FUTURING SMART ENERGY

Opening the Future of Smart Energy
LSIS has published Sustainability Report since 2015 to share its economic, social and environmental performances with various stakeholders. In preparing the third sustainability report, we focused on disclosing our sustainability management performance and results in 2016 in a balanced and transparent manner. We published the previous sustainability report in June 2016.

**Reporting Period**
- This report includes quantitative and qualitative data regarding our performance from January 1 through December 31, 2016, and in some cases, historical data from 2014, 2015, and the first half of 2017 have been included for trend analysis.

**Scope and Boundary**
- We aimed to report status and performance in each major aspect of sustainability management as environment, society, and economy in our domestic business sites in principle, but included overseas business sites where relevant.

**Reporting Standards**
- This report was prepared in accordance with the Global Reporting Initiative G4 Guidelines.

**Assurance**
- The reliability of this report was verified by the Korea Management Registration Inc. (KMR), a third-party assurance institution which is independent from our businesses and has expertise in sustainability management. The assurance report can be found in the appendix of this report.

**Inquiries on the Report**
- For more information or suggestions, please contact us using any method below.

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HIGHLIGHTS

March

R&D Campus Became “Korea’s First Construction Outfitted with BEMS”

The R&D Campus in Anyang, South Korea, is Korea’s first construction that has acquired the certification of Building Energy Management System (BEMS) from Korea Energy Agency. Outfitted with BEMS, the R&D Campus Building develops energy saving plans based on energy source-specific consumption analysis, and maintains the optimal operation of key equipment (hot/cold water dispenser, boiler and etc.) through real-time analysis of energy efficiency.

April

World’s First UL Certification of PCS for MW-class ESS

LSIS has won the world’s first certification for its power conversion system (PCS) for a megawatt-class mass capacity energy storage system (ESS), from Underwriters Laboratories (UL) of the United States. It will lead to accelerate the company’s advance into the ESS market of the US, which is rapidly growing by expanding new renewable energy generation and introducing the smart grid for its outdated transmission networks.

LSIS-GE Signing MOU in Grid Solutions & Smart Energy Business

LSIS and GE signed a Memorandum of Understanding (MOU) to intensively work in a broad spectrum of the power and energy fields, including green power materials/equipment, power transmission and substation solutions, smart energy, IoT technology-powered smart factory. We expect the cooperation will speed up the development of eco-friendly switches utilizing G3 (Green Gas for Grid) technology.

September

PLC and Inverter Ranked Top in the KS-QEI for Four Consecutive Years

LSIS, since its project to build substations in Haiti in 2014, has made strong inroads into the electricity infrastructure markets in the Central and Latin Americas. The latest achievement of winning the bid for the substation project in Portoviejo, Ecuador, is expected to help LSIS tap further into the local market.

October

Joint Social Contribution Activities with Suppliers

LSIS has been selected as the No.1 company in the Programmatic Logic Controller (PLC) and Inverter category for four consecutive years at the Korean Standard – Quality Excellence Index Award, solidifying its position as the leader in the automation solution business in Korea.

LSIS Holds “Sharing a Meal” event at a local welfare facility with ACE Club, which is a gathering of employees from LSIS’s key suppliers. Believing in growing together with suppliers and local communities is one of the essential elements of sustainable growth, LSIS will continue to expand its social contribution activities going forward.

November

Microgrid Project for Montgomery College in the US

LSIS has signed a project contract with Montgomery College in Maryland, the US, to build an energy-independent smart campus by installing initial PV power facilities and an ESS. Under the deal, LSIS will cooperate with the Korean Electric Power Corp. (KEPCO) to establish BEMS, PV power facilities, ESS and smart meters on six buildings on the Germantown campus.

Presidential Citation for Outstanding Achievement for FTA

LSIS has been recognized for its continued support for SMEs in building export competitiveness and selected as the best company in the “Outstanding Achievement for FTAs” field at the 2016 Shared Growth Ceremony hosted by the Korea Commission for Corporate Partnerships (KCCP).

December

Korea’s Best Company Award for Nine Consecutive Years

LSIS has been selected as Korea’s Best Company for nine consecutive years in recognition of its contribution to securing the nation’s new growth engines, through continuous R&D investment, not only into its core business areas of electric power systems and automation but also new energy industry areas, and strategic advance into overseas markets.

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Global Network

Power Solution Business

Industrial Automation Business / Other Businesses

About This Report

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EEO Message
Dear esteemed stakeholders of LSIS,

LSIS has published the sustainable report every year since the first publication in 2015, aiming to facilitate continuous communication with everyone. Concerted efforts were made for this year’s report, which is the third to be published, to duly reflect the interests and demands derived from the outcome of the materiality test.

With the recent increasing concerns on safety issues, customers’ interest towards product safety and quality is higher than ever. With LSIS being one of Korea’s top providers of electric power systems/automations that compose the fabric of our SSO, even the smallest problem can have tremendous impact over and across the industry. In order to secure product safety, we have systemized the development reliability process to ensure the quality of its products and services from the initial planning stage. As a result of such effort, our products such as the PLC and inverter ranked first place in the KS-QEI (Korean Standard-Quality Excellence Index) for four consecutive years. Furthermore, LSIS was named among the Top 100 Global Innovators for six years in a row, acclaimed for acquiring technology that is the foundation of the fourth industrial revolution, and developing products that meet market demand.

Environmental problems such as fine dust pollution and global warming are being recognized as significant national challenges. In this regard, LSIS is focusing efforts to help resolve such challenges by utilizing smart energy, with a heavy sense of responsibility. Apart from the development of green products, we are promoting an eco-friendly and safe process for the entire product lifecycle, from the purchase of raw materials, production, service provision, and disposal, as well as refraining from using harmful substances.

We are also placing great importance on communication, shared growth, and mutual development with its diverse stakeholders. While duly responding to customer needs through various communication channels such as customer satisfaction surveys or seminars, LSIS is taking the lead in establishing a fair business relationship with subcontractors, providing various support as a genuine partner for business. In addition, concerted efforts are being made to recruit talent with global competitiveness and to build a healthy organizational culture where everyone treats each other with respect. LSIS is at the forefront of supporting the marginalized and the future generations of local communities adjacent to the sites where we operate.

Dear valued stakeholders of LSIS,

The objective of LSIS’s sustainable management is for it to become a respected company built upon strong trust from its stakeholders. To this end, LSIS is determined to drive the following three priorities.

First, we will improve business competitiveness through smart and simple management that focuses on the essence. Second, we will boost the quality of life for everyone and maximize our business value by actively driving eco-friendly and safe products/services as new business areas. Third, we will conduct management that caters to the needs of various stakeholders including customers, employees, suppliers, shareholders & investors, environmental activist groups, and local communities.

Under the Management Philosophy of LSpartnership where we create more value by working together, LSIS is committed to opening the future for smart energy that can improve the value of our lives and our society, and would like to ask for your continued support and interest. LSIS will be at your side at all times as a genuine partner and friend.

Thank you.

Chairman & CEO
Ja-Kyun Koo
About LSIS

Since its establishment in 1974, LSIS has grown into the leader of the industrial electric power and automation solution business in Korea. We are committed to offering impressive customer experience based on top-tier technology and product quality and, at the same time, ushering in the transition to the new smart energy future based on LSpartnership for greater values for all.
Corporate Profile
Since the establishment in 1974, LSIS has been spearheading the domestic industrial electric power and automation solution business. 7 plants, 5 R&D centers, 7 local subsidiaries and 12 overseas branches are in operation worldwide, and our management activities to offer impressive customer experience based on top-tier technology and quality are highly trusted and hailed by stakeholders at home and abroad. LSIS was separated from LG Group and re-launched itself as the LS Group in 2003 to pursue a second leap, and, in 2005, it was renamed to LSIS. With the declaration of the value-focused management principle in 2015 for yet another new chapter, we are moving forward to achieve our mission of "Futuring Smart Energy."

Vision and Strategy
Management Philosophy
Greater value together!

Vision
Opening the Future of Small Energy

Core Value
Collaboration, Creativity, Execution, Integrity

Company History
1974~1994
Jul 1974    Established Lucky Packaging
Mar 1977    Renamed to Goldstar Industrial Systems
Jul 1994    Held its initial public offering (IPO)

1995~1999
Feb 1995    Renamed to LG Industrial Systems
Sep 1999    Merged with Goldstar Industrial Systems and Goldstar Electric Machinery
Apr 1999    Merged with LG

2000~2007
Jun 2000    Opened a factory in Dalian, China
Sep 2000    Opened Power Testing & Technology Institute Construction
Dec 2000    Separated from LG Group
Mar 2003    Renamed to LSIS
Sep 2005    Opened a factory producing electric power & automation equipment in Blue, China
Est. the world’s 1st EDR relay factory
FZI in Dalian, LGI

2008~2012
Apr 2008    Moved headquarters (LS Tower in Anyang, Korea)
Oct 2008    Opened Shanghai R&D Center in China
Mar 2009    Acquired Green Business
Oct 2009    Incorporated LS Marine as a subsidiary
Feb 2010    Established LSUS
Mar 2010    Opened Busan plant
Apr 2010    Obtained the 1st Green Technology Certification and demonstrated the largest certifications
Nov 2011    Opened a world-class technology factory
Nov 2011    Selected as one of the top 50 fastest growing companies in the Fortune Korea
May 2012    Opened Cheongju EV Relay factory
Jun 2012    Won the Edison, Escan and Technology Ministers Prize (EDMI)
Dec 2012    Acquired a VC and EDI parts for smart meter technology

2013~2016
Ushering in a new era of smart energy
May 2013    Signed a contract for technology transfer and manufacturing with KAPES and Korea
Nov 2013    Won the grand prize in nearly all of the 39th National Quality Management Competition
Dec 2013    Won the 16th Global Brand Tower Award
May 2014    Won the Gold Tower Order of Industrial Service Merit at the 49th Invention Day
Oct 2013    Became the first Korean company to obtain the SIL4 certification (KRTCS Ground & Onboard System)
Nov 2013    Declared value-focused management principle
Mar 2015    Field demonstrated products with a single certificate of smart meter product in Korea (KOSM)
Mar 2015    Completed project for KRTCS Certification
Mar 2016    Elected as the 1st Korean representative for R&D Coordination
Jun 2014    Selected as the first listed company for new conservatism
Sep 2016    Awarded presidential citation for outstanding achievement for ZIA
Corporate Governance

Composition and Operation of the BOD

LSIS ensures a transparent and reasonable decision-making process at the corporate level through an independent Board of Directors (BOD). The BOD is composed of two inside and three outside directors and has two subcommittees of Outside Director Candidate Recommendation Committee and Audit Committee, in accordance with relevant regulations and the articles of association, regulations, and the articles of association.

Governing Structure

Composition and Operation of the BOD

LSIS ensures a transparent and reasonable decision-making process at the corporate level through an independent Board of Directors (BOD). The BOD is composed of two inside and three outside directors and has two subcommittees of Outside Director Candidate Recommendation Committee and Audit Committee, in accordance with relevant regulations and the articles of association, regulations, and the articles of association.

Subcommittees

Audit Committee

Comprised of three outside directors, the Audit Committee supervises management decision-making through checks and balances. It reviews operating results and financial information, regulations and the articles of association.

Communication with Shareholders and Investors

Sharing corporate information is timely and transparent manner is essential to build a trust-based relationship with shareholders and investors. To this end, we proactively provide with them not just our operating performances and financial information, but also mid- to long-term management strategy and promotion of new businesses through various IR meetings and events. We plan to organize more diverse IR events, including our regular earnings release meetings and overseas conferences, in our continued efforts to communicate with our investors at home and abroad.

Shareholder Returns (Dividend)

(1) LSIS pays shareholders dividends higher than the market average. Ever since the dividend payout ratio was adjusted upwardly to approximately 40 percent in the financial year of 2014, we have maintained a high dividend payout ratio that almost doubles the KOSPI average (24.20% in 2016) for three consecutive years in accordance with our commitment to higher investor returns despite the global economic trend toward lower interest rate and slower growth. Going forward, we will continue to make efforts to enhance shareholder values.

Core Issues of Sustainability Management

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IR Reinforcement of Product Competitiveness

E2 Environment and Safety Management

E3 Customer Communication

E4 Shared Growth with Suppliers

E5 Securing and Cultivating Global Talents

E6 Local Community Contribution

KOSIS Evaluation

LSIS has received A grade in Korea Corporate Governance Service (KCGS)’s annual evaluation. KOSIS is an independent organization that evaluates and analyzes the corporate governance and social responsibility of all stock-listed companies, and then discloses corporate governance evaluation ratings of those companies for investors starting 2002. Our KOSIS evaluation results have been improved every year since we published sustainability management. LSIS will make continued efforts to enhance the corporate governance and evaluation results.
Listening to stakeholders’ opinions is a privilege that enables us to incorporate them into all management activities and share added values created along the way with our stakeholders so that we can grow responsibly with them.

### Stakeholder Value Chain Map

**Suppliers**
- **Raw materials purchase**
  - Amount: 1,139,295
  - Team in charge: Win-win Growth Team
  - Key communication channels in 2016:
    - Partner exchange meetings
    - Quality innovation meeting for Win-win Growth
    - Performance sharing meetings

**Employees**
- **Salary, benefits, severance pay, and etc.**
  - Amount: 283,436
  - Team in charge: HR Team
  - Key communication channels in 2016:
    - Communicator
    - LinkedIn
    - LSIS Monthly Magazine

**Shareholders & Investors**
- **Dividend, interests**
  - Amount: 44,538
  - Team in charge: Treasury Team
  - Key communication channels in 2016:
    - NDR*
    - Company Visits
    - Homepage

**Environmental Organizations**
- **Environment & safety investments**
  - Amount: 3,136
  - Team in charge: Environment & Safety Team
  - Key communication channels in 2016:
    - Direct communication with staff in charge
    - Notices listed on homepage
    - Regular meetings

**Donation, social contribution expenses and etc.**
- Amount: 1,001

**Local Communities**
- Team in charge: Public Relations Team
  - Key communication channels in 2016:
    - Community meetings
    - Direct communication with staff in charge
    - Dialogue with the management

**Taxes and charges (corporate tax)**
- Amount: 16,404

**Government**
- Team in charge: Marketing Team
  - Key communication channels in 2016:
    - Visits to customers
    - Product trainings
    - Customer meetings

**Customers**
- Team in charge: Sales
  - Amount: 1,712,375

**Dividend, interests**
- Amount: 44,538

**Shareholders & Investors**
- Team in charge: Treasury Team
  - Key communication channels in 2016:
    - NDR*
    - Company Visits
    - Homepage

* NDR: Non-Deal Roadshow
LSIS competes on par with global players and is actively increasing its share in the global market through intensifying investment and marketing activities in high-potential markets, such as China, the United States, Southeast Asia, the Middle East, and Europe. We are expanding our presence in the energy convergence business and global micro-grid markets, in particular, based on the recognition for the advanced smart energy technology.

Status of Global Talents
As of the end of 2016, around 1,000 employees work at seven production/sales subsidiaries in the United States, Europe, China, Vietnam, and Japan, as well as 17 overseas branches in Russia, Indonesia, and more. In order to make inroads into global markets and boost global sales, LSIS strives to reinforce human resources’ competitive edge with a mid- to long-term perspective under Global Talent Map. Further, we are gradually expanding our global talent hiring program in North America, China, and Europe to secure and nurture global talents.
Power Solution Business

LSIS offers a total solution that enables a safe and efficient management of the end-to-end process from power generation to consumption. Electric power systems are mainly divided into two groups: Transformers, used in electrical power systems for adjusting the system voltage to a safe value, and Circuit Breakers, designed to prevent overcurrent and ensure adequate electric supply and protection. Our product portfolio has recently become diversified with the launch of High Voltage Direct Current (HVDC) System, Energy Storage System (ESS), and Energy Management System (EMS). Intended to minimize power transmission loss and maximize efficiency, these systems deliver to households and companies a non-threatening and smarter way of consuming energy at a lower cost.

Main Products

Electric Power Transmission

1. High Voltage Direct Current (HVDC)

Transmitting electricity by converting alternating current into direct current

2. Gas Insulated Switchgear (GIS)

Protecting power plants and substations from accidents caused by overload, grounding, and short-circuits

3. Power Transformer (TR)

Transforming voltage and current stably through step-up and step-down of voltage

4. Switchgear

Monitoring electric power systems and managing safety control by electric disconnect switches, fuses or circuit breakers in the electrical box

5. Vacuum Circuit Breaker (VCB)

Protecting lives and devices by breaking the circuit in a vacuum when abnormal current flows in medium voltage distribution lines

6. Distribution Transformer (TR)

Transforming voltage and current by using electromagnetic induction devices

7. Air Circuit Breaker (ACB)

Protecting power and devices by breaking the circuit when abnormal current takes place in low voltage distribution lines

8. Molded Case Circuit Breakers (MCCB)

Breaking the current by manual or electric control, and automatically in case of such abnormal situations as overload and short-circuit

Smart Energy

LSIS offers smart energy services based on its smart grid solution that supports two-way information exchange. It allows power suppliers and consumers to exchange real-time information, thereby optimizing energy consumption control and facilitating free energy sharing and transactions among consumers. We also provide a smart energy platform that is built on the existing power systems and combines more advanced concepts such as ESS in our endeavor to implement an efficient and green system to address the impending energy deficiency issue.

About LSIS

Power Solution Business
Industrial Automation Business

LSIS provides a wide range of automation solutions for efficient operation of industrial facilities. Main product portfolio includes PLC for equipment control, AC Drive for motor speed adjustment, and HMI for real-time equipment monitoring. More recently we are promoting the Smart Factory Solution business that delivers integrated information gathered from various automation systems in order to help our clients achieve better energy efficiency in their overall business, not just in factory operation. Client companies, as a result, can not only create a highly efficient workplace with maximum productivity with lower cost but also implement environmentally friendly systems that utilize resources in a way more efficient manner.

Main automation products

- Programmable Logic Controller (PLC): A universal controller that is programmed to operate machinery in a set sequence and conditions which has a wide range of applications from large-scale automation equipment at factories to cars and washing machines, golf ranges and general usage.
- Human Machine Interface (HMI): A device that allows users to easily check the status of various production equipment through the touch screen and to take necessary measures immediately.
- Motion/Servo: A device that enables precise feedback control when equipment is moved to a location or operated at a certain speed/direction that the system requires. (Motion Controller/ Servo Drive/Servo Motor)

Railway Infrastructure

The railway infrastructure business is composed of various systems for signaling, power supply, equipment control, operation & maintenance, railways and vehicles. As a leading provider of the railway infrastructure systems with a special focus on signaling and power supply solutions, LSIS is expanding the business to overseas markets based on proven track records from numerous projects.

- Railway Signaling System: The railway signaling system equipped with engineering technologies controls diverse signals and communications, providing effective service intervals, train operations, security, and IT equipment management.
- Railway Power System: Technology to implement electric cars and power supply facilities that are built on the railways as permanent facilities to supply electric energy from railway system to cars.

Industrial Automation Business

Smart Factory

LSIS’s smart factory solutions support efficient business operation through optimization of various information services tapping into factory automation solutions. In 2010, LSIS proved the tangible benefits of smart factory solution has to offer—60% productivity increase, 60% energy savings, 75% failure rate reduction—by setting up Smart Factory in its Cheongju Plant, which integrates ICT with automation solution. With a sense of responsibility as a leader of the Korean government-led ‘Manufacturing Industry Innovation 3.0’ as well as its proven know-how and advanced technologies, LSIS will spare no efforts to make valuable contribution to attaining the two objectives the country is pursuing, industrial productivily enhancement and energy saving, with the aim to help all plants across the country catch up with the level of optimization of our plants.

Other Businesses

Railway Infrastructure

Transport infrastructure business is composed of various systems for signaling, power supply, equipment control, operation & maintenance, railways and vehicles. As a leading provider of the railway infrastructure systems with a special focus on signaling and power supply solutions, LSIS is expanding the business to overseas markets based on proven track records from numerous projects.

- Railway Signaling System: The railway signaling system equipped with engineering technologies controls diverse signals and communications, providing effective service intervals, train operations, security, and IT equipment management.
- Railway Power System: Technology to implement electric cars and power supply facilities that are built on the railways as permanent facilities to supply electric energy from railway system to cars.

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The objective of sustainability management at LSIS is to become a respected company built upon strong trust from its stakeholders. To this end, we endeavor to grow together with our stakeholders and take environmental responsibility to be a good steward of the earth for the next generation. We will strive to abide by laws and do business in a transparent manner to fulfill our duties as a respected corporate citizen.

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Under the primary objective of sustainability management to become a respected company built upon strong trust from its stakeholders, LSIS has set up three strategic directions of “stakeholder engagement,” “sustainability image enhancement,” and “integrated risk management” as well as stakeholder-specific action plans for continuous stakeholder engagement in its pursuit of shared growth.

The Roadmap for Sustainability Management

- **Key stakeholders**
  - Customers
  - Suppliers
  - Environment
  - Employees
  - Shareholders & Investors
  - Local Communities

**Action Plans by Stakeholder**

**Communication**

- Create customer satisfaction product responsibility and proactive communication
- Pursue sustainable growth based on a culture of fair trade
- Promote environmental management meeting global standards
- Cultivate ethical talents and improve quality of life
- Enhance stakeholder value through management integrity and transparent disclosure
- Co-trust with local communities by voluntary social contributions

**Risk Management**

- Build a risk management system

**Sustainability Management**

- Contact in-house training on sustainability
- Operate the Sustainability Management Council
- Align departments and RBI for stakeholder relations

**Stakeholder Engagement**

- Expand stakeholder environmental activities

**Sustainability Image Enhancement**

- Enhance integrated risk management systems

**UN SDGs**

LSIS is committed to supporting the UN Sustainable Development Goals (SDGs) and always strives to explore what it can do about them.

At LSIS we operate the sustainability management system to raise visibility of sustainability issues and stakeholder voices to the Board of Directors for efficient decision-making. The Sustainability Management Council is participated by staff members of all core teams including Stakeholder Engagement Team. In 2016, the Council met relevant staff from core teams, checked progress made in each area, and discussed detailed implementation plans to further sustainability management execution.

**Sustainability Management Council at LSIS**

- **Chairman**
  - CEO
- **Other Members**
  - Management Council (Corporate Planning Team)

**Sustainability Management Framework**

- Becoming a respected company built upon strong trust from its stakeholders

**Three Strategic Directions**

- **Stakeholder Engagement**
- **Sustainability Enhancement**
- **Integrated Risk Management**

**Sustainability Management Implementation System**

- Board of Directors
- CEO
- CSL (responsible execution for sustainability management)
- Sustainability Management Council
Suppliers

LSIS believes that communication is the most important factor for promoting shared growth with suppliers. In this regard, LSIS actively collects opinions from suppliers through continuous interaction and reflects them in business activities in a timely manner. An effective communication requires not only formal exchange of views but also casual discourse. LSIS holds a dinner gathering once every quarter to invite employees from the LSIS, as well as from first- and second-tier suppliers. At the end of each year, a satisfaction survey is conducted to gather opinions from various viewpoints to reflect them into next year’s activities with regards to communication with suppliers.

Customer

As increasing importance was placed on customer satisfaction surveys after the introduction of the sustainable management regime, LSIS expanded the scope of the survey under the instructions of the Executive Vice President. The customer satisfaction survey consists of BSI surveys which record the Economic Sentiment Index of companies. And CSI survey is on the level of satisfaction on LSIS products. These survey outcomes are valuable indicators for improving customer satisfaction. Furthermore, LSIS regularly participates in seminars held abroad in a bid to attract foreign customers. LSIS will continue to exert efforts to facilitate communication with customers and prevent complaints from occurring in the first place.

Employees

LSIS focuses efforts on acquiring talents through internship, regular recruitment, and special recruitment, and provides various training programs tailored to each position, department, and business area, in order to ensure that every employee attains global competitiveness and professional expertise. Diverse communication channels are in place to enhance employee satisfaction and improve existing systems, including the executive-to-employee discussion committee (Linkers), Smart Board, ACE Board and Hi-Card, where employees can receive feedback on personal concerns or requests. Some examples of welfare for enhancing employees’ happiness and satisfaction include events that invite family members of those who have been promoted to managerial positions, or Leisure Weeks designed to achieve work-life balance and family-friendly management. Based on such effort, LSIS was certified as a family-friendly company by the Ministry of Gender Equality and Family. As of early 2017, LSIS has 26 employee-to-employee discussion committees, including Linkers, Smart Board, ACE Board and Hi-Card, where employees can receive feedback on personal concerns or requests.

Global Sourcing Team

Ki-Bok Kim

Marketing Team

Sang-Woo Hong

HR Team

Sang-Woo Hong

Employees

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Local Community

LSIS endeavors to realize its philosophy of social contribution, which is to ‘provide secure and consistent support based on solidarity towards social conflicts and the vulnerable.’ In particular, a CSR TFT was organized among the public relations team and partner firms’ businesses. Products and services, but also manufacturing operations throughout the entire value chain, including not only its own products and services, but also manufacturing operations and partner firms’ businesses.

Shackholders & Investors

Transparent disclosure of information is the single-most important demand of shareholders and investors. With this understanding, LSIS makes concerted efforts to effectively distribute information on not only its business but also on sustainable management, including issues on environment and society. Along with regular corporate performance reporting and IF meetings, facilities to facilitate communication with shareholders, various activities are developed and implemented to boost investor relationship. LSIS will continue to consistently satisfy investor demand on information disclosure.

Environment/Safety

Environmental problems such as global warming or fine dust pollution are increasing every day. Feeling a heavy sense of responsibility to protect the environment, LSIS is strongly pursuing green business based on smart energy. In addition, the recent law on social responsibility in Korea illustrates the growing importance of safety-first management. Against this backdrop, LSIS is exerting efforts to establish a safe and eco-friendly process throughout the entire value chain, including not only its own products and services, but also manufacturing operations and partner firms’ businesses.

Core Issues of Sustainability Management

Integrated Sustainability Management

Interview with Heads of Stakeholder Communication Departments

Stakeholder Communication Departments are one of the most reliable communication channels, through which we identify the needs of our stakeholders and feed them back to our management activities.

Interview with Heads of Stakeholder Communication Departments
Materiality Test

Materiality Test Overview

LSIS carries out the materiality test every year to derive core issues that we face, incorporate them to our business strategies, and prepare this report centered on stakeholder interests. In 2016, we derived 16 key issues from the materiality test that was conducted by 1) creating a pool of major issues, 2) prioritizing major issues, and 3) deriving key issues.

<table>
<thead>
<tr>
<th>STEP 1</th>
<th>STEP 2</th>
<th>STEP 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder survey</td>
<td>Media &amp; web analysis</td>
<td>Diagnosis on CSR level</td>
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<tr>
<td>September to October 2016</td>
<td>October 2016</td>
<td>December 2016</td>
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</table>

<table>
<thead>
<tr>
<th>Respondents</th>
<th>857 persons</th>
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<tbody>
<tr>
<td>Source</td>
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</table>

<table>
<thead>
<tr>
<th>Participating Teams</th>
<th>18 departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability Management TF involvement</td>
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</tbody>
</table>

A pool of 34 major issues was formed by reviewing internal and external documents including agendas of key discussion bodies at LSIS based on the previous year’s pool of issues and reflecting views from the Sustainability Management Council.

**STEPS OF MATERIALITY TEST**

1. Creating a Pool of Major Issues
2. Prioritizing Major Issues
3. Identifying Key Issues

**Creating a Pool of Major Issues**

A pool of 34 major issues was formed by reviewing internal and external documents including agendas of key discussion bodies at LSIS based on the previous year’s pool of issues and reflecting views from the Sustainability Management Council.

**Prioritizing Major Issues**

- Stakeholder survey
- Media & web analysis
- Diagnosis on CSR level
- On-/off-line survey
- Big Data analytics
- Using an external consulting institute tool

**Identifying Key Issues**

Key sustainability issues derived from the issue prioritization process are then featured on the Materiality Matrix depending on stakeholder interest and business impact. Each of the 16 key issues is presented in this Report in detail along with LSIS’s efforts to address them.

**Materiality Test Matrix**

<table>
<thead>
<tr>
<th>Category</th>
<th>Core Issue</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethics &amp; tax</td>
<td>A. Ethical management</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>B. Establishing a culture that promotes fair trade activities</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>C. Compliance management</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>D. Integrated risk management</td>
<td>33</td>
</tr>
<tr>
<td>Environment and safety management</td>
<td>E. Securing product quality competitiveness</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>F. Building a system to ensure product reliability</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>G. Ensuring technological competitiveness</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>H. Intellectual property management</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>I. Local community contribution</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>J. Spreading a culture of giving</td>
<td>39</td>
</tr>
</tbody>
</table>

**Key Sustainability Issues**

- A. Ethical management
- B. Establishing a culture that promotes fair trade activities
- C. Compliance management
- D. Integrated risk management
- E. Securing product quality competitiveness
- F. Building a system to ensure product reliability
- G. Ensuring technological competitiveness
- H. Intellectual property management
- I. Local community contribution
- J. Spreading a culture of giving
Ethical Management

Objective of Ethical Management

LSIS aims to operate as a top-tier company that fulfills its responsibilities to customers, suppliers, shareholders, and society by conducting transparent management on the basis of the principles of fairness, honesty, and faithfulness.

Ethical Management Goal

- Build confidence in company and products
- Secure a stable foundation for growth
- Enhance company value and image
- Secure viable investment foundation

Code of Ethics and Conduct

LSIS has established the Code of Ethics and Conduct as a standard for employees’ ethical behavior and decision-making. It is applied to all affiliates and subsidiaries, while overseas local subsidiaries comply with this in consideration of local laws and regulations at the same time. We take regular inspections on the implementation of the Code of Ethics and Conduct to keep it up to date and strive to raise employees’ awareness of the standard.

Policies and Systems in Operation

Ethical Management Policies

- Self-reporting Program
- Core Issues of Sustainability Management
- Ethical Management
- Compliance
- Integrated Risk Management
- Environment and Safety Management
- Customer Communication
- Shared Growth with Suppliers
- Securing and Cultivating Global Talents
- Local Community Contribution

Informed Protection Policy

LSIS does not leak any reporting contents and privacy of informants without prior consent. If the informant receives any disadvantage due to a mismanagement of this policy, the Company takes all responsibilities to repair or compensate for damages.

Response Procedure to Unethical Behaviors

Based on the Code of Ethics and Conduct, LSIS carries out thorough fact-finding investigations on unethical behaviors and takes disciplinary action through the Disciplinary Committee. The severity of disciplinary action is decided through deliberation and resolution of the Committee.

Self-reporting Program

To eliminate unethical behaviors between employees or with stakeholders (customers, suppliers, shareholders, etc.) and build a transparent and sound corporate culture, LSIS has in place a system for employees to voluntarily report their unethical practices such as bribery and entertainment. In addition, we hold special sessions to promote self-reporting by guaranteeing anonymity and providing immunity for past misconducts. Such sessions were held in 2007, 2010 and 2014.

Appendix

- Sustainability Data Management
- GRI G4 Index
- UN Global Compact COP
- Third Party Assurance Statement
- Staff Recognition for Their Contribution to This Report
Compliance

Since the introduction of the compliance officer system in 2012, LSIS declared the compliance management in 2014 and has supported all employees to observe compliance practices in daily work through the voluntary transaction system and inspection activities. Our compliance management involves categorizing legal risks, self-assessment, and compliance education under the direction of the Compliance Officer who is also head of Legal Affairs Division.

Compliance Officer System

The Compliance Officer was appointed by the BOD in accordance with Article 542-13 of the Commercial Act. We have since 2012 appointed a Compliance Officer, and a unit responsible for compliance is formed under Legal Affairs Division to support compliance activities and report their activities to the BOD every year.

Self-initiated Inspection Activities

The compliance unit at LSIS prepares and provides a checklist that helps employees categorize legal risks associated with their business activities while conducting self-initiated assessment and check. The checklist specifies legal compliance matters, consisting of Yes/No questions on categorized legal risks. For noncompliance areas identified through the question, employees can review the background and correctional measures themselves. The checklist is updated on a yearly basis in the process of the legal risk categorization.

The Compliance Officer ensures that employees voluntarily abide by regulations based on the checklist on a yearly basis. The Officer also monitors the outcome of employee self-assessment to further improve compliance if necessary.

Compliance Training

The Compliance Officer ensures compliance training programs are offered on a selection of key compliance themes to raise compliance awareness of employees. In 2016, LSIS conducted training and investigation on 20 occasions with a special focus on the topics of Fair Trade Act and Fair Subcontract Transactions Act. In the second half of the year, we carried out nine training sessions for staff of LSIS and subsidiaries on domestic and overseas anti-corruption laws and regulations, including the Inquirer Solicitation and Draft Act (also known as "Kim Young-ran Act") and Foreign Corrupt Practices Act (FCPA). We have posted the key parts of the Kim Young-ran Act and provide information in a Q&A format on the company cyber bulletin board (WLS) for employees to remind themselves of the act and do daily work.

Enhancement of Ethical Management Execution Activities to Accurate Ethical Management Execution

Ethical Management Practice Training

Training on ethical management is mainly offered through induction training for new and experienced employees. Since 2013, we have been conducting such training at the LS Group level with the aim of further promoting ethical management. In 2014, in particular, the DTV (S生猪 Value Tigger) program was implemented to foster a compliance culture, internalize LSpartnership, and give impetus to organizational and individual change at the LS Group level. We also provide employees with online training about compliance. From 2015, ethical management has been included in the training course for newly-promoted managers, raising awareness of ethics and compliance and cultivating competence to respond to ethical dilemmas. Starting 2017, ethics training materials are made available on the online bulletin board, helping employees understand the importance of ethical management.

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### Integrated Risk Management

**Internal Control of Financial Reporting**

To maintain efficient control over all processes relating to the calculation of our financial statements, we built the internal control system based on the COSO Framework* in 2005 and began operating it starting 2006. The internal accounting manager reports the operation status to the BOD and the Audit Committee, and the Audit Committee reports its evaluation results to the BOD.

**Risk Management Categories**

We have defined a total of 104 risks that are then categorized into three-layer classes - general, medium and minor. After risk categorization we prioritized risks based on evaluation of risk management status and opinions of responsible teams to identify 26 key risk items.

#### Risk Management Categories

<table>
<thead>
<tr>
<th>No.</th>
<th>Minor</th>
<th>Medium</th>
<th>General</th>
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<tbody>
<tr>
<td>13</td>
<td>15</td>
<td>22</td>
<td>16</td>
</tr>
</tbody>
</table>

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**Corporate Risk Pool**

We have defined a total of 104 risks that are then categorized into three-layer classes - general, medium and minor. After risk categorization we prioritized risks based on evaluation of risk management status and opinions of responsible teams to identify 26 key risk items.

#### 26 Key Risk Items Derived

![Diagram showing 26 key risk items]

- Risk management status evaluation : 11
- Employee evaluation : 12
- Opinions of responsible teams : 13

---

### Introduction of Preliminary Risk Identification Approach

Corporate risks are categorized by management types into emergency response, preliminary risk control and work process inter- nalization. In 2016, we adopted the preliminary risk management approach with the aim to identify and manage risks in a timely manner, and rolled it out to key risks on the first step for efficient response. We plan to expand the scope to all 104 risk types identified for LSIS and establish a detailed guideline. In addition, we will monitor areas requiring management improvement as well as risk grade through a checklist-based effort to assert risks and risk quantification for risk-volatility measurement.

---

### Core Issues of Sustainability Management

In 2016, we adopted the preliminary risk management approach with the aim to identify and manage risks in a timely manner, and rolled it out to key risks on the first step for efficient response. We plan to expand the scope to all 104 risk types identified for LSIS and establish a detailed guideline. In addition, we will monitor areas requiring management improvement as well as risk grade through a checklist-based effort to assert risks and risk quantification for risk-volatility measurement.

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### Appendix

- **Sustainability Management Data**
  - GRI 61 Index
  - UN Global Compact COP
  - Third Party Assurance Statement
  - Staff Recognition for Their Contribution to This Report

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* COSO : Committee of Sponsoring Organizations of the Treadway Commission
Reinforcement of Product Competitiveness

LSIS always strives to strengthen R&D capabilities and improve the quality and reliability of our products in a firm belief that product competitiveness is the very foundation for any business to thrive on. In 2016, we not only adhered to improving the quality of the products being developed but also modernized the reliability process so that our customers could use our products more safely.

Quality Management

We are committed to providing the highest quality of products and services as part of our mission to become a Great Company prospering for 100 years with quality that creates customer satisfaction.

Operation of PT&T Center

LSIS Power Testing & Technology (PT&T) Center is the first private institute in Korea equipped with 2,000 MVA capacity short circuit, high voltage, and reliability test equipment. Focusing on developing technologies to improve product performance and strengthen reliability, LSIS PT&T has since its establishment in 2000 contributed to reducing test time by about 30% and saving KRW 4.5 billion annually in testing costs. Above all, it allows us to control testing schedules and ensure high quality and reliability in early stage.

Core Issues of Sustainability Management

Integrated Sustainability Management

Interview with Heads of Stakeholder Communication Departments

Materiality Test

Ethical Management

Compliance

Integrated Risk Management

01 Reinforcement of Product Competitiveness

Environment and Safety Management

02 Customer Communication

04 Shared Growth with Suppliers

05 Securing and Cultivating Global Talents

06 Local Community Contribution

Appendix

Sustainability Management Data

GRI GS Index

UN Global Compact COP

Third Party's Assurance Statement

Staff Recognition for Their Contribution to This Report

LSIS has completed design verification of its new product R&D processes so as to ensure product quality prior to launch. We provide our customers with highly reliable products with guaranteed quality through evaluating the completeness of each development phase, addressing any issues that may arise in the process, and engaging in tests that take into account the actual setting a user would experience while using our products.

Operations

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International和其他

Mission

"Pride in quality," gaining a competitive advantage in the global markets and heralding the era of quality marketing based on zero-defect quality

Vision

"Great Company prospering for 100 years with quality that creates customer satisfaction"

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### Product Reliability

#### Strengthening Product Reliability

We have designated IEC 6-0300-based reliability management system manual as the corporate standard for systematic management of reliability tools and analytics at the corporate level. The reliability management system manual ensures that systematic reliability tools are applied to products to be developed from 2017 onward and that consideration is given to product quality and reliability early on from the design phase. We have also devised reliability/quality training curriculum into five steps and been offering well-thought out training courses with the aim of nurturing experts who are equipped with reliability and statistical quality management capability. Such efforts have contributed greatly to the systematic operation and control of reliability tools (environment, function, life cycle), and in turn to enhancing product reliability and brand value of LSIS.

#### Reliability Tool Application Process

- **PSA**: Party stress test analysis and failure rate calculation
- **FSA**: FMEA analysis
- **TBA**: FTA
  - **Aligning top and bottom arrows**
  - **Making event tree and product failure calculation data**
- **TAA**: RBD
  - **Incorporating functional requirements**
  - **Determining event tree and affected system**
- **RBS**: Incorporating reliability measure using performance index
- **BRC**: Detecting design issues between systems
- **BSC**: Verification through accelerated life testing

#### Reliability / Quality Training Curriculum

<table>
<thead>
<tr>
<th>Training Category Step</th>
<th>1 Step</th>
<th>2 Step</th>
<th>3 Step</th>
<th>4 Step</th>
<th>5 Step</th>
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<tr>
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<td>Reliability Measurement and Reporting System</td>
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#### Core Issues of Sustainability Management

- **Integrated Sustainability Management**: Interview with Heads of Stakeholder Communication Departments
- **Materiality Test**: Ethical Management
- **Risk Management**: Compliance
- **Stakeholder Engagement**: Integrated Risk Management

#### Core Issues of Sustainability Management

- **Reinforcement of Product Competitiveness**: Sustainability Management
- **Sustainability Management**: 2016-2017 LSIS Sustainability Report
- **Sustainability Management**: Core Issues of Sustainability Management
- **Sustainability Management**: Core Issues of Sustainability Management
In order to maintain our competitive advantage and prepare for the future, LSIS has been investing around six percent of sales in R&D activities for building a strong portfolio, boosting global competitiveness and proactively exercising the rights. In an effort to sharpen our technological competitiveness in the face of the fourth industrial revolution, we have set our sights on the global LVDC market. We will also be executing a global-scale site project in the field of DC distribution networks, globally in the initial stage of development, with the low-voltage DC distribution network project (DC Island) we were executing a global-scale site project in the field of DC distribution networks, globally in the initial stage of development, with the low-voltage DC distribution network project (DC Island) we were awarded in Seogeochado, Jindo. We will continue our R&D activities to identify and support strategic alliance partners and create the Open R&D Pool of partners and experts to promote more systematic and efficient technology collaboration with them.

Key R&D Performances in 2016

Development of DC-Specific Product and Technology LSIS is accelerating development of new and renewable energy facilities such as DC power products, including photovoltaic, and DC circuit breakers that protect the DC distribution networks. We now have solar, wind, and ESS-type DC 1000V MCCB in our product line and are planning to build a full-line up of DC MCCB, MCCB, and DC circuit breakers starting with the solar-specific DC 1000V MCCB, which we will set our sights on the global LVDC market. We will also be executing a global-scale site project in the field of DC distribution networks, globally in the initial stage of development, with the low-voltage DC distribution network project (DC Island) we were awarded in Seogeochado, Jindo. We will continue our R&D activities through the project to secure global product competitiveness and the first mover advantage in the respective global market.

Continued Reinforcement of Company-Wide Tech Infrastructure to Strengthen Business Competitiveness As we did in 2015, LSIS continued our activities aimed at improving the six common platform technologies (communications, SW, Safety, EMC, analysis, materials) and expanding them throughout the company. Main achievements in 2016 include securing a connectivity standard that could connect all our company products from an IoT perspective and clearly establishing the platform strategy and action plan for embedded SW. Furthermore, a system for improving the reliability of LSIS products has been firmly established, and we are witnessing visible progress in acceleration of R&D that capitalizes on improved 3D CAD, CAE capabilities.

Digital Transformation Establishment and Execution of Digital Transformation Strategy In 2016, a company-wide Digital transformation strategy and implementation system were established to strengthen the competitiveness of our digital solutions/services business at the same time. The digital elementary technologies, including IBM’s Tivoli, Cloud, Big Data, Machine Learning, were utilized to improve operational excellence of our business services (energy efficiency, productivity and quality improvement) and buildings (improvement of energy efficiency and energy cost reduction) by delivering measurable results. These efforts allowed us to clearly define our business models such as Smart Energy and Smart Factory while enhancement business competitiveness.

Intellectual Property

Intellectual Property [IP] Strategy LSIS creates visible and invisible profiles from intellectual property. By building a strong portfolio, boosting global competitiveness and successfully exercising the rights, in an effort to sharpen our technological competitiveness in the face of the fourth industrial revolution, we have set our sights on the global LVDC market. We will also be executing a global-scale site project in the field of DC distribution networks, globally in the initial stage of development, with the low-voltage DC distribution network project (DC Island) we were awarded in Seogeochado, Jindo. We will continue our R&D activities through the project to secure global product competitiveness and the first mover advantage in the respective global market.

LSIS operates “6P” program to provide advanced and fundamental technologies and solutions. We are also operating the first independent power testing and technology institute among private companies to elevate our R&D competitiveness.

Reinforcement of Product Competitiveness Sustainability Management 2016-2017 LSIS Sustainability Report

LSIS strives to validate its main business areas, secure growth engines in the next-generation sectors in advance, and improve R&D productivity and efficiency, contributing to the sustainable growth of LSIS as a total solution provider in the smart power and automation markets. In particular, we are working to proactively respond to the fast evolving digital transformation and boosting R&D capacity on the smart energy and smart factory businesses. We evaluate R&D activities for aligning with multiple R&D strategies established in 3 designated locations: Anyang, Cheonan, and Cheongju and a R&D Center in Wuxi, China. To foster close support to production sites and synergy creation with design functions. We are also operating the first independent power testing and technology institute among private companies to elevate our R&D competitiveness.
Environment and Safety Management

LSIS is committed to becoming a ‘G3 [Green, Great, Global] ESH Company’ that realizes a workplace free from accidents and pollutions through enhancing environment and safety management competence while operating the environment and safety management system, thereby preemptively responding to domestic and overseas regulations.

**Mission**
Operate global-level ESH system

**Values**

- G5 ESH Company
- Workers free from accident, pollution, and damage
- Operate global-level ESH system

**Strategy**

- Strengthen ESH management system
- Operate TBM* activities
-雷trace automated fire detection equipment
- Conduct experience-based safety training
- Engage in pre-work TBM activities

**Plan for 2016**
- Build an integrated disaster control center
- Promote a culture of safety management

**Achievements in 2016**
- Strengthened monitoring of fire prone areas
- Replaced automated fire detection equipment
- Conducted experience-based safety training
- Engaged in pre-work TBM activities

**KPI in 2016**

<table>
<thead>
<tr>
<th>KPI</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of industrial accidents</td>
<td>0</td>
</tr>
<tr>
<td>Environment &amp; safety investment</td>
<td>3,136</td>
</tr>
<tr>
<td>Number of green technology graded products</td>
<td>1,252</td>
</tr>
</tbody>
</table>

**Plan for 2017**
- Identify safety risk factors and conduct thematic inspections
- Promote safety management on project sites
- Reinforce the handling and control of harmful substances / dangerous equipment

Declaration on Environment, Safety, and Health Management

In fulfilling our management philosophy, “going together for a greater value,” we acknowledge the activities for environment, safety, and health management as basic tasks to be done. We promise to put the activities below into practice in order to build a clean and safe society.

**Building Eco-friendly Workplace**
- Minimize the usage of resources and energy by adopting clean production technologies
- Comply with international agreements, laws, corporate standards, and other requirements
- Conduct periodic environmental assessments to analyze the performance and constantly improve environment management systems

**Operating a safe and healthy workplace**
- Provide training programs for a better environmental awareness among employees and encourage them to engage in activities for environmental conservation

**Environment and Safety Monitoring Activities**
We continuously inspect environment and safety management so as to provide our employees a safe and pleasant workplace. Any risk factors identified during inspection are addressed immediately, and in cases where immediate remediation is impossible, we make sure that a mid- to long-term plan in developed and followed up and progress checked.
Preliminary ESH Inspection
We utilize the preliminary ESH inspection system during invest-
ment planning so as to develop the most possible prevention plans.
and abide by environmental and safety laws through environment
and safety risk analysis.

Green Purchasing
In response to RoHS, LSIS declared the ‘Green Purchasing
Guideline’ and does not engage in production and transaction
activities involving raw and subsidiary materials that contain the six
hazardous substances. Moreover, we support the govern-
ment's Green Purchasing Policy and purchase materials and of-
fice supplies with the Green Mark where possible.

Investment in Environment and Safety
LSIS endeavors to minimize impacts on environment, safety, and
health over the entire product life cycle from production to dispos-
tion through developing green products and enhancing processes.
To this end, we continue to make investments to save energy and reduce
environment and safety risks.

Response to Climate Change
Climate Change Strategy
In an effort to deal with issues such as global warming and the
destruction of the ozone layer that cause climate changes, we volun-
tarily signed an agreement for saving energy and reducing
GHG emissions to join the government-led climate change poli-
cy. Moreover, we monitor and control GHG emissions from our
businesses in a systematic way through the standardization of the
company rules and guidelines of measuring emissions. We partici-
pated in the CDP in 2011 and have since submitted our commit-
ment to GHG management, emission reduction plans, and risks
& opportunities, disclosing our GHG management strategy to the
public. The Cheonju Purchasers strived to set and accomplish GHG
emissions reduction goals since 2014 when it was designated as a
worksite subject to GHG & Energy Target Management System.

Verification of GHG Emissions
We monitor the source and amount of GHG emissions in real time
by establishing guidelines and inventories of GHGs. Since 2010, we
have commissioned a third party to verify our GHG invento-
ty to ensure the reliability on our GHG management, while using
relevant data as basis for green product designs and energy sav-
ing planning. The emission of SF6 gas during the manufacturing
process of BIS (Insulated Switchgear) is the source of almost
90% of our GHG emissions and the rest 10% comes from the us-
age of electric power and LNG (for heating).

Energy Usage
The GHG inventory and Energy Management System enable a real
time monitoring of the energy consumption. We mainly use
electric power and LNG at our workshops, for manufacturing pro-
cess and HVAC facilities, and heating and cooking, respectively. Although energy consumption reduction appears to be chal-
cenging with the increasing energy demand due to the expansion of
business, establishment of new research facilities, and expansion
of plant buildings, we will endeavor to minimize our energy foot-
print through setting and executing mid- and long-term energy
saving plans and managing energy intensity.

<table>
<thead>
<tr>
<th>Category</th>
<th>Unit</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>MWh</td>
<td>1,280,229</td>
<td>1,306,916</td>
<td>1,427,789</td>
</tr>
<tr>
<td>Electricity</td>
<td>MWh</td>
<td>520,697</td>
<td>542,075</td>
<td>541,033</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>MCF</td>
<td>2,573,147</td>
<td>2,616,579</td>
<td>2,715,197</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source of electricity generation</th>
<th>Unit</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind power</td>
<td>MWh</td>
<td>286</td>
<td>179</td>
<td>28</td>
</tr>
<tr>
<td>Solar energy</td>
<td>MWh</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Pulmonary Control
Air Pollutant Control
LSIS has in place an optimized treatment facilities for air pollu-
nants generated from the production process. We have introduced
rigorous emission standards for particulate emissions set at below 50
percent of the legal limit, are working to increase the pollution con-
trol facilities’ treatment efficiency by having air pollutant density
measured by a third party accredited by the Ministry of Environ-
ment.

Waste Management
The waste discharged from manufacturing process is legally
managed based on different treatment methods, and over 90
percent of the waste generated is recycled, including byprod-
uct metals. In addition, we have in place a systematic evaluation
and examination process for waste treatment facilities that starts
from before concluding contracts to make sure waste dis-
charged from plants is treated in an appropriate manner.

Management of Chemical Substances
Our Environment and Safety Team manages chemical substanc-
es handled in our workforce through reviewing Material Safety
Data Sheet (MSDS) and Letter of Confirmation (LOC) beforehand
for new chemical substances to check their usability. We are
continuously monitoring the water quality of neighboring streams
and rivers in our effort to minimize the impacts of wastewater from
our workshops on the environment.

Energy and GHG Reduction Activities
We are implementing mid- to long-term investment plans for
reducing GHG emissions and saving energy. Our aim is to con-
tribute to the global effort to address global warming and other
issues faced by climate change.

Establishment of Energy-Convergence Smart Factory Model
LSIS aims to expand energy management to the facto-
y production line by displaying energy consumption from pro-
duction line and utility real-time on the dashboard. We will begin
by installing LSIS-developed GIMAC & Module at Cheongju 1 to real-
ize real-time monitoring of energy consumption, after which
energy efficiency and productivity will be increased through con-
nection with the existing platform.

Installation of Energy Storage System (ESS) for Emergency Power
The diesel emergency generator equipped for emergency use at Anyang R&D Campus was replaced by an ESS. This is the
first 1MWh ESS used for emergency power in the private sector,
allowing up to 2 hours and 20 minutes of evacuation and fire fight-
ing while not emitting any green house gases or creating noise or
vibration. It also provices immediate power supply at the time of
a power outage.

Waste Treatment
The waste discharged from manufacturing process is legally
managed based on different treatment methods, and over 80
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continuously monitoring the water quality of neighboring streams
and rivers in our effort to minimize the impacts of wastewater from
our workshops on the environment.
Creating Accident-Free workplace

Since 2008 when we implemented the safety and health management system with the aim of building accident-free workplace, we have highlighted roles and responsibilities and continued risk evaluation and working environment improvement activities. As a result, the accident rate at LSIS has been maintained at the lowest level in the industry since 2012. Furthermore, monthly regular safety inspection is conducted on jobs with high risk on construction sites, environment, and technical services are offered to ensure safety management.

Company Average Industry Accident Rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Accident Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>0.82</td>
</tr>
<tr>
<td>2013</td>
<td>0.82</td>
</tr>
<tr>
<td>2014</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Safety Management in Workplace

Safety Awareness Activities

All of our employees are engaged in establishing safe site conditions, with outside specialists invited to conduct training, company-wide safety & health signage inspections and, quarterly independent inspections held, and quarterly joint safety inspections held with the labor union. Moreover, safety rules and manuals are regularly distributed on the internet bulletin board more than once a month, and business divisions run their own injury-bulletin boards, motivating the employees to commit to safety & health management.

Safety Management Implementation Plan

Safety management is essential to survival of a business and is recognized as an imperative quality when it comes to corporate competitiveness. As such, LSIS engages in safety management activities that LSIS family and all partner companies’ employees can participate in.

Fire Safety Management

Operation of Fire Prevention System

We have created a map of fire and explosion prone zones for more systematic management of fire and explosion risks in all our work sites and been working to meet fire safety level in the view of insurers based on National Fire Prevention Association (NFPA). Furthermore, we have implemented the Smart Management System in order to effectively manage fire prevention facilities in case of emergencies in workplace.

Emergency Response Procedure

In an effort to further emergency preparedness in all our work sites, we conduct regular fire drills based on detailed scenarios by accident type and ensure rapid and safe evacuation of employees in the event of an accident. Emergency first response training is also provided to secure rapid initial response in the assurance of an emergency patient to prevent or minimize loss of life.

Safety Management at Company Research Center

Safety activities are performed at the company research center to create a safe and comfortable research environment where high-quality research deliverables can be produced. In addition, in its daily safety activities, the research center receives regular inspections and safety diagnoses by an established special team specializing in safety diagnosis and identifies and removes potential risk factors in advance. In particular, a risk assessment is conducted to identify electrical, chemical, and mechanical risks present in each laboratory and systematically analyze them to remove and replace the risks, in an effort to protect our researchers.

Safety Management for Awarded Projects

Our safety management is executed to meet the needs of our customers, or more specifically to provide our combined power solutions, such as the high-voltage power facilities and switchgear that we manufacture and install, also perform safety-related inspections. To secure safety at installation sites, Tool Box Meetings (TBMs) and other site safety management activities are performed with the leadership of Project manager. Our (P)PM construction safety management activities are also tracked with managing sites dispersed across country by districts, identifying and removing any risk for site accident or code violation. Safety readiness is also assessed by unannounced inspections.

Safety Training System

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Training System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksite-specific Safety Accident Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company Average Industry Accident Rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Management in Workplace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Management Implementation Plan</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Work Environment Improvement

In order to create a pleasant working environment and improve employees' health, we regularly commission external specialized institutions to conduct inspection on hazardous factors in working environment. We respond to issues derived from the inspection through developing an optimized improvement plan.

Health Improvement Program

For the purpose of creating a healthy working environment by improving employees’ personal health, we have implemented an already program in connection with the metabolic syndrome. A body composition analyzer is used to precisely analyze the body type and a blood test is performed, to prescribe personalized exercise and meal plans.

If an employee is found to be more susceptible to a metabolic syndrome, a doctor is to be consulted for further treatment. To prevent smoking-related diseases and to create a clean, smoking-free workplace, employees who attempt to quit smoking are provided with professional counseling and activities to fight withdrawal symptoms.

Musculoskeletal Disorder (MSD) Risk Factor Management

To prevent and manage MSDs, which are nationally on the rise, periodic and constant MSD risk factor checks are performed. The results provide the basis for improving our work environment and heavy object handling process, and MSD prevention training is provided to the workers.

Eco-Friendly Product Management

Eco-Friendly Product Development Process

LSIS operates an R&D process for eco-friendly product development. At the product-planning phase, eco-friendly R&D plan must be established, and new components are to be tested for environmentally harmful substances through our harmful substance management system so that parts that fail the test are not used in the products that are being developed.

At the product development phase, the Design Review, comprised of heads of department and working-level employees, reviews the qualitative and quantitative outcome of the eco-friendliness plan per each development stage. When the final completion report is made, we make the final determination on whether the developed product qualifies for our eco-friendly product classification by looking at if it meets the technical standards of RoHS and green certification and whether it received the green certification.

Green Product Standards

Under our vision “Futuring Smart Energy,” we stay committed to improving LSIS’s profile as a green-energy business and reinforcing sustainability management through dealing with eco-friendly products in a coordinated manner in accordance with “Green Product Grade Model.” All models of our products are given grades from 1 to 3 based on the level of eco-friendliness according to the “Green Product Grade Model.” In dealing with products based on their grade, we are promoting development of customer-oriented green products.

Core Issues of Sustainability Management

Integrated Sustainability Management

Interview with Heads of Stakeholder Communication Departments

Materiality Test

Ethical Management

Compliance

Integrated Risk Management

01 Reinforcement of Product Competitiveness

02 Environment and Safety Management

03 Customer Communication

04 Shared Growth with Suppliers

05 Securing and Cultivating Global Talents

06 Local Community Contribution

Appendix

Sustainability Management Data

GRI GI Index

UN Global Compact COP

Third Party Assurance Statement

Staff Recognition for Their Contribution to This Report
Every year, LSIS conducts a customer satisfaction survey among our major customers at home and abroad. In 2016, the survey was conducted for major customers of each product, and a survey of 220 clients for our switchgear resulted in an average score of 71.5, which is higher than our competitors. The product received higher scores in all categories, with 70.3 on Product & Price, 73.6 on Place & SVC, and 68.3 on Promotion.

Automation / Customer Requirements by LV Drive Function

<table>
<thead>
<tr>
<th>Automation</th>
<th>PLC Controller</th>
<th>Servo System</th>
<th>HMI</th>
<th>Smart I/O</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>14</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>10</td>
<td>37</td>
</tr>
<tr>
<td>LV Drive</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>16</td>
<td>2</td>
<td>14</td>
<td>20</td>
<td>64</td>
</tr>
</tbody>
</table>

Customer Satisfaction Survey Results for Power Board & Switchgear

<table>
<thead>
<tr>
<th>Company</th>
<th>Product &amp; Price</th>
<th>Place &amp; SVC</th>
<th>Sales Promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSIS</td>
<td>73.4</td>
<td>69.4</td>
<td>71.2</td>
</tr>
<tr>
<td>Company A</td>
<td>67.4</td>
<td>59.6</td>
<td>66.6</td>
</tr>
<tr>
<td>Company B</td>
<td>65.3</td>
<td>53.8</td>
<td>62.2</td>
</tr>
</tbody>
</table>

Achievements in 2016
- Analyzed market trend and customer needs through customer face-to-face survey
- Reinforced customer communication through exhibitions and seminars
- Conducted information protection training for all employees (79%)

Plans for 2016
- Expand customer communication activities such as satisfaction survey
- Improve customer seminar activities
- Conduct company-wide information protection training
- Publish targeted PR materials
- Conduct information protection training for all employees of LSIS and partners (over 10%)

KPI in 2016
- Customer Satisfaction Survey Results for Power Board & Switchgear: 71.5 points
- No. of Customer Seminars Held: 61
- Company-wide Security Training Participation Rate: 79%
Customer Communication

2016-2017 LSIS Sustainability Report

Sustainability Management

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Sustainability Management Data

GRI GI Index

UN Global Compact COP

Third Party’s Assurance Statement

Staff Recognition for Their Contribution to This Report

Each year, LSIS participates in exhibitions for various business areas at home and abroad to introduce our main businesses and capabilities while utilizing the opportunity as a communication channel with our customers.

At the CIGRE conference, comprised of meetings and forums on technology, we introduced our technical capabilities that enable us to provide total solutions in the power sector.

At the IEEE Transmission and Distribution Conference and Exposition, the biggest of its kind in North America, LSIS not only introduced our up-to-date, eco-friendly technical capabilities and HV business capabilities but also promoted the customer-tailored total solution we can provide.

By establishing the system unit that enables networking between products, we demonstrated our capabilities as a total solution provider. And as a leader in factory automation (FA) market and the adaption and expansion of the smart factory, we were able to firmly establish ourselves as a prominent leader in government-led manufacturing sector innovation.

We introduced a hands-on solution that integrates all businesses at Hannover Messe held under the main theme of ‘Experience Smart Integrated Solution’ by firmly establishing our image as a world-class business.

At the CIRED conference, comprised of meetings and forums on technology, we introduced our technical capabilities that enable us to provide total solutions in the power sector.

At the SPS IPC Drives exhibition, the world’s largest automation exhibition, we introduced new major products and applications to new customers and distributors.

At Korea’s biggest electric power industry fair, ‘SIEF,’ we introduced full line-up of Susol/Metasol electric equipment solution and promoted ourselves as a leading business in the DC era.

At Korea Smart Grid Week, which is Korea’s only exhibition where guests can see the current status and future of government-led new energy industry, LSIS introduced a customer value-centric business model, promoting ourselves as an energy leader that is Future Smart Energy.

For more information, please visit our Sustainability Report website: www.lsism.com/en/sustainability/
In the industrial equipment business with traditional product-centric nature, responding to customer requirements in a timely manner can especially be challenging. Established for the er-centric nature, responding to customer requirements in a

In the industrial equipment business with traditional produc-

equipment category.

Selected as a GD

product in industrial
equipment category.

Highly recognized for its design uniformity of the draw

control, equipped with easy draw-out, compact breaker unit.

Susol LV Switchgear & MCC is a distribution solution that

Susol LV Switchgear & MCC

UI/UX Design for GridSol Cloud System

UI/UX Design for GridSol Cloud System allows general users and experts to conveniently monitor and manage the amount of energy generated by the solar power generating system as well as the amount consumed, and a cloud service is provided so that it can be used anywhere, anytime on any connected smartphone, tablet POC, and desktop PCs. N Screen is supported for displaying the same content on various devices, and custom UX is provided so that the users may change the UI structure to their preference, earning it the GD product title in their preference, earning it the GD product title in

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LSIS is actively implementing shared growth business initiatives such as technological/financial support and ACE Club operation, based on the belief that the competitiveness of suppliers is closely intertwined with the LSIS’s performance. In particular, concerted efforts were made in 2016 to build a fair business culture for subcontractors by systemically promoting legal compliance and non-violation. Furthermore, LSIS helped establish an FTA country of origin system to ensure that the competitiveness of its suppliers meet global standards.

During the last business year, to prevent unfair business practices. Other roles of the committee include the reviewing of registration process of new suppliers and deregistration process of firms subject to evaluation, with an aim to prevent violation of subcontracting laws and protect sound business.

**Establish Fair Trade Culture**

**Fairness of Contract**

We pursue fairness of contract to comply with the Fair Trade Act and Subcontracting Act. To this end, we signed the “Subcontracting Basic Agreement” with about 515 suppliers in 2016. The contract was built on “Standard Subcontracting Agreement”, recommended by the Korea Fair Trade Commission (KFTC), and was updated last year with articles stipulating promotion of subcontractor rights and standards for subcontracting payment (fairness and manners of payment) as per recommendations of the KFTC, for establishing fair and transparent trading relationships with suppliers. The pledge to ethical management practice has also been concluded with all current suppliers. In 2016, we signed the subcontracting fair trade agreement with 350 suppliers reaffirming our commitment to fostering mutually beneficial fair trade and growth.

**Activities to Avoid Violations of Legal Regulations and Improve Compliance**

Four Action Plans for Shared Growth. The four action plans consisted of a sound signing of contract, a fair selection(registration) of partners, a cooperation and operation of an internal audit committee for subcontractors, and sound issuance and maintenance of documents. LSIS has illustrated strong commitment for the shared growth initiative by integrating these plans into its code of business conduct (rules on domestic purchase management, rules on partner management) and posting them on the TOPS website (shared-growth internet portal). Led by the CPO, monthly audit committee convenes to monitor risks of delayed payment for each subcontractor. The committee also reviews the business process of the subcontractors which generated revenue of more than 1% among the gross amount of all of LSIS’s subcontracting firms.

Unfair Subcontracting Business Prevention. Monthly review of delayed payment is conducted to ensure that payments are securely within the legal payment requirement period (40 days), while notification service is provided when more than 50 days have passed after receipt of product or in the case of non-registration of payment account, etc. For matters of importance is provided to mitigate risk of delayed payment. LSIS is also duly responding to the government’s SME protection policy that imposes stricter restrictions against large companies operating from SME’s technologies, and the trend of stronger IP protection. For example, relevant departments are made sure to receive instructions on subcontracting laws or review guidance regarding request for information on technology. Similar initiatives are underway, such as the standardization of information request forms for technology (electronic contract), and distribution of relevant guidelines.

**Training on Subcontracting Act**

In 2016, we conducted fair trade training for both our employees and suppliers to dissemi- nate the compliance with Subcontracting Act and the culture of fair trade. In June, fair trade education was offered in June to procurement managers who work in close partnership with suppliers, and an education session on Subcontracting Act and fair trade was organized in October for the CEOs and employees of around 130 1st and 2nd-tier suppliers under the support from the Shared Growth Committee. In addition, the monthly procurement operation meeting increases the visibility of key contract and legal management issues and provides guidance and coaching to bring about a positive change to the compliance mindset of staff in the area of procurement. We will keep on running those programs for employees of LSIS and suppliers to help them cultivate basic knowledge on fair trade and prevent any dispute and unfair trade in advance.

**Plans for 2017**

- Engage in systematized fair trade and compliance activities.
- Assist suppliers in securing global competitiveness.
- Facilitate communication channels and information exchange.
- Build a system for handling conflict minerals.

**Achievements in 2016**

- Systematic activities to avoid violations of legal regulations and improve compliance.
- Supported suppliers in implementing FTA country of origin system (FTA suppliers).
- Expanded the scope of communication and promoted effective communication.

**Plans for 2016**

- Disseminate the culture of fair trade and shared growth.
- Stiffen global competence of trade and shared growth.
- Invigorate communication with suppliers.
- Facilitate information exchange and support.
- Engage in systemized fair trade and compliance activities.
- Assist suppliers in securing global competitiveness.
- Facilitate communication channels and information exchange.
- Build a system for handling conflict minerals.

**KPI in 2016**

<table>
<thead>
<tr>
<th>Purchasing Amount of ACE CLUB Members</th>
<th>Financial Support for Suppliers</th>
<th>No. of 1st and 2nd-tier Suppliers Using the Mutual Growth Payment System</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRW 222.5 billion</td>
<td>KRW 14.4 billion</td>
<td>642</td>
</tr>
</tbody>
</table>
Establishment of Dispute Resolution Mechanism: A dispute resolution mechanism has been established for swift problem solving. Disputes include non-payment or delayed payment, non-payment of fees from alternative payment to bills, unfair refusal to receive products, unfair returns and unfair decision of sales price or reduction of price. All disputes that have occurred within 3 years after the completion of the said business are subject to resolution. LSIS also collects complaints on a quarterly basis, receives requests for dispute resolution on the shared growth portal, and operates a joint communication channel and a website for filing petitions, in order to eradicate the source of dispute and prompt conflict resolution.

Post-exit analysis of the legality of subcontracting deals: Bi-monthal monitoring is carried out on the business relations between LSIS and the first-tier suppliers who have signed the fair trade treaty (350 companies in 2016). The monitoring focuses on the compliance of important requirements and non-violation under the Subcontracting Act, to ensure that LSIS staff in charge of trading with suppliers duly observe all important legal requirements. The monitoring conducted in the first- and last-half of 2016 revealed that LSIS has signed the basic trading agreement with all 350 firms subject to the legality analysis for subcontractors, did not make unfair decisions on the sales price, or unjustified special provisions. The analysis also found that in expected circumstances of layoff changes or price fluctuation of raw materials, LSIS would adjust its prices as appropriate, and insert required forms for technological information only when deemed reasonable and always with prior consent from partners. Apart from always honoring the payment period of 60 days upon receipt, LSIS sets the expiration date of the alternative payment to bills as within 60 days upon receipt and fully abided by it for all trades. Upon receipt and always within 60 days, LSIS would pay the alternative payment to bills as per the fair trade treaty. Moreover, our shared growth programs help them acquire global competitiveness and establish a well-reliance management system.

Seminars for Supplier CEOs: LSIS has held an annual seminar for CEOs of ACE Club members to share know-how regarding business strategy, finance, marketing, leadership, and economy. In a seminar held in September 2016, an introductory lecture on labor law was provided to give SME owners much needed information on employment contract and labor hour management. Moreover, current issues that may have implications for suppliers were covered, including the strengthened labor supervision by the Ministry of Employment and Labor and minimum wages.

Intensifying Supports for Shared Growth: Financial Support and Mutual Growth Payment System Financial Support: LSIS renews funds in various ways and lends suppliers; use them at a lower interest rate, helps purchase the equipment and extending manufacturing facilities for improving their product quality, turnaround time and productivity. In 2016, we raised a total amount of KRW 23.8 billion – KRW 3.6 in direct support, KRW 1.6 billion in combination support and KRW 5.6 billion in special support - and offered KRW 11.4 billion in TT and 2st-tier suppliers for helping them boost the cash flows and stabilize management. Considering the overall competitiveness enhancement within the supply chain, we are providing financial support not only to 1st-tier suppliers but also to 2nd-tier suppliers. In 2017, we plan to make sure suppliers in need of financial assistance have access to the program.

In 2016, supplier innovation activities were themed around productivity and quality enhancement, and LSIS provided support to ensure a systematic implementation of the activities, providing channels to make the most of professional consulting agencies and government-driven projects. We will encourage suppliers to voluntarily plan and organize various innovative activities, through which suppliers can build up global competitiveness.
Mutual Growth Payment. We operate the mutual growth payment system to ensure that 1st, 2nd, and 3rd-tier suppliers get trade receivables-secured loans. As a result, in 2016, a total of 62 1st, 2nd, and 3rd-tier suppliers benefited from the mutual growth payment worth KRW 66.4 billion. The number of 1st-tier suppliers and 2nd and 3rd-tier suppliers banking on the mutual growth payment system has increased nine-fold and seven-fold, respectively, since 2014.

Support for the establishment of an FTA country of origin system. With the exporting environment transitioning rapidly to fit the FTA regime, LSIS and suppliers alike felt the need to secure the legality of the certificates of origin and minimize the risk of post hoc analysis. Against this backdrop, LSIS evaluated the status of its suppliers’ management of the FTA country of origin, and identified the urgent need to develop a computerized system. Significant investment was made to accomplish five priorities, which were designated to support the country of origin management of all suppliers in a consistent and systematic manner. As a result, suppliers were able to enhance competitiveness of FTA exports and save KRW 3 billion in tariff saving, while LSIS strengthened its FTA country of origin management capacity. Acknowledged for accomplishing shared growth, LSIS received the Presidential Citation at the Joint Growth Commencement ceremony held in November 2016, which was the most honorable award to be given to a group for special contribution to FTA promotion.

Supports provided
- • Country of origin management system implementation and operation
- • Certification/country of origin certificates issuance, professional consultation services regarding country of origin management process
- • Direct
- • Combination
- • Special
- • Total

No. of 1st-tier Suppliers Using the Mutual Growth Payment System

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>28</td>
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<tr>
<td>2015</td>
<td>32</td>
</tr>
<tr>
<td>2016</td>
<td>60</td>
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No. of 2nd- and 3rd-tier Suppliers Using the Mutual Growth Payment System

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>18</td>
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<tr>
<td>2015</td>
<td>26</td>
</tr>
<tr>
<td>2016</td>
<td>28</td>
</tr>
</tbody>
</table>

No. of Suppliers Supporting Mutual Growth Payment System

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2</td>
</tr>
<tr>
<td>2015</td>
<td>25</td>
</tr>
<tr>
<td>2016</td>
<td>27</td>
</tr>
</tbody>
</table>

Supports for Productivity Enhancement
Establishment of Production Management System (NAMOS ERP System) LSIS has provided suppliers a production management system (NAMOS ERP System) linked with its ordering information system free of charge in order to enable an effective production and inventory control and support the establishment of self-reliance management system. A total of 32 suppliers have completed the system in 2015 and 2016, and we plan to expand the system implementation to other suppliers in 2017. We also dispatched professional resources who help suppliers assess/diagnose the utilization of NAMOS ERP system and address vulnerable areas identified from the assessment. We will continuously support suppliers in managing production in a systematic manner by providing well-thought-out training.

Support for Training and Education LSIS has been operating diverse training and education programs for suppliers to help them enhance competitiveness since 2007. These programs focus on essential business items such as quality, production, and FTA in association with specialized training institutions outside such as the Chungbuk branch office of the KSA. In 2016, a total of 241 employees from 24 suppliers have attended the training and education programs on quality, production, design, finance, and FTA (18 rounds, 14 courses), which contributed to enhancing the component quality and productivity of suppliers.

Introduction of the TQRDCM system The TQRDCM system was introduced in 2016, in order to effectively secure global suppliers. The existing merit-based evaluation of QDC (quality, delivery, cost) or the performance-based evaluation of process quality had their limits in sufficiently measuring the suppliers’ capabilities. The TQRDCM tool was adapted as a complementary method to the existing system in order to secure global suppliers armed with robust capabilities. TQRDCM appraises such fundamental business capacity as Technology, Quality, Responseability, Deliv- ery/production, Cost, and Management, with an aim to promote suppliers’ sustainable growth and performance. LSIS will continue to implement the TQRDCM tool in 2017 in order to balance the evaluation factors between performance and capabilities, and provide full support for the suppliers as they take a leap forward as global suppliers.

Three-Year Training Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
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</tr>
<tr>
<td>2015</td>
<td>424</td>
</tr>
<tr>
<td>2016</td>
<td>527</td>
</tr>
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</table>
Technical Cooperation Task Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>29</td>
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<tr>
<td>2015</td>
<td>33</td>
</tr>
<tr>
<td>2016</td>
<td>44</td>
</tr>
</tbody>
</table>

Purchasing (Investment) Support

When suppliers need investment for their buildings (IT equipment, measurement tools, test and repair devices, other), LSIS provides support by exercising its purchasing capacity. By engaging in the entire process from the selection of business counterparties to price analysis, LSIS helps suppliers land a good purchasing deal with competitive conditions. LSIS has provided support to three suppliers: Seunglim Electric Co., MyungIn Industry, and GS Tech. In 2015, helping them to make the purchase at about KRW 4.6 billion lower than what would have been independent prices (average 6% of cost reduction for the three firms).

Technology Protection

LSIS has been using “System and Method on Certification of Trade Secret” since 2015 with the intention of protecting technologies and trade secrets of suppliers. Run by the Korean Institute of Patent Information, System and Method on Certification of Trade Secret confirms proprietary technologies and the ownership of business information SMS, and helps suppliers prepare against theft and illicit use of proprietary technologies and business information. We supported 13 suppliers in protecting 29 technologies and trade secrets at their request in 2015. In 2016, the number increased to 15 suppliers with 44 technologies and trade secrets. Going forward, we plan to intensify our activity by conducting demand survey and purchasing (investment) support.

Communication and Information Sharing with Suppliers

Performance Sharing Meeting

Every quarter in order to share our business and information in a horizontal and open manner, LSIS holds regular meetings with the suppliers. There are 46 collaborative tasks worth KRW 6.4 billion in 2014, maintaining the increasing trend every year in terms of the number of tasks and the investment. We will continue to expand these tasks so as to encourage suppliers to enhance technology development and deepen cooperative relations.

Satisfaction Survey Results on Shared Growth

Satisfaction Survey on Shared Growth in 2016. Specifically, we ask about how satisfied our suppliers are in terms of trade relation, shared growth support policy, and shared growth operation system, and the results are adapted to the activity direction for shared growth. In the survey of 30 major suppliers conducted in 2016, respondents rated 6.1 in terms of trade relation, 5.8 for shared growth operation system on a scale of 7.0. The results indicated that suppliers were most satisfied with fair trade presented by price analysis and payment conditions, shared growth policy presented by financial support and technical support. On the other hand, they indicated that the suppliers’ satisfaction level was quite low in terms of payment adjustment for delivered goods, and supplier diagnosis and guidance. We plan to annually carry out the survey to collect feedback from customers and suppliers, and to reflect the results in setting the policy direction for shared growth.

Between LSIS, first-tier and second-tier suppliers

Regular interactions between LSIS employees and representatives from first- and second-tier suppliers have taken place since 2013, amid the increasing importance of a horizontal organizational culture of shared growth. In particular, these interactive meetings took the form of dinner gatherings in 2015, aiming to promote causal communication and refrain from a rigid and formal relationship. Four first-tier partners and eight second-tier partners were invited to dinners hosted in 2016, which were meaningful occasions to engage in frank discussions and understand each other better. LSIS will continue to strengthen communication with suppliers, thereby establishing fair and transparent partnership while fostering cooperation for shared growth.

Dinner between LSIS, first-tier and second-tier suppliers

For LSIS’ Technology Sharing Presentation (One-on-one Coaching Program)

LSIS has since 2012 worked closely with supplier for this government-led project to enhance their technology development and innovation performances with the aim of enlarging the scope of LSIS partnership. The program for the CLD Toward Technology Sharing Partnership consists of Biz Solution Talk for listening to the complaints of suppliers and finding solutions together, Wrap-up for the CLD to summarize the discussions, and Dinner for all the participants to engage in networking. The Talk Concert will be continued to be held as an interactive channel for sharing important business issues, understanding the suppliers’ challenges, and discussing ways to strengthen partnership.

Satisfaction Survey Results on Shared Growth

We started a survey to check the level of satisfaction of suppliers for shared growth in 2015. Specifically, we ask about how satisfied our suppliers are in terms of trade relation, shared growth support policy, and shared growth operation system, and the results are adapted to the activity direction for shared growth. In the survey of 30 major suppliers conducted in 2016, respondents rated 6.1 in terms of trade relation, 5.8 for shared growth operation system on a scale of 7.0. The results indicated that suppliers were most satisfied with fair trade presented by price analysis and payment conditions, shared growth policy presented by financial support and technical support. On the other hand, they indicated that the suppliers’ satisfaction level was quite low in terms of payment adjustment for delivered goods, and supplier diagnosis and guidance. We plan to annually carry out the survey to collect feedback from customers and suppliers, and to reflect the results in setting the policy direction for shared growth.

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Dinner between LSIS, first-tier and second-tier suppliers

For LSIS’ Technology Sharing Presentation (One-on-one Coaching Program)
Securing and Cultivating Global Talents

HR Philosophy
The ideal employee we are seeking for is an “Imagineer for Futurizing Smart Energy.” We proclaimed the new HR philosophy in 2016 with the purpose of hiring and nurturing talents who can proactively respond to the paradigm changes in the electric power industry and make the vision “G365” come true. Named by combining “Imagine” and “Engineer,” “Imagineer” refers to a person who takes pride in their work and company, dreams of the future of smart energy on the basis of the understanding of technology and global competency, and leads to better outcomes based on partnership. The Imagineers of LSIS commit themselves to achieving corporate mission and vision.

Diverse Talent Recruitment Channels and Processes
We strive to enhance our competitive edge by strategically assigning resources with global competencies to core businesses through biannual open recruitment of new and experienced workers and a global recruitment program targeting college graduates in North America, China, or foreign intellectuals in the R&D field. Moreover, a year-round recruitment program is running to attract excellent researchers for new core businesses and talented workers with extensive experience. Different talent recruitment channels such as on-campus recruitment, employee recommendation, and search firms help place right resources in the right positions efficiently.

Achievements in 2016
- Recruited core resources equipped with capabilities to implement global businesses
- Implemented organization development programs including organization diagnosis/design

KPI in 2016
- No. of newly hired employees in 2016: 101
- Training expense per employee: KRW 2,109
- Union membership rate: 30.5%

Plans for 2017
- Intensity of global competencies of human resources
- Build Great Work Place
- Create a reasonable labor-management partnership

Plans for 2016
- Nurture capabilities to implement global core businesses
- Implement organization development programs

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Compliance
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02 Environment and Safety Management
03 Customer Communication
04 Shared Growth with Suppliers
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Staff Recognition for Their Contribution to This Report

Securing and Nurturing Talents

KPI in 2016
- No. of newly hired employees in 2016: 101
- Training expense per employee: KRW 2,109
- Union membership rate: 30.5%
Programs to Help New Hires Adjust to Company

New hires at LSIS have diverse experiences prepared to help them rapidly adjust to the Company. We provide a new graduate package with a message from the CEO and flower basket and take them on tours of the Jeju Pilot HVDC SMART CENTER, allowing them to be proud of joining the Company. Other programs include entry level education to introduce the group, “Future Smart People” course, mentoring program, on-the-job training, basic job training course by each value chain. The Onboarding Package program introduces the Company’s HR system and guides for their jobs, supporting quick adaptation to organizational culture and exhibition of their abilities. In addition, the LS Future Camp assists employees who have finished their first year to look back and reflect on tours of the Jeju Pilot HVDC SMART CENTER, allowing them to be proud of joining the Company. Other programs include a coaching program for performance management, and pred Advent ice training courses for acquiring competencies. These education programs are systematically offered to our employees to help them secure the competence needed to compete in the global markets. Moreover, we operate the Career Development Program (ICDP) that supports all employees to develop career paths ranging from hiring to retirement.

Development of Human Resources and Education

Our HR development focuses on cultivating smart people to achieve the vision “LSIS”. With the belief that consistent competence development ensures the future, we operate about 150 collective training programs participated by around 10,000 employees and customers every year and run roughly 2,500 online programs as well. The LSIS Training Center had won the President Prize in 2005 and has obtained a Grade for four years in a row from 2012 to 2015 in recognition of its excellence. Our education & training programs for employees are grouped into “positives”, “global”, “organization development”, “expertise”, and “customer”, in general. We also run specialized education programs including the Global Lounge, a coaching program for performance management, and productivity training courses for acquiring competencies. These education programs are systematically offered to our employees to help them secure the competence needed to compete in the global markets. Moreover, we operate the Career Development Program (ICDP) that supports all employees to develop career paths ranging from hiring to retirement.

Employee Benefits and Organizational Culture

“Smart Working, Happy Life! Event: For the employees promoted to managerial level, the “Smart Working, Happy Life!” event is held in early every January where their families and company executives are invited. Started in 2011, the event has served the purpose of assuring the importance of the manager role as well as the well-being of the families support. Family Fun Event on Children’s Day: We also hold an annual meeting on Children’s Day for the kids of staff members in order to realize the importance of family and give them a sense of pride in the company their parents work for.

Concentrated Vacation System: We run a system which allows all employees to go on a concentrated vacation within the limits of their paid leaves and personal vacations, which are fixed by relevant laws and collective agreements. It is a policy that helps employees balance work with personal lives. It is, in particular, implemented after long term projects or personal events, allowing employees to regain strength and return, thus enhancing business efficiency. Apart from summer vacation, all LSIS employees are given concentrated breaks at the first half and latter half of a year (5-6 days), which provide employees with an opportunity to rest and refresh.

Family happiness camp: Family happiness camps are held to facilitate communication within families, by providing an opportunity for both the parents and children to think about what makes a family happy. The program teaches family members how to complement each other and exchange opinions, and encourage families to think of ways to enhance happiness in their homes.

Dream Camp: Children can search for their dreams and find out how they can accomplish them through the Dream Camp. Children of employees can participate in this camp to think about their long term goals, position, skill, and ability.

Counseling for married couples: Marriage counseling sessions are held to help married couples improve their relationship and have better communication skills. Consisting of various sessions such as “open your heart, understand myself and my spouse, and put words into action”, the counseling program encourages couples to express their affection and understand each other’s differences.

Employee Benefits and Organizational Culture

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Power Solution Business

Industrial Automation Business / Other Businesses

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Social Contribution System

Social Contribution Philosophy
We jointly carry out social contribution activities with LS Group. LS Group’s management philosophy, “LSpartnership,” which can be summed up as creating a greater value together as trustworthy partners, embodies the identity of our social contribution activities. LS Group also implements various social contribution activities at home and abroad to create a greater value through sharing and collaborating between beneficiaries and volunteers under the social contribution philosophy of becoming “A Reliable Partner Sponsoring the Underprivileged and the Future Generation with Dreams.” All affiliates of LS Group generate synergy throughout the entire process encompassing planning and implementation of social contribution under a unified philosophy.

LSIS’s Social Contribution Philosophy
- Trustworthily supporting the underprivileged and future generations.
- Choosing better value through sharing and collaboratively engaging benefits of company and volunteers based on the philosophy of Leadership.
- Devoting and operating programs with the same concept in line with LS Group’s philosophy to create synergy among affiliates.

Achievements in 2016
- Introduced social contribution programs tailored to national holidays.
- Enhanced communication regarding joint social contribution activities with welfare facilities.
- Expanded employee participation in social contribution programs.
- Entrenched joint social contribution programs with suppliers.

Plans for 2017
- Establish stakeholder communication channels to hear from local welfare facility workers, academics, citizens, and government (discussion forum).
- Reinforce social contribution activities tailored to local communities we operate in.
- Continue seasonal programs targeting the socially disadvantaged.
- Firmly establish a culture of sharing among employees.

Social Contribution Implementation Structure
The company-wide social contribution activities are driven by the Public Relations Team, and, at the plant level, the HR Support Support Invention Team and LinkerS’s representative body for support staff, implement activities tailored to each region.

Flagship Social Contribution Programs with LS Group
LS Dream Science Class
We run LS Dream Science Class to provide neighboring elementary and middle schools with science and culture experiences in cooperation with the Child Fund and the National Academy of Engineering of Korea since 2013. Tailored to 5th and 6th-grade students in elementary school, this program offers science experiment classes and weekly culture/arts activities to boost children’s interest in science. Science mentors and the company offer students chances to visit the company and its worksites.

KPI in 2016
- No. of participants in volunteer service: 8,258
- Total funds raised in 2016: 958.4 million KRW
- Social Contribution Expenses: 42.82 million KRW
Community-based Social Contribution Activities

Based on the principle of 'sincerity', LSIS is conducting various social contribution activities that can resolve the fundamental problems rather than settling for one-off donations. Not only in An-yang, where the company headquarters are located, but also in Cheong-ju, Cheon-an, Busan, and other areas home to regional branches, LSIS is actively implementing Social Contribution activities, developing programs that have relevant business, and carrying out donation for the low-income households.

Cheong-ju

Various programs are carried out in Cheong-ju, where the Cheong-ju branches no.1 and no.2 are located, to promote communication and sharing with the local residents. Every month, LSIS holds a Green & Clean Day, where employees clean not only the insides of the office but also the surrounding areas. Other regularly conducted activities include volunteer work at local cultural heritage programs, designed to protect local heritages including the Sambong mountain fortress, or the Cheong-ju Bumsori mountain program which aims to preserve the natural environment of the region.

An-yang

LSIS runs diverse social contribution activities in tandem with the Anyang Senior Wellness Service Center established by the city government, and is now to help the low-income families in An-yang. One example is the Warm Winter together with LSIS. Launched in 2014, which donated insulated winter clothing to low-income senior citizens. Similarly, Cool Summer together with LSIS was launched to donate cooling mats priced over KRW 5 million to help the elderly living alone without the shadowing summer heat.

- Volunteer work at Garum Veterans
- Volunteer work at Yeonan House
- Green & Clean Day
- Support for selling agricultural products under 1 Company 1 Village sisterhood
- Fitness Protection activities

Busan

Various social contribution activities such as volunteer work, social contribution, and donations are being implemented in Busan by the Busan branch, based on the unique CSR model adopted by LSIS. Group volunteer work at senior centers and welfare facilities, or social contribution such as free meal events are good examples of bolstering harmony in the local community. The branch also holds Green Days to clean the local environment, engages in the program to preserve nature, and holds factory visit programs to invite local residents and students on a tour.

- [Social Contribution Activities]
  - Free meal events at Cheon-an Welfare Center
  - Group work at Senior Center
  - Free meal events at company 1 Village sisterhood
  - Fitness Protection activities

Interview - Jee-seo Byun, An-ang Senior Wellness Facility

Although LSIS is not a household name to most people given its business characteristics, its activities and Social Contribution are definitely giving them a friendly and warm image. Going forward, I feel that LSIS should try to define its brand identity in order to see its successful development. Also, because facilities in local communities have different characteristics, High conglomerates will be important to understand what kind of help is really needed. I am grateful for the support that LSIS has shown thus far, and would like to ask them to keep up the excellent work.
### Sustainability Management Data: Economy

#### Consolidated Basis

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current assets</td>
<td>1,402,955</td>
<td>1,394,335</td>
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<tr>
<td>Non-current assets</td>
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<td>897,207</td>
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<td><strong>Total assets</strong></td>
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<tr>
<td><strong>Liabilities</strong></td>
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<tr>
<td>Current liabilities</td>
<td>707,527</td>
<td>618,075</td>
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<td>Non-current liabilities</td>
<td>564,121</td>
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<td><strong>Total liabilities</strong></td>
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<td><strong>Total</strong></td>
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<td>2,251,674</td>
<td>2,261,806</td>
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#### Summarized Income Statement

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>2,294,355</td>
<td>2,291,542</td>
<td>2,213,616</td>
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<tr>
<td>Gross income</td>
<td>417,013</td>
<td>417,013</td>
<td>412,886</td>
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<tr>
<td>Operating income</td>
<td>150,966</td>
<td>150,966</td>
<td>124,424</td>
</tr>
<tr>
<td>Income from continuing operations</td>
<td>150,966</td>
<td>150,966</td>
<td>124,424</td>
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<tr>
<td>Net income</td>
<td>150,966</td>
<td>150,966</td>
<td>88,748</td>
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#### Non-consolidated Basis

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current assets</td>
<td>1,571,149</td>
<td>1,074,543</td>
<td>1,083,749</td>
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<td>Non-current assets</td>
<td>1,031,924</td>
<td>1,011,360</td>
<td>1,002,913</td>
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<td><strong>Total assets</strong></td>
<td>2,603,073</td>
<td>2,085,903</td>
<td>2,086,662</td>
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<tr>
<td><strong>Liabilities</strong></td>
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<tr>
<td>Current liabilities</td>
<td>614,731</td>
<td>518,865</td>
<td>579,425</td>
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<td>Non-current liabilities</td>
<td>559,952</td>
<td>417,401</td>
<td>518,887</td>
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<td><strong>Total liabilities</strong></td>
<td>1,174,683</td>
<td>936,266</td>
<td>1,098,312</td>
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<tr>
<td><strong>Total</strong></td>
<td>3,777,756</td>
<td>3,022,169</td>
<td>3,185,050</td>
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</table>

#### Summarized Income Statement

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales</strong></td>
<td>1,827,657</td>
<td>1,753,118</td>
<td>1,712,375</td>
</tr>
<tr>
<td>Gross income</td>
<td>369,284</td>
<td>371,608</td>
<td>331,438</td>
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<tr>
<td>Operating income</td>
<td>155,115</td>
<td>147,877</td>
<td>97,392</td>
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<tr>
<td>Income from continuing operations before tax</td>
<td>115,995</td>
<td>104,417</td>
<td>74,886</td>
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<tr>
<td>Net income</td>
<td>93,904</td>
<td>69,452</td>
<td>57,882</td>
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#### Government Subsidies

<table>
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<tr>
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<tbody>
<tr>
<td><strong>Subsidy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery</td>
<td>238</td>
<td>112</td>
<td>11</td>
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<tr>
<td>Tools and instrument</td>
<td>76</td>
<td>76</td>
<td>6</td>
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<tr>
<td>Buildings</td>
<td>367</td>
<td>367</td>
<td>243</td>
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<tr>
<td>R&amp;D expenses</td>
<td>5,504</td>
<td>2,119</td>
<td>1,873</td>
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</table>
### Sustainability Management Data _Environment & Safety_

<table>
<thead>
<tr>
<th>Sector</th>
<th>Index</th>
<th>Unit</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy</strong></td>
<td>Electricity consumption</td>
<td>MWh</td>
<td>11,088.6</td>
<td>11,379.8</td>
<td>11,546.7</td>
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<tr>
<td></td>
<td>Electricity intensity</td>
<td>MWh/kW/hour</td>
<td>2.42</td>
<td>2.50</td>
<td>2.39</td>
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<tr>
<td></td>
<td>LNG consumption</td>
<td>MMtoe</td>
<td>2,267.7</td>
<td>2,308.7</td>
<td>2,353.2</td>
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<tr>
<td></td>
<td>LNG intensity</td>
<td>MMtoe/MMBtu</td>
<td>0.11</td>
<td>0.12</td>
<td>0.12</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>Industrial accident rate</td>
<td>%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Training hours (cumulative)</td>
<td>%</td>
<td>75,560.0</td>
<td>78,626.0</td>
<td>82,668.0</td>
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<tr>
<td></td>
<td>Workstation (cumulative)</td>
<td>Persons</td>
<td>31,780.0</td>
<td>30,899.0</td>
<td>37,442.0</td>
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<tr>
<td><strong>Raw materials</strong></td>
<td>Nonferrous metals</td>
<td>kg</td>
<td>4,683,174.0</td>
<td>4,629,879.0</td>
<td>3,305,555.0</td>
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<tr>
<td></td>
<td>Waste generation</td>
<td>kg</td>
<td>53,042.0</td>
<td>48,373.0</td>
<td>563.0</td>
</tr>
</tbody>
</table>

**Generation cost** | KRW in million | 10,256.4 | 11,106.8 | 11,928.5 |

* The data in this report presents energy consumption of LGD Changwon and therefore may vary from data in our previous reports.

** We are operating the Occupational Safety and Health Committee, which deliberates on major issues with regard to safety and health of employees working at sites, which contributes to building safe and pleasant working environments.

### Sustainability Management Data _Society & Others_

<table>
<thead>
<tr>
<th>Index</th>
<th>Classification</th>
<th>unit</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workforce</strong></td>
<td>Permanent staff</td>
<td>Persons</td>
<td>3,758</td>
<td>3,851</td>
<td>3,820</td>
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<tr>
<td></td>
<td>Contracted staff</td>
<td>Persons</td>
<td>264</td>
<td>263</td>
<td>263</td>
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<tr>
<td></td>
<td>Total</td>
<td>Persons</td>
<td>3,497</td>
<td>3,354</td>
<td>3,403</td>
</tr>
<tr>
<td><strong>Workforce by region</strong></td>
<td>Aning</td>
<td>Persons</td>
<td>1,424</td>
<td>1,581</td>
<td>1,037</td>
</tr>
<tr>
<td></td>
<td>Cheongju</td>
<td>Persons</td>
<td>567</td>
<td>507</td>
<td>503</td>
</tr>
<tr>
<td></td>
<td>Anyang</td>
<td>Persons</td>
<td>257</td>
<td>197</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>Persons</td>
<td>116</td>
<td>108</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Persons</td>
<td>3,497</td>
<td>3,354</td>
<td>3,403</td>
</tr>
<tr>
<td><strong>Workforce by age</strong></td>
<td>20s</td>
<td>Persons</td>
<td>567</td>
<td>507</td>
<td>503</td>
</tr>
<tr>
<td></td>
<td>30s</td>
<td>Persons</td>
<td>1,292</td>
<td>1,185</td>
<td>1,112</td>
</tr>
<tr>
<td></td>
<td>40s</td>
<td>Persons</td>
<td>1,424</td>
<td>1,581</td>
<td>1,037</td>
</tr>
<tr>
<td><strong>Welfare</strong></td>
<td>Training expense</td>
<td>KRW in millions</td>
<td>1,216</td>
<td>1,116</td>
<td>667</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Persons</td>
<td>3,397</td>
<td>3,296</td>
<td>2,820</td>
</tr>
</tbody>
</table>

**Newly hired (permanent staff) | Persons | 266 | 116 | 101 |

**Remuneration rate (permanent staff)** | % | 3.35 | 2.97 | 2.69 |

**Female workforce** | Persons | 657 | 676 | 671 |

**Percentage of female workforce** | % | 12.5 | 11.6 | 12.8 |

**Female managers** | Persons | 29 | 32 | 33 |

**Workforce with disabilities** | Persons | 45 | 45 | 45 |

**Percentage of workforce with disabilities** | % | 2.69 | 3.08 | 3.09 |

**Foreign workforce** | Persons | 20 | 22 | 20 |

**Percentage of female workforce** | % | 92.5 | 92.4 | 92.3 |

**Training hours PD/Persons** | h | 11 | 10 | 10 |

**Rate of return to work after parental leave** | % | 100 | 100 | 100 |

**Training expenses** | KRW in millions | 2,109 | 2,109 | 2,109 |

**Amount of DC type invested assets operated by individual** | KRW in millions | 182,152 | 3,293 | 667 |

**No. of subscribers** | 3,317 | 3,317 | 3,317 |

**Amount of DC type invested assets** | KRW in millions | 182,152 | 3,293 | 667 |

**No. of subscribers** | 3,317 | 3,317 | 3,317 |

**Anyang** | 20 | 19 | 19 |

**Rate of return to work after parental leave** | % | 100 | 100 | 100 |

**Retirement Pension Program**

<table>
<thead>
<tr>
<th>Classification</th>
<th>unit</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Defined Benefit (DB)</strong></td>
<td>Amount</td>
<td>197,182</td>
<td>193,641</td>
<td>180,152</td>
</tr>
<tr>
<td></td>
<td>No of subscribers</td>
<td>3,217</td>
<td>3,217</td>
<td>3,217</td>
</tr>
<tr>
<td><strong>Defined Contribution (DC)</strong></td>
<td>Amount</td>
<td>687</td>
<td>687</td>
<td>687</td>
</tr>
<tr>
<td></td>
<td>No of subscribers</td>
<td>687</td>
<td>687</td>
<td>687</td>
</tr>
</tbody>
</table>

**Remarks**

* The number of employees who cashed in retirement fund prematurely. (There is no DC type invested assets in real.)
** Annually of DC type invested assets operated by individual.

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**Sustainability Management Data**

<table>
<thead>
<tr>
<th>GRI</th>
<th>Index</th>
<th>UN Global Compact COP</th>
<th>Third Party Assurance Statement</th>
<th>Staff Recognition for Their Contribution to This Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 6a Index</td>
<td>UN Global Compact COP</td>
<td>Third Party Assurance Statement</td>
<td>Staff Recognition for Their Contribution to This Report</td>
<td>2016-2017 LSIS Sustainability Report</td>
</tr>
</tbody>
</table>

**About LSIS**

Corporate Profile  | Corporate Governance  | Stakeholder Value Chain Map  | Global Network  | Power Solution Business  | Industrial Automation Business / Other Businesses |

**Core Issues of Sustainability Management**

Integrated Sustainability Management  | Interviews with Heads of Stakeholder Communication Departments  | Materiality Test  | Ethical Management  | Compliance  | Integrated Risk Management  | 01 Reinforcement of Product Competitiveness  | 02 Environment and Safety Management  | 03 Customer Communication  | 06 Shared Growth with Suppliers  | 05 Securing and Cultivating Global Talents  | 06 Local Community Contribution  |
Win-win Growth

Social Contribution

Sustainability Management Data_ Society & Others

<table>
<thead>
<tr>
<th>Index</th>
<th>Classification</th>
<th>Unit</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donations</td>
<td>Donations (a)</td>
<td>KRW in thousands</td>
<td>114,970</td>
<td>67,380</td>
<td>95,960</td>
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</tr>
<tr>
<td>Social contribution expenses</td>
<td>Donation (b)</td>
<td>KRW in thousands</td>
<td>6,752</td>
<td>5,002</td>
<td>6,002</td>
<td></td>
</tr>
<tr>
<td>No. of social contribution activities</td>
<td></td>
<td></td>
<td>154</td>
<td>141</td>
<td>154</td>
<td></td>
</tr>
<tr>
<td>No. of participants</td>
<td></td>
<td></td>
<td>3,964</td>
<td>5,099</td>
<td>8,258</td>
<td></td>
</tr>
</tbody>
</table>

Social contribution activity hours Per participant x avg. activity hours (5 hours)

Win-win Growth

Social Contribution

Sustainability Management Data_ Society & Others

<table>
<thead>
<tr>
<th>Index</th>
<th>Classification</th>
<th>Unit</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donations</td>
<td>Donations (a)</td>
<td>KRW in thousands</td>
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<td>95,960</td>
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</tr>
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<td>KRW in thousands</td>
<td>6,752</td>
<td>5,002</td>
<td>6,002</td>
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<tr>
<td>No. of social contribution activities</td>
<td></td>
<td></td>
<td>154</td>
<td>141</td>
<td>154</td>
<td></td>
</tr>
<tr>
<td>No. of participants</td>
<td></td>
<td></td>
<td>3,964</td>
<td>5,099</td>
<td>8,258</td>
<td></td>
</tr>
</tbody>
</table>

Social contribution activity hours Per participant x avg. activity hours (5 hours)
UN Global Compact COP

### Human Rights

- **Principle 11**: Businesses should support and respect the protection of internationally proclaimed human rights.

- **Principle 12**: Businesses should seek to prevent and address human rights impacts in their operations and those of their suppliers.

- **Principle 13**: When businesses can identify an imminent risk of serious harm to human rights, they should stop or suspend the operations until the risk is removed.

### Labour

- **Principle 4**: Businesses should respect workers’ rights to freedom of association and collective bargaining.

- **Principle 5**: Businesses should not use all forms of forced or compulsory labor.

- **Principle 6**: Businesses should support the elimination of all forms of forced and compulsory labor.

### Environment

- **Principle 7**: Businesses should support a precautionary approach to environmental challenges.

### Anti-corruption

- **Principle 8**: Businesses should work against corruption in all its forms, including extortion and bribery.

### Core Lens

- **Principle 9**: Businesses should support public policy initiatives that help to reduce corruption risks.

- **Principle 10**: Businesses should work against corruption in all its forms, including extortion and bribery.
To the Readers of 2016-2017 LSIS Sustainability Report:

Korea Management Registration Inc. (hereinafter "KMR") has been requested by LSIS to verify the contents of its 2016-2017 Sustainability Report (hereinafter "the Report"). LSIS is responsible for the collection and presentation of information included in the Report. KMR's responsibility is to carry out assurance engagement on specific data and information in the assurance scope stipulated below.

Scope and standard

KMR has been requested by LSIS to verify the contents of its 2016-2017 Sustainability Report. KMR performed a Type 2, moderate level of assurance using AA1000AS (2008) as an assurance standard. KMR's assurance team (hereinafter "the team") evaluated the adherence to Principles of Inclusivity, Materiality and Responsiveness, and the reliability of the selected GRI G4 indices as below, where professional judgment of the team was exercised as materiality criteria.

• GRI Reporting Principles
  General Disclosures
  • Specific Standard Disclosures
    ∙ Specific Standard Indices of Aspects
      - Economic Performance: EC1, EC2, EC3, EC4
      - Market Presence: EC5
      - Indirect Economic Impacts: EC7, EC8
      - Procurement Practices: EC9
      - Materials: EN1, EN2
      - Energy: EN3, EN4, EN6, EN7
      - Water: EN8, EN9, EN10
      - Emissions: EN11, EN14, EN18, EN19, EN20
      - Effluents and wastes: EN22, EN23, EN24, EN25
      - Products and Services: EN37
    ∙ Compliance: EN97
    ∙ Overall: EN120
  
  Supplementary Environmental Assessment: EN32
  - Environmental Gravitational Mechanisms: EN41
  - Employment: LA1, LA2, LA3
  - Labour/Management Relations: LA4
  - Occupational Health and Safety: LA5, LA6, LA7, LA8
  - Training and Education: LA9, LA10, LA11

  - Diversity and Equal Opportunity: LA12
  - Human Rights Gravitational Mechanisms: HR12
  - Local Communities: SO1
  - Anti-corruption: SO3, SO4, SO5
  - Public Policy: SO6
  - Anti-competitive Behavior: SO7
  - Compliance: SO9
  
  - Governance Mechanisms for Impacts on Society: ST1
  - Customer Health and Safety: PR1, PR2
  - Product and Service Labeling: PR5
  - Marketing Communications: PR6, PR7
  - Customer Privacy: PR8
  - Compliance: PR9

This Report excludes a data and information of joint corporate, contractor etc. which is outside of the organization, i.e. LSIS, among report boundaries.

Our approach

In order to verify the contents of the Report within an agreed scope of assurance in accordance with the assurance standard, the team has carried out an assurance engagement as follows:

• Reviewed overall report
• Reviewed materiality test process and methodology
• Reviewed sustainability management strategies and targets
• Reviewed stakeholder engagement activities
• Interviewed people in charge of preparing the Report

Our conclusion

Based on the results we have obtained from material reviews and interviews, we had several discussions with LSIS on the revision of the Report. We reviewed the Report's final version in order to confirm that our recommendations for improvement and our revisions have been reflected. When reviewing the results of the assurance, the assurance team could not find any inappropriate contents in the Report to the compliance with the principles stipulated below. Nothing has come to our attention that causes us to believe that the data included in the verification scope are not presented appropriately.

• Inclusivity: Inclusivity is the participation of stakeholders in developing and achieving an accountable and strategic response to sustainability.
  - LSIS is determining the materiality of issues found out through stakeholder communication channels through its own materiality evaluation process, and the assurance team could not find any critical issues left out in this process.

• Responsiveness: Responsiveness is an organization’s response to stakeholder issues that affect its sustainability performance and is realized through decisions, actions, and performance, as well as communication with stakeholders.
  - The assurance team could not find any evidence that LSIS's materiality assessment methodology was inappropriately recorded in the Report. We could not find any evidence the Team was not prepared in accordance with the Core Option of GRI GL.

Recommendation for improvement

KMR recommends that the report published by LSIS will be actively used as a tool for stakeholder communication and continuous improvement.

• LSIS is conducting systematic materiality assessment through communication and diagnosis of various stakeholders. It is imperative that we are making active efforts to establish key issues and CSR action plans and to achieve LSIS's goals. In the future, we recommend that you continue to identify stakeholder interests and reflect them in our products and services.

• LSIS conduct systematic materiality evaluation through various communication and diagnosis with stakeholders and makes great efforts to enhance the sustainability of the organization. In the future, LSIS will continue to monitor and reflect stakeholder expectations and interests in products and services in the context of sustainability.

Our independence

KMR has no involvement in LSIS business activities other than providing third party assurance services and maintains independence to avoid conflicts of interest.

Ki Ho Park
Ceo

Sustainability Management

2016-2017 LSIS Sustainability Report

May, 5th, 2017

Korea Management Registration Inc.
Staff Recognition for Their Contribution to This Report

General Publication Management
Chief Strategic Officer: Se-Jin Ahn
Corporate Planning Team: Seung-Mok Lee
Corporate Planning Team: Young Min-Sang

Corporate Overview
Treasury Team: Jack Park
Treasury Team: Sung-Jeok Song
Power Solution Biz Strategic Planning Team: Jang-Guk Choi
Power Solution Biz Strategic Planning Team: Jin-Hong Song
Industrial Automation Biz Strategic Planning Team: Hee-Jin Jang
Industrial Automation Biz Strategic Planning Team: Jin-Bok Noh

Core Issue Reporting
Ethical Management
Audit Dept.: Jun-Ok Kim
Audit Dept.: Won-Hy Kim
Compliance
Legal Affairs Team: Daeg-In Ahn
Legal Affairs Team: Ju-Mi Kim

Integrated Risk Management
Internal Verification Team: Hee-Tack Kim

Reinforcement of Product Competitiveness
Quality Management Team: Hee-Inh Yoon
Quality Management Team: Gil-Hi Ahn
Reliability Center: Jung-Ho Suk
Reliability Center: Sung-Ho Kim
Research Support Team: Yang-Ho Park
Research Support Team: Sang-Hee Eom
IP Team: Jong-Sil Song
IP Team: Jeong-Hwan Seo

Environment and Safety Management
Environment & Safety Team: Hye-Sang Kim
Environment & Safety Team: Gye-Myung Yu
Environment & Safety Team: Ju-Fi Hyun

Customer Communication
Power Marketing Team: Sang-Won Hwang
Power Marketing Team: So-Hyun Yoon
Industrial Automation Biz Marketing Team: Byung-Su Ku
Industrial Automation Biz Marketing Team: Sang-Hee Hong
Innovation Promotion Team (Security Part): In-Kyoung Kim

Design Center
Sung-Min Kim

Shared Growth with Suppliers
Global Sourcing: Hye-Young Lee

Securing and Cultivating Global Talents
HR Team: Sang-Woo Park
HR Team: Sung-Soo Park
HR Development Team: Ha-Suk Oh
HR & Relations Management Team: Joon-Woo Kim

Local Community Contribution
Public Relations Team: Young-Bai Oh
Public Relations Team: Myung-Koo Oh
Public Relations Team: Oh-Tae-Kwan

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