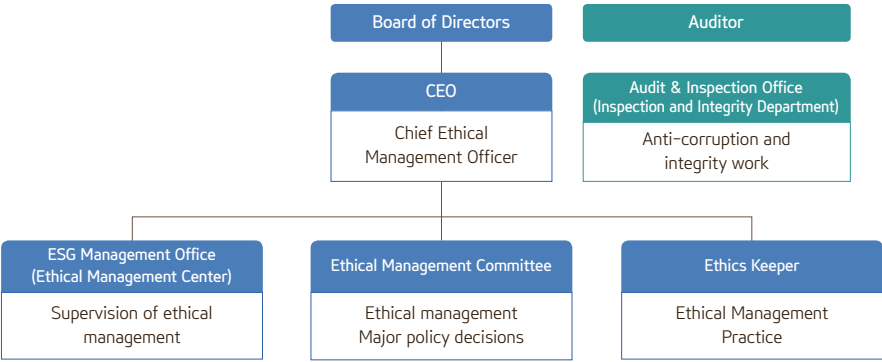
Direction for Ethical Management Promotion

Under the ethical management objective of ‘Clean LX trusted by the public’, all LX employees comply with the Ethics Charter and the employee code of conduct. In 2021, we re-established the ethical management promotion system and set up and implemented 3 key promotion tasks – strengthening the foundation for ethical management, enhancing fairness in LX’s operations, and expanding the culture of ethical management. In June 2022, we established an ethical management system linked to ESG management to internalize ethical management by reorganizing the organization for ethical management, upgrading ethical standards, and operating an ethical risk assessment system.



Organization for Ethical Management

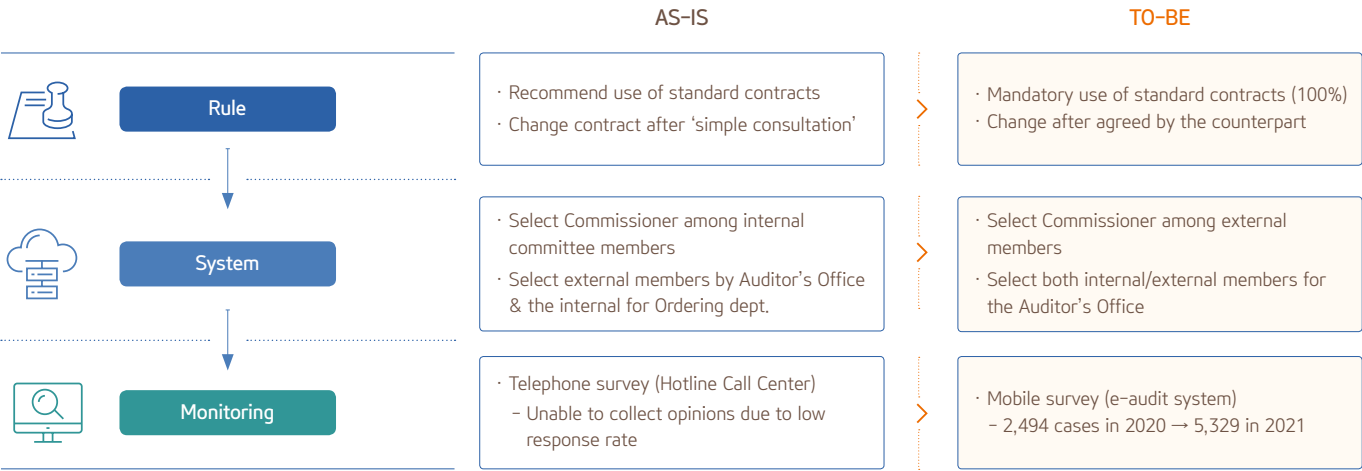
LX strives to systematize the organization for ethics management promotion to realize comprehensive compliance and ethical management across all tasks. The officer with ultimate responsibility for ethical management is the President & CEO of LX. The ethics management committee makes decisions on ethical management. We are committed to strengthening ethical management by appointing a non-executive director dedicated to ethical management to serve as an advisor in this respect. Further, we will strengthen our ethical policy establishment and anti-corruption response by forming a permanent cooperative system with the Ethics Management Center and the Inspection and Integrity Department. In addition, we conduct corruption risk assessments and ethical awareness index surveys for employees, and constantly monitor and take quick action through e-audit systems, the corruption reporting center, and the LX Ombudsman to ensure the effective operation of the ethical management system.



Anticorruption System

With its strong commitment to anti-corruption, LX has set up an organization dedicated to establishment of the corruption prevention system and revised the guidelines and manual on anti-corruption management. In 2021, LX built a three-tier anti-corruption system which leads from rules, system to monitoring, taking the lead in promoting a culture of fair contracting.

LX 3-tier Anti-corruption System



2021 Performance of Corruption
Prevention Award

MoLIT public service area

Excellent Institution

In addition, LX has improved the public trust by making it mandatory for employees to use their real name when writing their signature after using a corporate credit card in order to prevent illicit use of the card, running human rights protection consultative body for partners and subsidiaries, posting of details on exclusion of duties or punishment on its website, and running various systems to eradicate power overuse at work including investigation into unfair transactions. As a result, we received grade 1 in corruption prevention policy evaluation from the Anti-corruption and Civil Right Commission and were recognized as ‘Excellent Company’ in the area of public service from the Ministry of Land, Infrastructure and Transport.



Ethics Charter of LX

LX protects the property rights of the people and contribute to the development of cadastral system and spatial information by efficiently promoting projects in accordance with the Framework Act on National Spatial Data Infrastructure.

With this dignity and pride, we intend to become a global public enterprise that is trusted and loved by the people through the development of cadastral surveying and spatial information technology with transparent and rational management. Therefore, we always try to achieve our mission as an organization that harmonizes with creative thinking, handling our work in an honest and fair manner based on high ethical values, and strive to prevent corruption for a clean public office culture.

We also make effort to receive trust and love from our customers and respect the market order of free competition.

We respect the personality of each employee without discrimination and try to improve the health and quality of life of executives and employees while ensuring that they get fair opportunities and fair evaluation.

We actively participate in public interest activities and constantly create new values to contribute to the development of the country and society.

2021 Establishment of Internal Check System Performance

Training on internal auditor expertise building

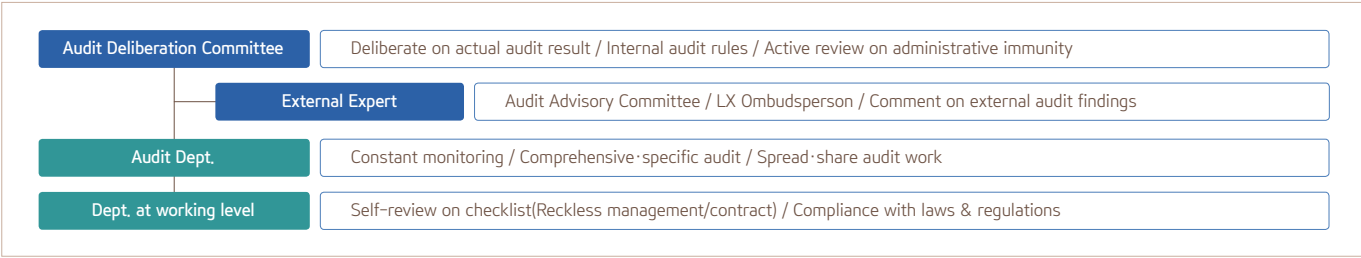
85.2h person

Establishment of Internal Check System

To support institution-wide ethical management and uphold public interest and value, LX has strengthened the promotion strategies and implementation system for internal check and systematized the operation of its internal check system. LX has reviewed vulnerable areas in terms of internal check, which resulted in developing an additional checklist for 57 items regarding spatial information project management and relevant laws and regulations as well as 21 items related to safety inspection and addressed risk factors in advance by checking departments at working level. In addition, we are promoting internal check activities with a focus on prevention in advance to avoid recurrence of risk factors.

Moreover, LX offered specialized training in the areas of IT, accounting, etc. to internal auditors in order to strengthen their expertise. In 2021, the total hours of training per capita amounted to 85.2, and all internal auditors succeeded in acquiring audit-related certificates including a certificate as internal check evaluation auditor. In addition, we are improving transparency and reliability of our auditing activities, by operating the Audit Advisory Committee and LX Ombudsperson which utilized external experts in such activities.

Executing system for internal check



Internal check activity & performance



Risk Assessment System

In 2022, LX established a step-by-step risk assessment system for systematic ethical risk management. Ethical risks identified through the system are classified as common/general or unique/core and controlled in accordance with risk levels.

Control Method by Risk Stage

Risk Level	Control Method
High risk	Strong control through self-audit activities and regulatory improvements
Medium risk	Strengthening prevention activities through education and monitoring
Low risk	Efforts to maintain the current level through periodic self-diagnosis, etc.

2021 Integrity Culture Performance

Anticorruption Management System

ISO37001 recertified

Operation & performance of ethical management executing organization

Consultative Body for Spread of Integrity

[The public] Joining of outside experts in building organizational culture

- Diagnosis on cultural irrationality and make correction
- Reverse mentoring & Red Team in meeting and discussion

LX Millennial Board

[LX Employee] Joining in the Millennial Board as member

- Opinion for managerial improvement, communication channel with the management
- Policy proposals (3) such as building bulletin board for communication "plaza"

Anti-corruption Promotion Team

[Outside expert] Joining of external anti-corruption experts

- Diagnosis on task-specific corruption risk & subsequent regulatory improvement
- No. of risks detected, 107 & no. of recommendations implemented, 2

LX Millennial Board

[Internal expert] Joining of in-house lawyer

- Check on corruption-causing elements in LX regulations
- Increase no. of items subject to Corruption Impact Assessment (106 → 130)

2021 Corruption Reporting System Performance



Anti-corruption & Civil Rights Commission
Corruption prevention policy evaluation

Top Level, 7 consecutive yrs.

Anti-corruption & Civil Rights Commission
Internal Integrity

Level 2, 2 consecutive yrs.

Integrity as a Culture

Executing Body for Participation of the Public

LX strengthened the executing body of ethical management from the Consultative Body for Spread of Integrity, LX Millennial Board to the Working-level Integrity Promotion Team in order to encourage more participation from the people and thus expanding the culture of integrity further.

Effective Corruption Reporting System

LX aims to enhance effectiveness of the corruption reporting system by improving the public trust in the Corruption Report Center. For this, consigned training was offered to LX employees and partner companies regarding guidance on the reporting channel's operation system, how to report, and precautions. In addition, we inserted a QR code for the center in letters or promotional leaflets made to raise the public awareness for integrity to improve the people's accessibility to LX corruption reporting channel and convenience in reporting procedures.

Non-face-to-face Program for Ethics Cultivation

LX operates various customized education and participation programs to internalize the ethics of all employees. In collaboration with the Anti-Corruption and Civil Rights Commission, we developed integrity education contents suitable for the contactless era, such as 'Live Integrity Education' and 'Micro-learning', and promoted integrity education by life cycle from new employees to managers.

Furthermore, LX held the Integrity Contest where employees participated and created poet, online cartoon or poster on the theme of integrity, and the works deemed excellent were compiled and published as a collection, which were distributed to relevant institutions, further spreading the culture of integrity in the local community.

In 2022, we plan to build an ethical consensus among employees and provide customized preventive education for ethical management by producing an Integrity Echo (newsletter) and conducting integrity self-diagnoses. In addition, we will strive to create an ethical management ecosystem by spreading an ethical culture to subsidiaries, partners, and related organizations.

2021년 윤리함양 프로그램 실적

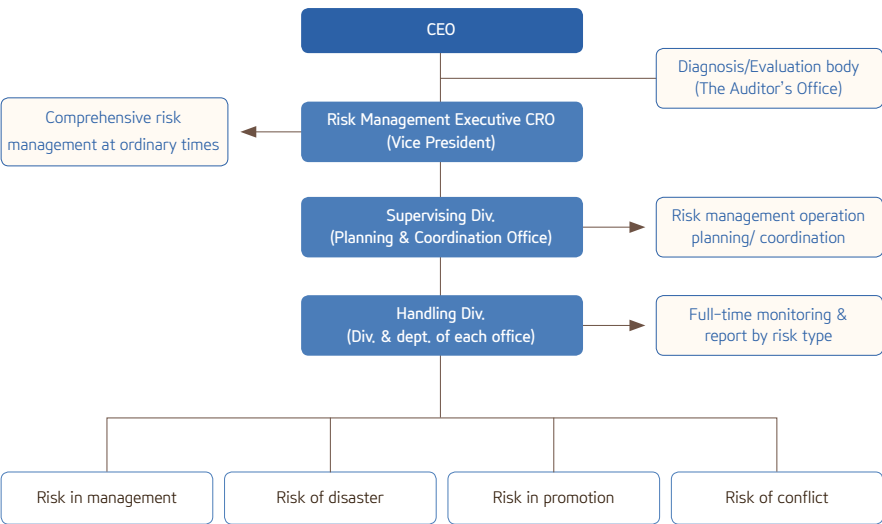


Risk Management

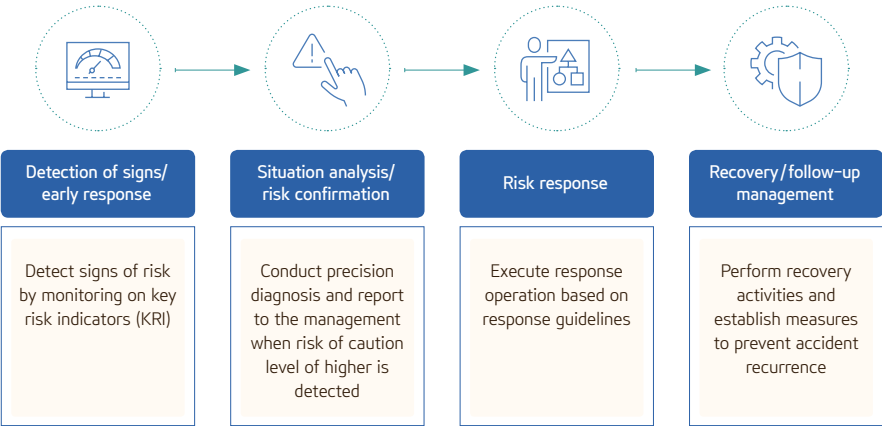
Risk Management System

To proactively manage the key risks that can exert significant impact on its mid- to long-term strategies, LX established risk management manual in detail according to the risk management regulations, and thus managing risks in stages. LX has established detailed operation processing procedures for risk management at ordinary times and emergency risk response activities. In addition, we have a working-level risk management organization in place, centering on the supervising division (planning and coordination office) and handling divisions (divisions and departments of each office) under direct control of the CEO and the vice president.

Risk Management Organization



Risk Response Process



Proactive Management of Risk Factors

LX selected 24 risk factors based on their likelihood and impact and conducted a questionnaire survey targeting internal and external stakeholders. The departments in charge of each type of risk digitizes and manages the possible risks. LX makes prompt decisions on serious risks by reporting the status and response plans to the CRO and CEO.

Risk Factor Identification and Prioritization

Management		Disaster	
⑤ Risk in strategies	Unmet management goal	⑥ Risk in information security	Cyber attack
	Management deficit		Personal information leakage
② Business risk	Decrease in cadastral survey demand		Information system failure
	Prolonged cadastral re-survey project	⑦ Risk of disaster	Heat wave/cold wave
	Change in national spatial information policy		Fire
	Suspension of overseas project		Typhoon (heavy rain)
⑩ Financial risk	Interest rate fluctuation		Earthquake
	Liquidity drop		Power failure
⑨ Risk in ethical & transparent	Employee illegality & corruption	③ Risk of safety incidents	Infectious disease
			Industrial accident
			Personal danger of employees abroad

Promotion		Conflict	
④ Risk in promotion	Spread of negative press/pubc opinion	① Risk of conflict with customers	Survey performance-related civil complaints/lawsuit
		⑧ Risk of labor-management conflict	Labor-management dispute

Bolstering Employees' Risk Response Capabilities

In order to improve the employees' risk management awareness and response capacity, LX provides full-time education and examines its risk management activities. In 2021, LX also provided e-Learning to all employees, and following the training, employees' risk management competency level was assessed so as to improve the educational program based on the assessment result. In addition, LX conducts mock training to develop employees' risk response capabilities.

Economic Performance

Summary Statement of Financial Position					
Classification		Unit	2019	2020	2021
Assets	Current Assets	KRW million	167,458	176,650	168,170
	Non-current assets	KRW million	558,641	627,660	676,187
	Total Assets	KRW million	726,099	804,310	844,357
Liabilities	Current Liabilities	KRW million	90,396	121,843	131,601
	Non-Current Liabilities	KRW million	150,831	174,147	163,875
	Total Liabilities	KRW million	241,227	295,990	295,476
Capital	Capital	KRW million	10,000	10,000	10,000
	Retained Earnings	KRW million	474,872	498,320	538,881
	Total Shareholder's Equity	KRW million	484,872	508,320	548,881

* Includes the subsidiary company (LX Partners).

Summary Statement of Comprehensive Income					
Classification		Unit	2019	2020	2021
Operating Revenue		KRW million	547,670	591,783	622,093
Business Expenses	Operational	KRW million	420,862	439,386	449,951
	Administrative expenses	KRW million	109,786	112,885	136,783
Operating Profit		KRW million	17,022	39,512	35,359
Other Revenues		KRW million	2,959	2,727	2,282
Other Expenses		KRW million	1,924	2,334	3,623
Other Profit		KRW million	1,173	1,430	1,880
Financial Profit		KRW million	3,819	2,197	2,476
Financial Costs		KRW million	232	780	236
Net Income Before Income Tax		KRW million	22,660	42,752	38,138
Income Tax Expenses		KRW million	4,854	10,427	8,647
Net Income for the Year		KRW million	17,806	32,325	29,491
Other Comprehensive Income		KRW million	1,509	(8,877)	11,070
Total Comprehensive Income		KRW million	19,315	23,448	40,561

Financial Status					
Classification		Unit	2019	2020	2021
Stability	Current Ratio	%	185	145	128
	Debt Ratio	%	50	58	54
Profitability	Ratio of Operating Profit to Net Sales	%	3	7	5.68
	Ratio of Net Income to Net Sales	%	3	5	4.74
	Return on Assets	%	3	4	3.58
	Operating Cash Flow to Total Assets	%	6	8	8.65
Growth Potentials and Activity	Net Sales Growth Rate	%	(3)	8	5.12
	Operating Profit Growth Rate	%	(72)	132	(10.51)
	Net Profit Growth Rate	%	(65)	82	(8.77)
	Total Assets Growth Rate	%	5	11	4.98
	Asset Turnover Ratio	%	1	1	0.75
Productivity	Total Asset Investment Ratio	%	67	68	64.17
	Property, Plant, and Equipment Investment Efficiency Ratio	%	132	120	105.19
	Unit Labor Cost Increase	%	2	1	1
	Value-Added Productivity Per Employee	%	(7)	6	0.7

R&D Investments					
Classification		Unit	2019	2020	2021
R&D Expenses		KRW million	13,412	18,926	22,879
Number of Researchers and Developers		Persons	31	34	36

Registration of Intellectual Property Rights					
Classification		Unit	2019	2020	2021
Patents (Utility Models)		Cases	34	35	50
Trademark Rights		Cases	57	63	63
Copyrights (program Registration)		Cases	400	404	404
Total		Cases	491	502	517

Environmental Performance

Energy Consumption and Energy Intensity				
Classification	Unit	2019	2020	2021
Diesel	TJ	40.807	38.252	38.455
Gas (LNG)	TJ	8.466	8.456	11.382
Gas (LPG)	TJ	0.012	2.016	5.723
White Kerosene	TJ	3.701	1.408	0.193
Gasoline	TJ	1.783	2.655	1.147
Electrical Power	TJ	117.868	127.098	145.475
Other	TJ	2.06	2.223	2.334
Total	TJ	174.697	182.108	204.709
Energy Consumption Intensity	TJ/KRW 100 million	0.03	0.03	0.03

Water Usage by Source				
Classification	Unit	2019	2020	2021
Tap Water	ton	83,913	85,025	96,422
* Tap Water: Company-wide (HQ, regional HQs and offices)				

Greenhouse Gas Emission and Greenhouse Gas Intensity				
Classification	Unit	2019	2020	2021
Greenhouse Gas Emission and Greenhouse Gas Intensity	tCO2e	3,616	3,485	3,995
Indirect Greenhouse Gas Emissions	tCO2e	5,713	6,160	6,949
Total	tCO2e	9,329	9,645	10,945
Direct Greenhouse Gas Emission Intensity	tCO2e/ KRW 100 million	0.66	0.59	0.64
Indirect Greenhouse Gas Emission Intensity	tCO2e/ KRW 100 million	1.04	1.04	1.12
* Total: Company-wide (HQ, regional HQs, branches)				
* Direct Greenhouse Gas Emission Intensity: Based on sales				
* Indirect Greenhouse Gas Emission Intensity: Based on sales				

Waste Generation by Type				
Classification	Unit	2019	2020	2021
General Waste	ton	403	460	470
Specified Waste	ton	-	-	-
Total	ton	403	460	470
* Total: HQ and regional HQs				

Social Performance

Employees					
Classification	Unit	2019	2020	2021	
Total Number of Employees		Persons	4,402	4,365	4,569
Employment Type	Executives	Persons	5	5	6
	Permanent Employees	Persons	4,067	3,965	4,178
	Unlimited Contract Workers	Persons	327	386	377
	Temporary Employees	Persons	8	9	8
Region	Headquarters	Persons	342	366	372
	Education Institute	Persons	33	32	74
	Research Institute	Persons	58	61	64
	Regional HQ	Persons	470	600	843
	Regional Offices	Persons	3,499	3,306	3,216
Gender	Female employees	Persons	587	591	651
	Female Managers	Persons	86	97	99
Minorities	Persons with Disabilities	Persons	108	119	117
	Veterans	Persons	150	153	165

* Female Employees: Permanent employees
* Female Managers: Level 4 or above of permanent employees

Ratio of Average Annual Salary to the Highest Annual Salary				
Classification	Unit	2019	2020	2021
Total Annual Salary of the Highest Salary Recipient (A)	KRW million	138.6	141.1	145.0
Average Salary Based on Total Employees (B)	KRW million	74.9	76.8	81.9
Ratio (A/B)	%	148	147	177

Ratio of Average Annual Salary Increase Rate to the Highest Annual Salary Increase Rate				
Classification	Unit	2019	2020	2021
Salary Increase Rate of the Highest Salary Recipient (A)	%	2.70	1.20	1.03
Average Salary Increase Rate (B)	%	1.80	2.70	1.02
Ratio (A/B)	%	150	44	101

Retirement Pension System				
Classification	Unit	2019	2020	2021
Retirement Pension operation Amount(DB)	KRW million	182,685	194,616	198,605
Retirement Pension operation Amount(DC)	KRW million	30,570	20,510	25,202
Total Retirement Pension operation Amount	KRW million	213,255	215,126	223,807
Number of Subscribers (DB)	Persons	4,225	4,362	4,284
Number of Subscribers (DC)	Persons	288	174	206
Total Number of Subscribers	Persons	4,513	4,536	4,490

Wage of New Employees Compared to Minimum Wage (Hourly)				
Classification	Unit	2019	2020	2021
Statutory minimum wage	KRW	8,350	8,720	8,720
Wage of New Employees (Male)	KRW	16,023	16,301	17,400
Wage of New Employees (Male)	KRW	16,023	16,301	17,400
Ratio (Male)	%	191.8	186.9	199.5
Ratio (Female)	%	191.8	186.9	199.5

Number of New Hires and Displaced Workers (Retirees)					
Classification		Unit	2019	2020	2021
Total Number of Employees (Permanent)		Persons	4,067	3,965	4,178
Number of New Hires(Gender)	Male	Persons	263	145	252
	Female	Persons	57	34	75
Number of New Hires(Age)	Under 30	Persons	248	150	276
	From 30 to 50	Persons	72	29	48
	Over 50	Persons	1	0	3
Number of New Hires(Local Employees)	Non-metropolitan	Persons	212	115	217
	Transferred region	Persons	58	32	76
Number of New Hires	Total	Persons	320	179	327
Ratio of Newly Employed Workers		%	7.9	4.5	7.8
Number of Displaced Workers (Retirees)		Persons	16	14	12
Ratio of Displaced Workers (Retirees)		%	0.4	0.3	0.2

Use of Parental Leave					
Classification		Unit	2019	2020	2021
Parental Leave Users	Male	Persons	30	29	55
	Female	Persons	53	61	73
	Total	Persons	83	90	128
Return after Parental Leave	After parental leave	Persons	41	44	46
	Employed for 12 months or longer after return from parental leave	Persons	40	42	45

Status of Flexible Work Arrangements					
Classification		Unit	2019	2020	2021
Part-time Work		Persons	18	28	29
Flexible work arrangements	Staggered hours	Persons	3,821	3,919	3,998
	Selective working hours	Persons	2,730	2,550	2,723
Remote Work Arrangements	Smart work	Persons	6	0	0
	Work from home	Persons	6	1,099	536

Safety and Health Committee				
Classification	Unit	2019	2020	2021
Number of Participants	Persons	12	12	14

Ratio of Work-related Disasters				
Classification	Unit	2019	2020	2021
Injury Incidence Rate	%	0.38	0.29	0.50
Number of Fatalities	Persons	0	1	0

Rate of Employee Performance Evaluation					
Classification	Unit	2019		2020	2021
Total Number of Employees	Persons	4,402		4,365	4,452
Number of Employees Subject to Evaluation	Persons	4,402		4,365	4,452
Ratio of Performance Evaluation	%	100		100	100

Employee Human Rights Education					
Classification		Unit	2019	2020	2021
Employee Human Rights Education	Distance education through the Internet	Persons	4,038	4,107	4,138
	Group training	Persons	1,032	0	281
Education on Sexual Harassment (4 Types)	Distance education through the Internet	Persons	4,018	4,177	4,364
Education on Workplace Bullying	Distance education through the Internet	Persons	0	3,500	4,141
	Group training	Persons	3,568	3,838	3,804

* Due to efforts to prevent the spread of COVID-19, non-face-to-face education was conducted.

Average Education Hours per Employee					
Classification		Unit	2019	2020	2021
Total Number of Employees (Permanent)		Persons	4,067	3,965	4,178
Total Education Hours		Hour	639,067	504,684	514,956
Education Hours per Person		Hour	157	127	123

Ratio of Employee Diversity (by Category)					
Classification		Unit	2019	2020	2021
Gender	Male	%	84.8	84.3	83.6
	Female	%	15.2	15.7	16.4
Age	Under 30	%	18.9	18.1	19.3
	From 30 to 50	%	55.0	54.8	52.2
	Over 50	%	26.0	27.1	28.5

Ratio of Basic Salary and Remuneration of Female Workers to Those of Male Workers (by Type of Worker)					
Classification		Unit	2019	2020	2021
Executives	Ratio of basic salary of females to that of males	%	100	100	100
	Ratio of total remuneration of females to that of males	%	100	100	100
Employees	Ratio of basic salary of females to that of males	%	91	91	91
	Ratio of total remuneration of females to that of males	%	91	91	91

Amount of Expenditure to Local Suppliers					
Classification		Unit	2019	2020	2021
Amount of Expenditure to Local Suppliers	Total purchase amount	KRW million	54,231	54,616	54,846
	SMEs	KRW million	50,010	51,139	50,065
	Technology development	KRW million	2,204	2,627	2,733
	Businesses run by females	KRW million	10,345	9,523	9,954
	Social enterprises	KRW million	1,439	1,579	1,058
	Persons with severe disabilities	KRW million	472	333	541
	Self-support village for disabled veterans	KRW million	139	365	86

* Total purchase amount: Individual expenses overlapped

* LX partners: companies for joint cadastral resurveys, SMEs involved in spatial information, regional SMEs, social economic enterprises, companies supplying survey equipment and goods, consigned companies, etc.

Social Contribution Expenses					
Classification		Unit	2019	2020	2021
Disbursement method	Social contribution operating expenses, etc. (indirect cost)	KRW million	-	-	-
	Donation, etc. (direct cost)	KRW million	1,004	1,502	2,799
Disbursement type	Cash	KRW million	937	1,434	2,668
	In-kind	KRW million	67	68	131
Total			1,004	1,502	2,799

GRI Standards

Universal Standards			
Topic	Disclosure		Page
Profile	102-1	Name of the organization	6
	102-2	Activities, brands, products, and services	8–11
	102-3	Location of headquarters	6
	102-4	Location of operations	7
	102-5	Ownership and legal form	6
	102-6	Markets served	8–11
	102-7	Scale of the organization	6
	102-8	Information on employees and other workers	75
	102-9	Supply chain	79
	102-10	Significant changes to the organization and its supply chain	–
	102-11	Precautionary Principle or approach	68–69
	102-12	External initiatives	87
	102-13	Membership of associations	87
Strategy	102-14	Statement from senior decision-maker	4–5
	102-15	Key impacts, risks, and opportunities	68–69
Ethics and Integrity	102-16	Values, principles, standards, and norms of behavior	64–67
	102-17	Mechanisms for advice and concerns about ethics	64–67
Governance	102-18	Governance structure	62–63
	102-22	Composition of the highest governance body and its committees	62–63
	102-23	Chair of the highest governance body	62–63
	102-33	Communicating critical concerns	62–63
	102-34	Nature and total number of critical concerns	62–63
	102-38	Annual total compensation ratio	75
	102-39	Percentage increase in annual total compensation ratio	75

Stakeholder Engagement	102-40	List of stakeholder groups	16–17
	102-42	Identifying and selecting stakeholders	16–17
	102-43	Approach to stakeholder engagement	16–17
	102-44	Key topics and concerns raised	18–19
Reporting Practice	102-45	Entities included in the consolidated financial statements	72
	102-46	Defining report content and topic Boundaries	18–19
	102-47	List of material topics	18–19
	102-48	Restatements of information	–
	102-49	Changes in reporting	–
	102-50	Reporting period	2
	102-51	Date of most recent report	2
	102-52	Reporting cycle	2
	102-53	Contact point for questions regarding the report	2
	102-54	Claims of reporting in accordance with the GRI Standards	2
	102-55	GRI content index	80–83
	102-56	External assurance	84–85
Management Approach	103-1	Explanation of the material topic and its Boundary	20–29, 32–37, 38–39, 40–43, 50–52, 53–55, 64–67
	103-2	The management approach and its components	
	103-3	Evaluation of the management approach	

GRI Standards

Topic-specific Standards			
Topic	Disclosure		Page
GRI 201 : Economic Performance	201-1	Direct economic value generated and distributed	72-73
GRI 203 : Indirect Economic Effect	203-1	Infrastructure investments and services supported	56-59
GRI 204 : Procurement Practices	204-1	Proportion of spending on local suppliers	79
GRI 205 : Anti-Corruption	205-2	Communication and training related to anti-corruption policies and procedures	67
GRI 302 : Energy	302-1	Energy consumption within the organization	74
	302-3	Energy intensity	74
GRI 303 : Water and Effluents	303-3	Water withdrawal	74
GRI 305 : Emissions	305-1	Direct (Scope 1) GHG emissions	74
	305-2	Direct (Scope 2) GHG emissions	74
	305-4	GHG emissions intensity	74
GRI 306 : Waste	306-3	Waste generated	74
GRI 401 : Employment	401-1	New employee hires and employee turnover	75
	401-3	Parental leave	77
GRI 403 : Occupational Safety and Health	403-1	Occupational health and safety management system	32-37
	403-2	Hazard identification, risk assessment, and incident investigation	32-37
	403-3	Occupational health services	32-37
	403-4	Worker participation, consultation, and communication on occupational health and safety	32-37
	403-5	Worker training on occupational health and safety	32-37
	403-6	Promotion of worker health	32-37
	403-9	Work-related injuries	77
	403-10	Work-related ill health	77

GRI 404 : Training and Education	404-1	Average hours of training per year per employee	78
	404-2	Programs for upgrading employee skills and transition assistance programs	51
	404-3	Percentage of employees receiving regular performance and career development reviews	77
GRI 405 : Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	78
	405-2	Ratio of basic salary and remuneration of women to men	78
GRI 412 : Human Rights Assessment	412-1	Operations that have been subject to human rights reviews or impact assessments	40-43
	412-2	Employee training on human rights policies or procedures	78
GRI 413 : Local Communities	413-1	Operations with local community engagement, impact assessments, and development pro-grams	59

Third-party Assurance Statement

To the management of LX

We have undertaken a limited assurance engagement in respect of the selected sustainability information (the ‘Identified Sustainability Information’) in the LX’s Sustainability Report for the year ended 31 December 2021 (‘the Sustainability Report’) listed below.

Identified Sustainability Information

The Identified Sustainability Information included in the LX’s Sustainability Report for the year ended 31 December 2021 is summarized below:

- Global Reporting Initiative (GRI) Standards Index, on pages 80–83
- Company Overview, on pages 04–19
- Leading Carbon Neutrality 2050, on pages 20–29
- Implementing Social Values with National Land Information, Fair·Transparent Management Together with the People, on pages 30–69
- Appendix, on pages 70–79

Our assurance was with respect to the year ended 31 December 2021 information only and we have not performed any procedures with respect to earlier periods or any other elements included in the Sustainability Report and, therefore, do not express any conclusion thereon.

Criteria

The criteria used by LX to prepare the Identified Sustainability Information on ‘GRI Standards with Core Option’

LX’s Responsibility for the Identified Sustainability Information

LX is responsible for the preparation of the Identified Sustainability Information in accordance with the Criteria. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of Identified Sustainability Information that is free from material misstatement, whether due to fraud or error.

Inherent Limitations

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measures and measurement techniques and can affect comparability

Our Independence and Quality Control

We have complied with the ethical requirements of the Republic of Korea, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Identified Sustainability Information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements other than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. These standards require that we plan and perform this engagement to obtain limited assurance about whether the Identified Sustainability Information is free from material misstatement.

A limited assurance engagement involves assessing the suitability in the circumstances of LX’s use of the Criteria as the basis for the preparation of the Identified Sustainability Information, assessing the risks of material misstatement of the Identified Sustainability Information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Identified Sustainability Information. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

Given the circumstances of the engagement, in performing the procedures listed above we:

- Interview with the personnel responsible for internal reporting and data collection regarding LX’s Identified Sustainability Information to understand their approaches to managing material issues
- Understand the systems and processes in place for managing and reporting the Identified Sustainability Information of each regional office and JeonJu head office
- Review documents relevant to output from the risk assessment process, sustainability-related policies and standards, materiality assessment, engagement activities of the stakeholders and others
- Perform inquiries and analytical reviews on the Identified Sustainability Information

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether LX’s identified Sustainability Information has been prepared, in all material respects, in accordance with the Criteria.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that LX’s Identified Sustainability Information the year ended December 31, 2021 is not prepared, in all material respects, in accordance with the Criteria.

Restricted Use

This Report is prepared solely for the management of LX to assist in obtaining understanding of LX’s sustainable management performance and activities. Accordingly, we accept no liability or responsibility to any third party, other than LX and its management, who gains access to this report.

WITH Accounting Corporation
Seoul, Korea



YoungSuk Lee,
Chief Executive Officer
July 15, 2022

UN Global Compact

Topic	Principle	Page
Strategy, governance, and engagement	The COP describes mainstreaming into corporate functions and business units.	12-15
	The COP describes value chain implementation.	6-11
Human Rights	The COP describes robust commitments, strategies or policies in the area of human rights.	40-43
	The COP describes effective management systems to integrate the human rights principles.	
	The COP describes effective monitoring and evaluation mechanisms of human rights integration.	
Labor	The COP describes robust commitments, strategies or policies in the area of labor	50-52
	The COP describes effective management systems to integrate the labor principles	
	The COP describes effective monitoring and evaluation mechanisms of labor principles integration.	
Environment	The COP describes robust commitments, strategies or policies in the area of environmental stewardship.	22-29
	The COP describes effective management systems to integrate the environmental principles.	
	The COP describes effective monitoring and evaluation mechanisms for environmental stewardship.	
Anti-corruption	The COP describes robust commitments, strategies or policies in the area of anti-corruption.	64-67
	The COP describes effective management systems to integrate the anti-corruption principle.	
	The COP describes effective management systems to integrate the anti-corruption	
UN SDGs and issues	The COP describes core business contributions to UN goals and issues.	14-15
	The COP describes strategic social investments and philanthropy.	56-59
	The COP describes advocacy and public policy engagement.	
	The COP describes partnerships and collective action.	-
Governance	The COP describes CEO commitment and leadership.	4-5
	The COP describes Board adoption and oversight.	62-63
	The COP describes stakeholder engagement.	16-17

Awards

Awards	Awarded
Win-win Growth Awards	Korea Commission for Corporate Partnership
Korea SMEs Innovation Awards	Korea Commission for Corporate Partnership
Ministerial Commendation	Ministry of Science and ICT
Appreciation Plaque for Contribution to Job Creation for Senior Citizens	Korea Labor Force Development Institute for the Aged
App of the Year, Web Award Korea 2020	Digital Chosun Ilbo
11 th Best of CHAMP Day Best Responsible Operator Category (Grand Prize)	Minister of Employment and Labor
2020 Korea Communication Awards	Korea Business Communications Association
Best Organization in 2020 National Human Resources Consortium Joint-training Center Performance Evaluation	Hunan Resources Development Service of Korea
12 th Best of CHAMP Day Best Joint-training Center Category (Grand Prize)	Minister of Employment and Labor
2021 Korea Communication Awards (Special Award)	National Assembly of ROK Science, ICT, Broadcasting and Communications Committee
Excellence in Promotion of the Provision and Use of Public Data	Ministry of the Interior and Safety
「2020 Public Institution Wing-win Growth Evaluation」 Best Institute	Ministry of SMEs and Startups
「2021 Korea SMEs Innovation Awards」 Presidential Prize of Commission for Corporate Partnership	Korea Commission for Corporate Partnership
「2021 Sustainable Management Merit Government Awards」 Ministerial Award	Minister of Trade, Industry and Energy
「2021 Korea Win-win Growth Awards」 Presidential Prize of Commission for Corporate Partnership	Korea Commission for Corporate Partnership
Appreciation Plaque for contribution to Regional Leading University Promotion Project	Jeonbuk National University
Award of Merit for Sustainable Development	National Sustainable Development Council

Associations and Groups

Korea Quality Management Association	Korean Association for Public Administration	International Federation of Surveyors	UN Global Compact
Korea Disaster Prevention Association	Smart City Association	Intelligent Transport Society of Korea	UN-Global Geospatial Information Management Association (UN-GGIM)
Korea Audit Association	Korean Association for Public Organization Auditing	Telecommunications Technology Association	Open Geospatial Consortium