



LG CNS ALREADY WITH YOU

DIGITAL INNOVATION LEADER

LG CNS SHARING IT WITH YOU



SUSTAINABLE INNOVATION LEADER

LG CNS Sustainability Report 2016-2017

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CEO Message

“It is our important role and social responsibility
to lead our customers' Digital Innovation.”



To Our Valued Stakeholders

First and foremost, we would like to express the deepest appreciation for your continued interest and support for LG CNS. In 2017, LG CNS celebrates the publication of the inaugural edition of our Sustainability Report.

LG CNS fully recognizes the significance of sustainability management and has been making overarching efforts to firmly establish sustainability in our business management and corporate culture. We believe that this report will serve as a great opportunity to present to our stakeholders the progress we have made thus far in this direction.

This report will also mark a new beginning for LG CNS and place us on a path to become a truly sustainable business.

With the business landscape in a constant state of flux, we are forced to embrace profound changes in the IT industry ecosystem that are driven by the remarkable advancement of information technology and disruptions created by the Fourth Industrial Revolution.

LG CNS foresees that Digital Innovation across the full spectrum of information technologies is the only way to enable our customers from diverse industries to survive this disruptive transition, outperform their competitors and attain their vision.

In order to ensure sustainable growth, we need to proactively acquire and internalize digital technologies and capabilities, with which we can propose new ways to solve problems and offer creative solutions essential to customers’ needs. LG CNS is fully convinced that it is our important role, as well as our social responsibility, to lead the Digital Innovation sought by our customers.

This is the future of LG CNS as well as the path we need to take—transforming ourselves into a leading group of information technologists to create irresistible value propositions to our customers.

LG CNS is at an important juncture to take yet another leap forward. Our strengths—information technology and business expertise—will lead us to a brighter future, and your continuing support and interest for LG CNS and our endeavors will take us closer to the goal.



LG CNS and our employees will do our utmost to achieve a sustainable success—an expression of our appreciation for your support and our effort to earn the enduring trust of our stakeholders.

Thank you.

June 2017
CEO & President



2016 CSR Key Figures

 Economy	 Customer	 Employee	 Environment	 Community
Sales KRW 3,036.9 B	Customer Satisfaction Rate 5.57 Pt. / 7 Pt.	Percentage of Female Employees 24.2% ²⁾	GHG Emissions 26,610 tCO ₂ eq	Win-Win Growth Rating Most Outstanding ³⁾
Operating Income KRW 156.5 B	Breach of Personal Information 0 cases	Industrial Accident Rate 0.01%	Energy Consumption 585 TJ	Amount Raised for Shared Growth Fund (Win-Win Growth Fund, Direct Financial Support) 190 B KRW
Debt-to-equity Ratio 151.0 %			Water Consumption 13 Tons	No. of Suppliers Participated in CSR Assessment 183
Percentage of Overseas Sales 17.2 %			Waste Discharge 8 Tons	Social Investments KRW 2,676.12 M
Total Dividends Paid Out to Shareholders KRW 1,748.9 B ¹⁾				

*The economic data is presented based on our consolidated financial statements (excluding total dividends paid out to shareholders), while the customer, employee, environment and local community data is expressed based on separate standards formulated by LG CNS.
*The environmental data is only applicable to the Sangam IT Center (pursuant to the "Environmental Information Disclosure Policy" from the Enforcement Decree for the Support for Environmental Technology and Environmental Industry Act).
1) LG CNS' Separate standards; 2) Local standards; 3) 2016

Overview

Company Overview

Since our company was founded in 1987, LG CNS has strived to lead business innovation for our customers with the highest level of IT service capability.

Today, over 6,500 employees are working at our business locations across the world, including the Seoul headquarters and overseas subsidiaries in China, Europe, the US and India.

Corporate Profile

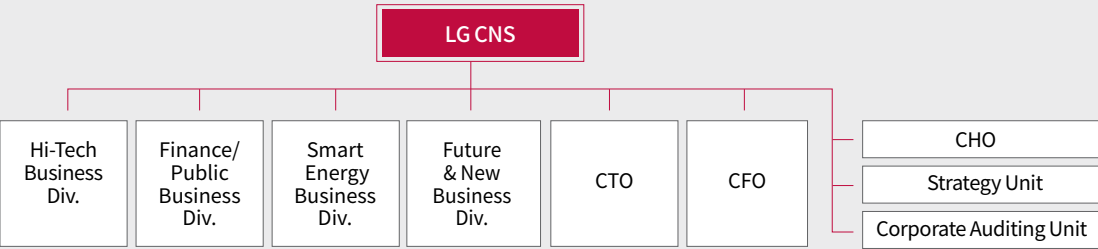
Company Name	LG CNS
Address	Yeongdeungpo-gu, Yeoui-daero 24, FKI Tower, Seoul
Date of Establishment	Jan. 1987
CEO	Young Shub Kim
Number of Employees	6,562 employees (as of 2016, including Korea & overseas)
Business Areas	Consulting, System Integration, Outsourcing, ERP/BI, IT Infrsolution, IT Convergence

Domestic & International Subsidiaries

HQ/ Subsidiary	LG N-Sys, BIZTech Partners, Korea Elecom, Haengbokmaru
Overseas Subsidiaries	China, Europe, Americas, India, Indonesia, Japan, Brazil, Colombia, Malaysia, SBI-LG, Uzbekistan, Vietnam

○ HQ/Subsidiary ● Overseas Subsidiaries

Organization Chart



Financial Status

Total Assets	Total Shareholders' Equity	Sales	Operating Income	Credit Rating
KRW 2,355B	KRW 938.3B	KRW 3,036.9B	KRW 156.5B	AA- Corporate Bond A1 Commercial Paper

Corporate Governance

Composition & Role of the Board

Board of Directors

Category	Name	Title/Position	Appointed in	Note
Non-executive director	Hyun Hwoi Ha	CEO & President of LG Corp.	March 2015	Chairman of the Board
Inside director	Young Shub Kim	CEO & President of LG CNS	March 2016	
Inside director	Dong Un Lee	CFO & Senior Vice President of LG CNS	March 2017	

Role of the Board

As the executive decision-making body of LG CNS, the Board of Directors makes executive decision on key management issues and monitors business management activities. The Board also actively provides recommendations for important management issues and conducts unbiased evaluation and supervision of management activities.

Operation & Activities of the Board

Operation of the Board

As part of its fiduciary and general duties, the Board is convened regularly on an annual schedule to review and resolve the issues specified in relevant laws and regulations and the articles of incorporation, as well as other important management issues. Special meetings are convened for urgent issues that require the immediate attention of the Board. Generally, board resolution requires the attendance of a majority of the Board members (more than 50 percent) and approval by a majority of the members present.

Activities of the Board

In the calendar year 2016, the Board held a total of 15 meetings to review 52 agendas, including the approval of the 2016 Business Plan, the spin-off of Ucess Partners and the appointment of the CEO. The Board members recorded a 97.8 percent attendance rate.

Year	No. of Meetings	Directors Attendance Rate	No. of Agendas	Major Decisions
2016	15	97.8%	52	· Approval of 2016 Business Plan · Approval of Ucess Partners Spin-off · Appointment of CEO
2015	16	89.6%	31	· Approval of 2015 Business Plan · Approval of Corporate Bond Issuance
2014	13	100%	33	· Approval of 2014 Business Plan · Approval of Dissolution of Japanese Subsidiary

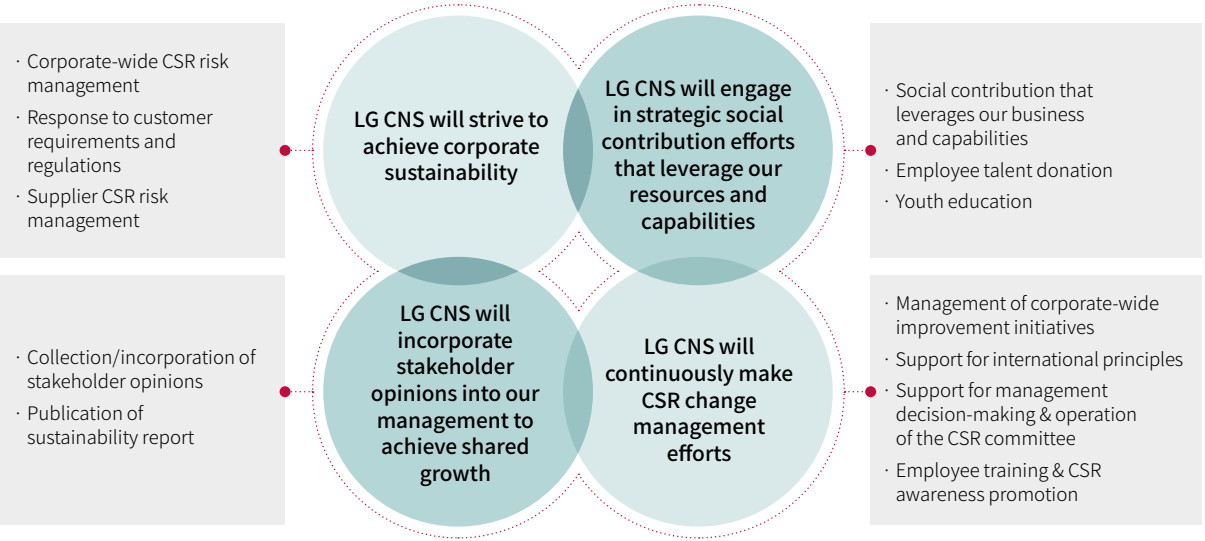
Stakeholders

As of December 2016, the total number of shares issued and outstanding was 87,197,353. The major shareholder, LG Corp, currently holds 84.95 percent of the total shares issued, with the Employee Stock Ownership Plan holding 2.16 percent and minority shareholders collectively holding 12.89 percent of the total shares.

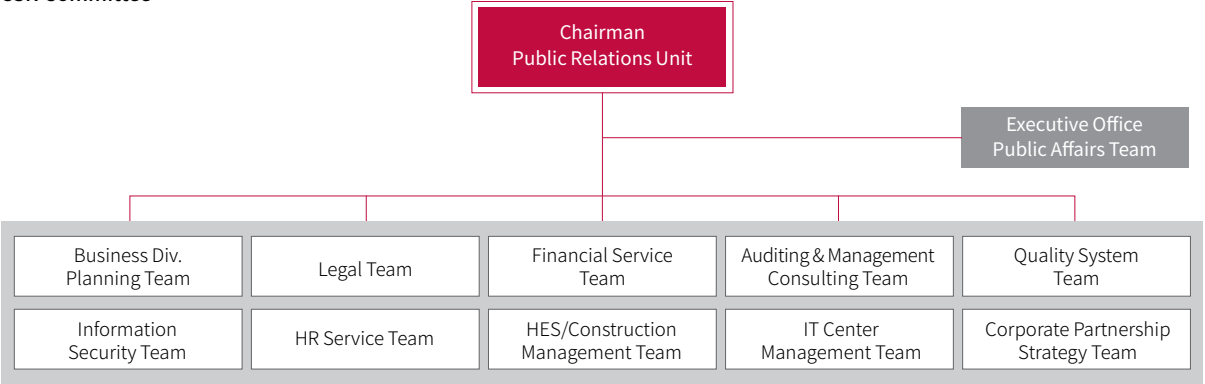
CSR Management Strategy & Roadmap

LG CNS is committed to becoming a sustainable IT business of the highest order by actively engaging in initiatives that help us fulfill our social responsibility. To this end, we are working to enhance our execution of CSR initiatives across business management as well as to strengthen our engagement and partnerships with our stakeholders, following the principles for ensuring business sustainability, implementing strategic social contribution efforts, and expanding stakeholder engagement and CSR change management.

CSR Management Roadmap



CSR Committee



Stakeholder Engagement & Materiality Analysis

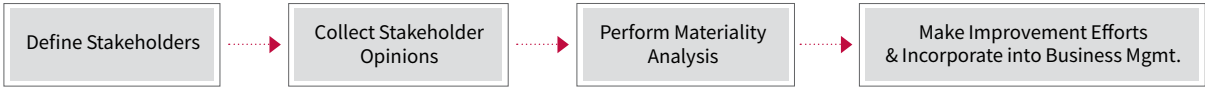
Stakeholder Communication

LG CNS greatly values the opinions of stakeholder groups in our sustainability management efforts, and continuously works to incorporate their ideas into our business management. To this end, we have in place a broad range of communication channels, through which we actively engage with our stakeholders.

Defining Our Stakeholders







LG CNS categorizes our major stakeholders into six groups: customers, employees, shareholders and investors, suppliers, communities and industries, and works to identify the interest and expectations of each stakeholder group and incorporate their opinions into our long-term corporate strategy.

Stakeholder Engagement Process



Stakeholder Engagement Channels

LG CNS has in place interactive engagement channels for each stakeholder group. This year, we also introduced the internal and external stakeholder survey as part of our materiality analysis process. Through these efforts for active engagement with our stakeholders, we seek stakeholder opinions on our sustainability management and performance, and incorporate their feedback into our business management in order to ensure mutual development and growth with our stakeholders.

Stakeholder Group	Key Activities	Communication Channels	Frequency
 Customers	Collect service feedback	Corporate Website /Solution Website CS Portal, VoC, Call Center Customer Complaints & Feedback Customer Satisfaction Survey	Year-round Year-round Year-round SM once a year or upon completion of project Upon completion of CSR
 Employees	Participate in strategic decision-making on business/management issues	Customer CSR Survey General Shareholders Meeting Business Report Board of Directors	Annually Quarterly Monthly
 Shareholders & Investors	Collect oninions on the company's management strategy and implementation	Intranet & Ombudsman Program Sinnungo Online/Printed News Letter Labor-Management Committee Future Planning Committee Safety and Health Committee Employ Satisfaction Survey Employee CSR Survey	Year-round Year-round Weekly / Bi-monthly Quarterly Year-round Quarterly Annually Annually
 Suppliers	Pursue shared growth with suppliers	Integrated Procurement Portal Cyber Sinnungo Supplier CSR Survey Workshops with Supplier CEOs Training support for suppliers Technology support for suppliers	Year-round Year-round Annually Annually Year-round Year-round
 Communities (Environment, Safety, NGOs, etc.)	Participate in decision-making processes for promoting local communities	GHG emissions reduction research group activities Korea Industrial Safety Association	Monthly Quarterly
 Industries (National Assembly, Government Agencies, Professional Associations, Businesses, etc.)	Participate in IT industry related decision-making processes	Public relations (public and government agencies) IT Industry organizations (KOSA, ITSA, FKII) Board of Directors/General Assembly Government Projects & Conferences	Year-round Year-round As required

Materiality Analysis

In 2017, LG CNS introduced materiality analysis to ensure an effective analysis of diverse sustainability management issues and their relevance to and impact on our business and to make an extensive report on high priority issues.

Materiality Analysis Process

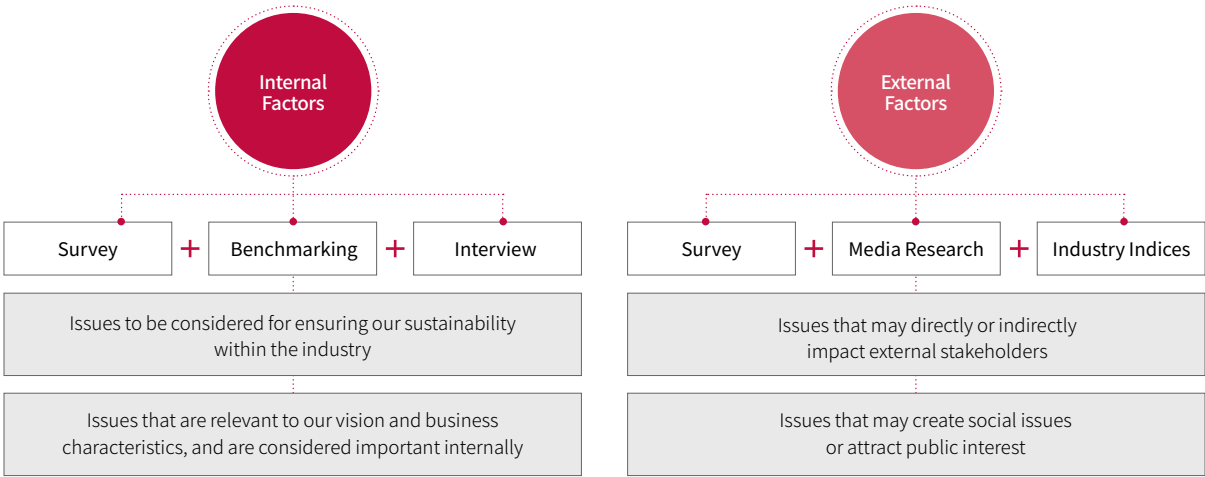
LG CNS performs a materiality analysis based on the Five-Part Materiality Test from AccountAbility, a global research organization specializing in sustainable management. First, we created an issue pool by carefully reviewing international standards and indices such as the GRI G4 guidelines, ISO 26000, and the Dow Jones Sustainability Indices, media reports, cases from industry peers and internally identified issues, after which we performed an online survey and interviews of employees from related departments and key stakeholders to collect the diverse opinions of internal and external stakeholders. After compiling an issue pool, we identified material issues through our assessment on internal and external factors that impact out sustainability management. As the final step, material issues selected through this process were finalized after a review by the management and leaders from related departments to ascertain their validity.

In this report, material issues are organized under the section “Focus Issues” to effectively present our management responses and cases on these issues, while other issues requiring our ongoing attention are reported under the section “Fundamental Issues.”

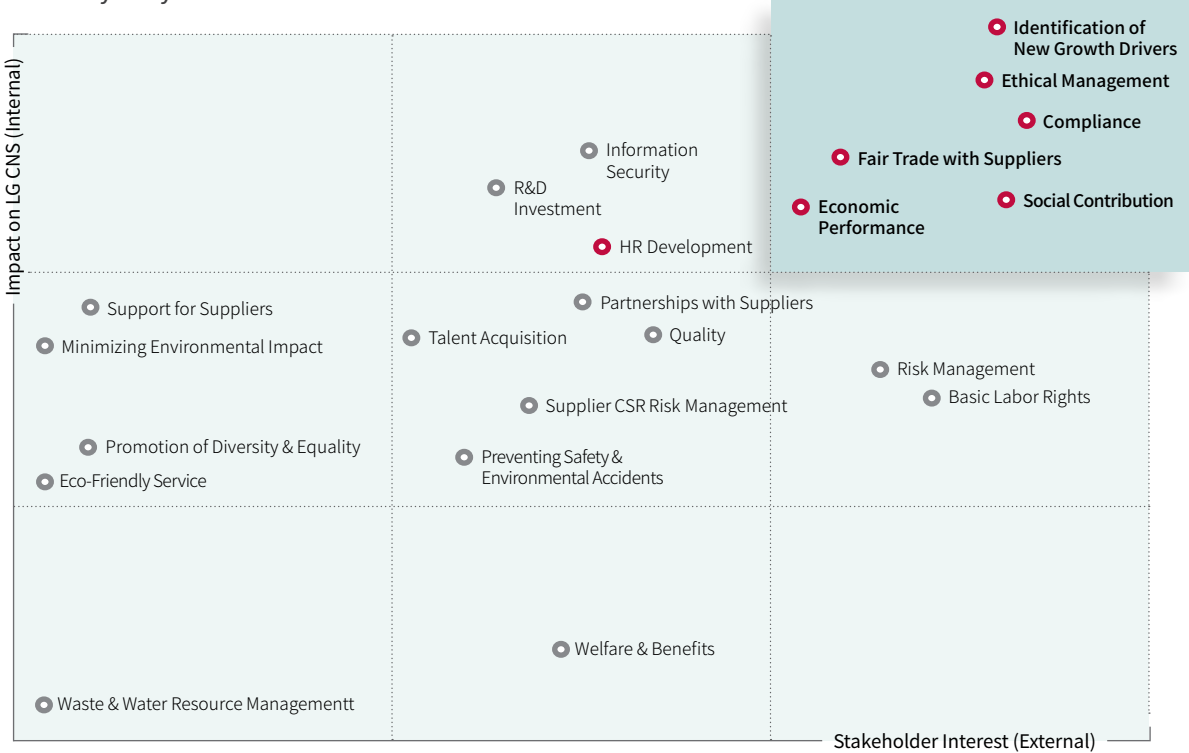


Materiality Analysis Process

As part of our material analysis, we performed an analysis of internal and external factors to identify material issues in corporate sustainability management. In order to measure their relevance to our business, such as our mid- to long-term business strategy and our business features, we carried out an employee survey, performed an overview of our industry peers as benchmarks and interviewed leaders from related departments. We also used external stakeholder surveys, media report analysis and global indices in assessing their relevance and impact levels, as expressed in external interest and social issues, and made a comprehensive analysis.



Materiality Analysis Results



Reporting Material Issues

LG CNS reorganized material issues identified through the material analysis into “Reporting Issues” based on their relevance and impact. These issues were further reorganized into “Focus Issues” and “Fundamental Issues” based on their materiality and reported accordingly. In addition, we also introduced the section “Digital Innovation Leader” to highlight our corporate vision, “IT Capability.”

	Stakeholders	GRI Aspects	Reported Issues	Material Issues
Digital Innovation Leader	Customers Employees	Major Services Economic Performance	Identification of Growth Drivers	Identification of New Growth Drivers Economic Performance Ethical Mgmt. Compliance
Focus Issues	Employees	Employment Training Education Equal Opportunity Prohibition of Discrimination Grievance Resolution Child Labor Collective Bargaining Forced Labor	HR Mgmt.	Establishing Fair Trade with Suppliers Social Contribution R&D Investment HR Development
	Shareholders Investors Employees Suppliers	Compliance Anti-corruption	Ethics & Compliance Risk Mgmt.	Information Security Business Risk Mgmt.
	Suppliers	Supply Chain	Shared Growth	Protection of Labor Rights (Human Rights)
	Customers Communities Government Agencies Public Organizations Professional Associations	Communities	Social Contribution	Partnerships with Suppliers Talent Acquisition Quality
Fundamental Issues	Employees Customers	Protection of Customers' Personal Information Security Practices	Information Protection	Preventing Safety & Environmental Accidents Minimizing Environmental Impact
	Customers	Product & Service	Customer Satisfaction (Quality)	Eco-Friendly Solutions
	Customers Communities Government Agencies Public Organizations Professional Associations Employees	Energy/Water Resource/ Emissions/ Waste Water Environmental Assessment Industrial Safety Report	Environment, Safety & Health	Promotion of Diversity & Equality Employee Welfare & Benefits Waste & Water Resource Mgmt.

DIGITAL INNOVATION LEADER

- Manufacturing
- Telecommunication & Media
- Financial Services
- e-Government (Public Services)
- Smart Transportation
- Energy
- Healthcare

INDUSTRY

Solution

- IoT
- Cloud/Data Center
- Big Data
- B2B/O2O Biz Platform
- Smart Signage

DIGITAL TECHNOLOGY

ICBMA Leader

CONSULTING

Cross Industry

- Hightech
- Smart Engineering
- Convergence Strategy
- FCM & Compliance
- Digital Strategy
- SCM & Logistics

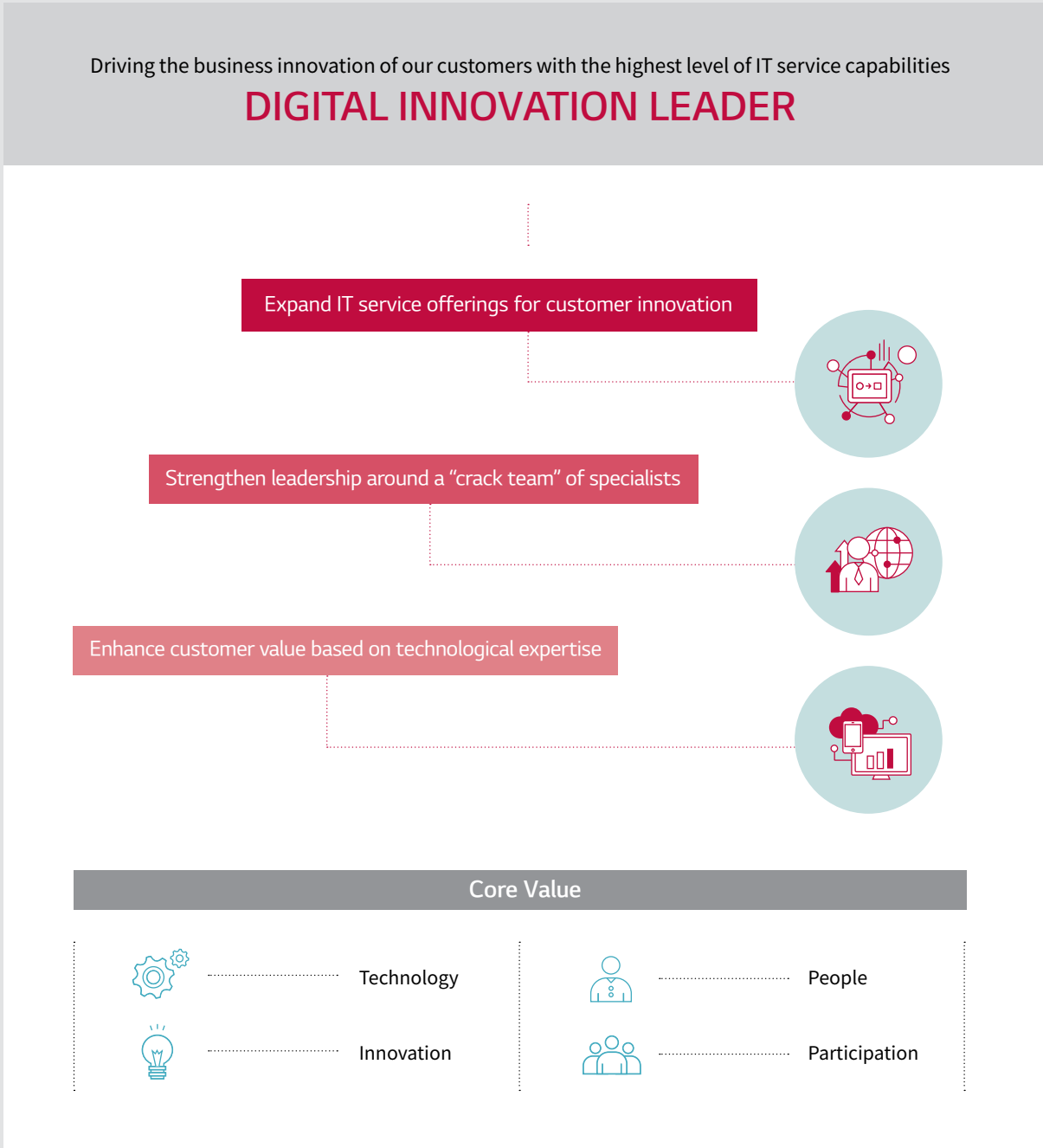
LG CNS is a global IT service provider, delivering values that far exceed the expectations of our customers with smart technologies and services implemented by creative and talented professionals. We strive to transform our lives and the world we live in, leading the Fourth Industrial Revolution with best-in-class IT services and capabilities.



WHAT WE DO

Our Vision

Based on our understanding of diverse industries and extensive IT expertise, LG CNS provides a full range of IT services such as consulting, system implementation/operation and outsourcing to customers both in Korea and overseas. We respond promptly to changing markets with smart-technology-driven expert solutions, and provide new value to our customers by identifying emerging business opportunities.

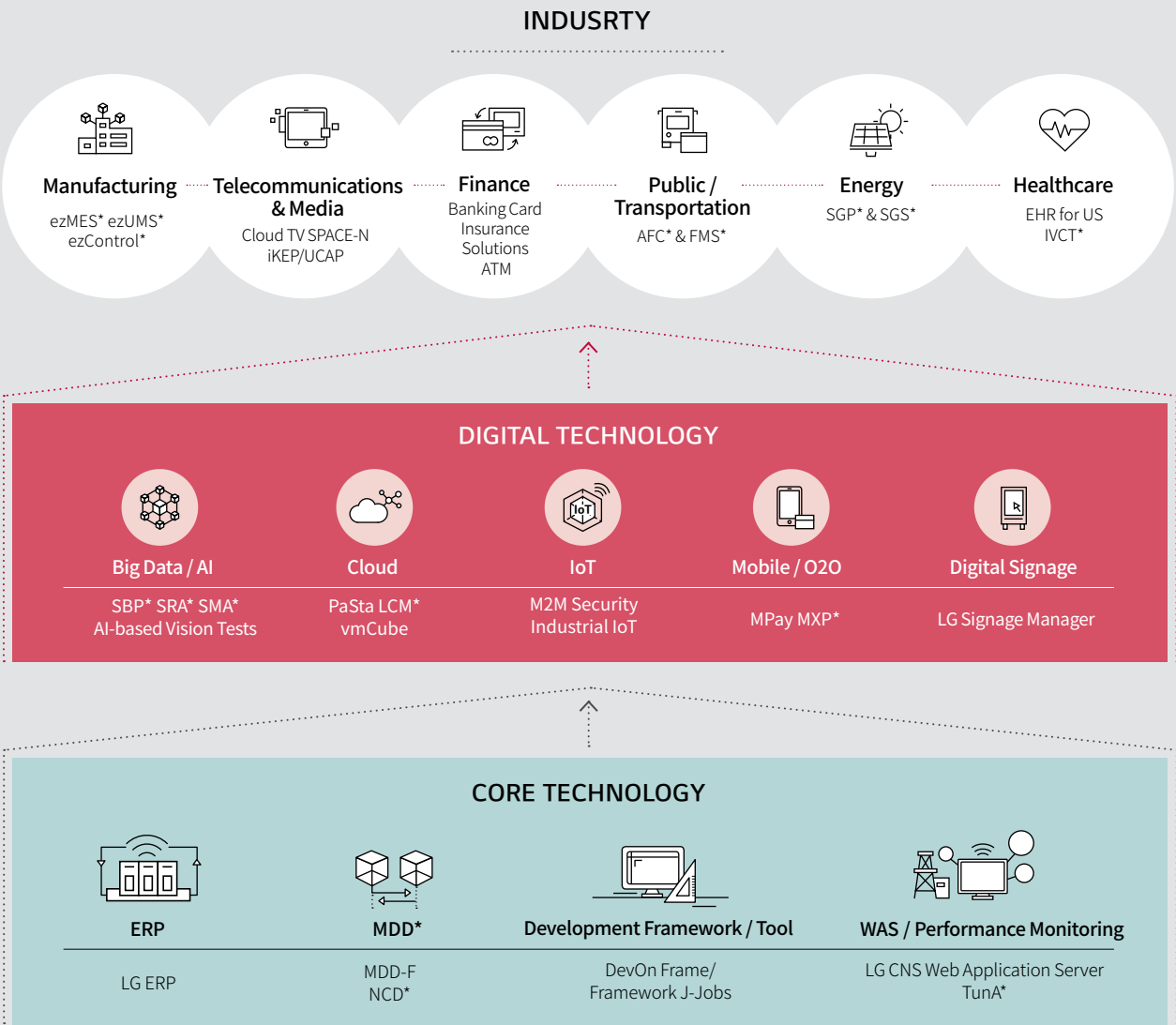


SERVICES & SOLUTIONS

Core Services & Solutions

Digital Innovation Leader. We drive the Forth Industrial Revolution with our digital business leadership in energy, smart factory and ICBMA technologies.

As the convergence of IoT, cloud computing, big data, mobile, AI and other key IT technologies of the Fourth Industrial Revolution fuels demand for “digital business transformation” needed to boost competitiveness and generate new growth drivers, LG CNS is taking leadership in customer innovation by leveraging our industrial expertise and primed-and-ready solution technologies.



*ezMES: Factory Solution *ezUMS: Integrated Control Solution *ezControl: Facility Control Solution
*AFC: Automatic Fare Collection *FMS: Fleet Management System *SGP: Smart Green Platform *SGS: Smart Green Solution *IVCT: Interaction Virtual Care Team
*SBP: Smart Big Data Platform *SRA: Smart R Analytics *SMA: Social Media Analytics *LCM: LG CNS Cloud Manager *MXP: Mobile Cross Platform
*MDD: Model Driven Development *NCD: No Coding Development *TunA: Tuning Assistant

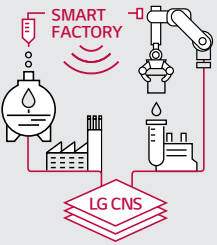
INDUSTRY

Manufacturing

IT solution-driven smart manufacturing/logistics system for maximum production competitiveness



Smart Factory



We know your top concerns

Factories struggle with production inefficiency due to initial design flaws as well as falling quality and rising production costs caused by mismatches between operating systems and the factory environment. LG CNS provides the optimal IT service for manufacturing companies by precisely identifying these pain points.

Smart Factory with Cutting-Edge IT Tech

The LG CNS Smart Factory Solution is the culmination and optimization of over 20 years of IT technology knowhow accumulated in the frontlines of industry to deliver our company's leading solution.

LG CNS' Proprietary Solutions

LG CNS designs plant layout/line/facility standardization from the initial planning stage, forming the basis for the optimal factory operational environment created through extensive simulation. Our Smart Factory Solution enables real-time management and control and a PC-based control platform that will deliver a real productivity boost.

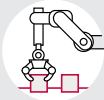
60

Number of businesses that adopted our Smart Factory Solution, both in Korea and overseas



20 Years

Development experience for the manufacturing industry



Core Capabilities

- Best practices acquired through our experience in system implementation, accumulated over the past two decades
- System operation based on the BizActor Platform, our proprietary and patent solution
- Quick and easy installation and usage, thanks to the streamlined PC-based structure
- A wide range of communication protocols for interfacing between systems and between devices
- Cloud-based solutions

Business Achievements

- **ezMES**
Implementation of the Global MES for LG Electronics
Implementation of G2 / DICC MES for Doosan Infracore
- **ezUMS**
Implementation of an energy management solution for LG Chem's Ochang Plant
- **ezControl**
Implementation of CTC for LG Display

Solution Offerings

Smart Factory Solution (Intelligent factory solution integrating people, systems and equipment)

Twenty years of knowhow in “intelligent factory” implementation distilled into a solution, the LG CNS Smart Factory Solution has been adopted by over 60 companies in Korea and abroad.

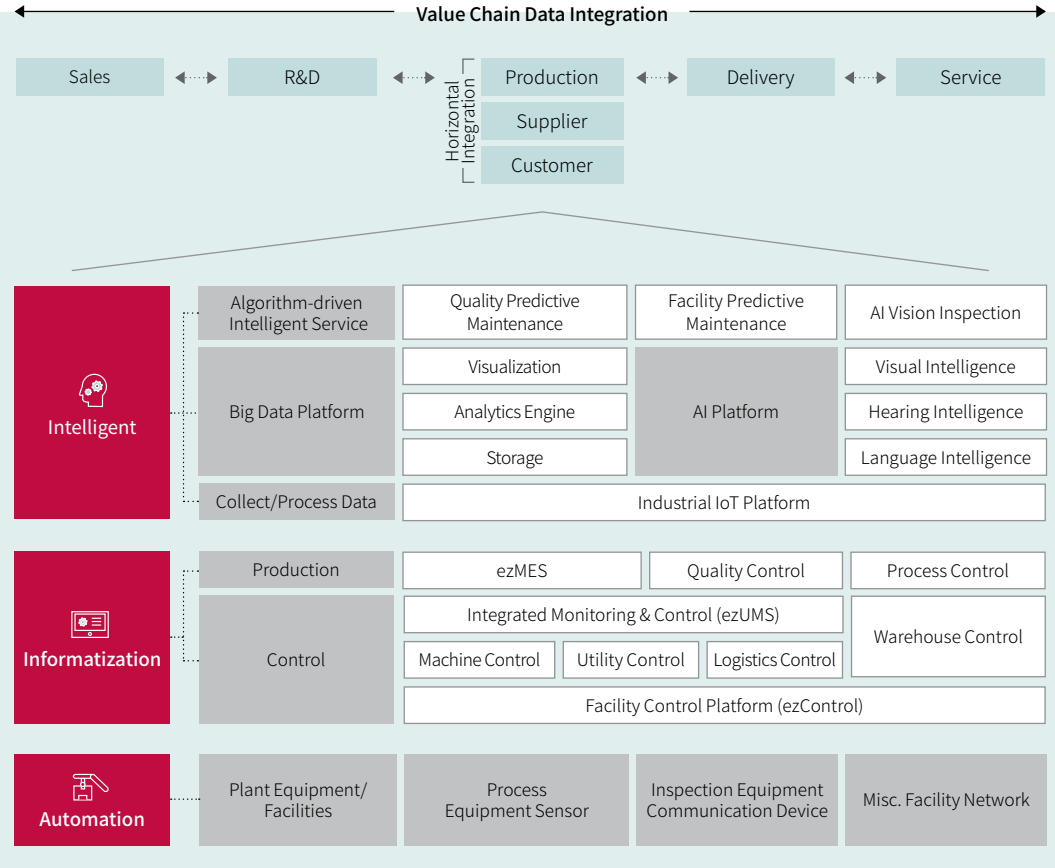
- ezMES

Actual volume based on production planning is precisely managed in real-time to boost productivity, and real-time sharing of production status enhances workflow efficiency. We offer standard MES solutions as well as specialized solutions for every industry with embedded sector-specific best practices.
- ezControl

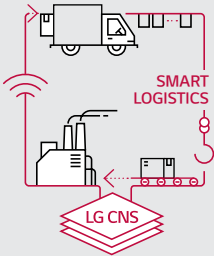
Providing a PC-based control solution enabling PLC-level real-time precision control for all production, logistics and utility facilities, ezControl allows customers to freely and flexibly organize a production line composed of a variety of equipment. Basic features include a wide range of modeling tools and simulations for fast and easy control system design and implementation.
- ezUMS

Real-time monitoring and control for all environments and utility facilities enable optimal operation and enhances product quality and energy management not only factory-wide but at the process level to ensure precise energy management.
- BizActor

Replacing the traditional coding development method with a business rule process to support a development environment that separates application and process development, BizActor offers a wide range of management tools for effective functional management during system operation.



Smart Logistics



We understand your unique logistics process

We provide the optimal logistics processes and facilities for each client business to enable rapid response to changing market conditions.

Total Engineering Logistics Solution

LG CNS provides Total Engineering services for the full range of logistics needs, from consulting and detailed design to system development, facility and solution implementation, and maintenance.

Core Capabilities

- A rich experience in logistics consulting and automation, and capabilities in total engineering
- Successful completion of multiple large-scale projects

Business Achievements

- DAISO Namso Distribution Hub center
- Ourhome East Seoul Food Ingredient Logistics Center
- E-Land Shanghai Fashion Logistics Center
- CJ Korea Express Metropolitan Mega-hub Package Terminal
- Malaysia Pos LaJu International Package Center

Service Offerings

- Logistics consulting
- Strategy development for logistics centers
- Logistics center operation process / layout design, logistics cost reduction / optimization
- Logistics center development
 - Automated warehouse (AS/RS) development
 - Auto sorter development
 - Other specialty facility development
- Facility automation and automation solutions for logistics center
 - VIVASORT
 - HSS (High Speed Shuttle)
 - AutoStore
 - ez-Control

1st

Ranked first in technology and cost evaluation, outperforming European competitors



30%

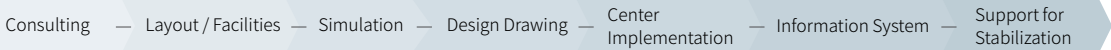
Reduction in energy consumption achieved at logistics centers



Core Capabilities for Business Success

Total Engineering Capability	Top experts Extensive experience Systematic methodology	<ul style="list-style-type: none">• Over 30 logistics/SCM consulting, over 100 IT/facilities engineers• Reference DBs for 300+ domestic and international logistics centers/factories• Advanced logistics center and logistics automation methodology
Integration Capability (Facility+IT)	In-house facilities Integrated control solution Logistics information system	<ul style="list-style-type: none">• Advanced cross-belt sorter design and development experience• Proven integrated facility control solution (ezControl)• Extensive range of information systems including SCM, WMS, TMS, SMS
Large-scale Project Mgmt. Capability	Top-level support SWAT organization Project quality control	<ul style="list-style-type: none">• Integrated management organization with business/IT/facilities experts• Rapid response team for preemptive solutions before project issues occur• Dedicated project management tool, used in over 500 projects per year

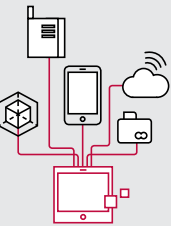
A-to-Z of logistics center implementation



INDUSTRY

Telecommunications & Media

Solutions and services that take customer value first and foremost and lead innovation with digital technologies



Providing IT leadership and competitiveness to our customers’ businesses

LG CNS successfully delivered the nation’s first integrated wired & wireless BSS and OSS for a leading telecom in Korea, and has maintained our leading position in the non-captive system integration market of Korea’s telecommunication and media sector.

Creating customer value through sustained innovation and technology-driven thinking

Our downloadable software CAS has delivered significant value of cost saving to our customers through the standardization of Korea’s pay TV market, and our development of the world’s first Android-based smart STB (Set Top Box) has brought the surging popularity of smart STBs in the pay TV market across the nation.

Our Cloud TV solution equipped with virtualization technology offers not only cost savings but performance and expandability to the existing STB services.

Best Partner in the Digital Innovation Era

LG CNS supports a digital transformation that drives the innovation of products, processes and business models of our customers, leveraging our extensive experience and technology leadership in building ICBMA (IoT, Cloud, Big Data, Mobile and AI) platforms.

Core Capabilities

- IT consulting in all fields of telecommunications, broadcasting, and media industries, industry specialization and IT system developments / operation capability
- Korea’s first and only company (as of 2Q, 2017) to develop an integrated (fixed and mobile) BSS and OSS
- Technology leader in ICBMA (IoT, Cloud, Big Data, Mobile and AI), the core technologies of digital innovation
- Development capability for media content generation and distribution systems, as well as for devices and their SW

Business Achievements

- Developments and operations of four technology platforms for LG U+ (IoT, Big data, Media and AI)
- Developments and operations of LG U+ Total IT (BSS, OSS, ERP) and data service solutions
- Implementations and operations of KT Bizmeka EZ (SaaS service)
- Supplier of Cloud UI & STBs to CMB and KeumGang cable operators
- Supplier of Platinum UHD STBs to D’LIVE cable operator (industry’s first STB equipped with a wireless transmission feature + wireless AP + diffuser)



KT Bizmeka EZ



Supplied Cloud UI & STB to CMB and Keumgang cable operators

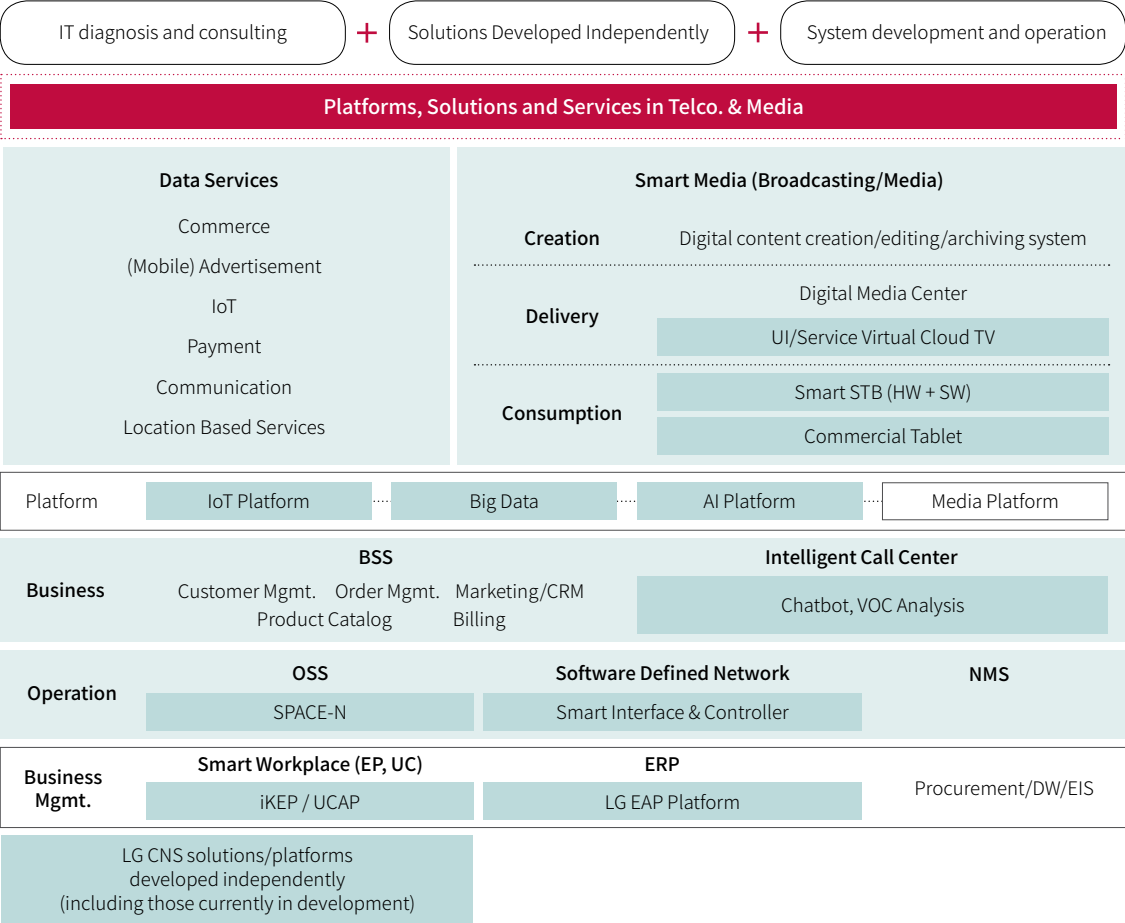
1st

No. 1 in Open SI business in the communications / media sector



Solution Offerings

- Cloud TV** All operations about UIs and services of a STB take place on the server (cloud) and video is fed from the server to the STB and other terminals in this virtualization technology-based solution. Cloud TV enables operators to offer uniform UIs and services to all STBs regardless of hardware specifications, operating systems or middleware.
- Smart STB** Our Smart STB solution for pay TV services such as cable TV and IPTV includes a wide range of products from Thin STBs (specifically designed for Cloud TV only) to premium products that integrate an extensive spectrum of functions (diffuser + wireless AP + wireless connection between TV and STB + voice AI). In addition, LG CNS provides combined hardware and software packages underpinned by our STB software including middleware and CAS solutions.
- SPACE-N** As a solution to build an OSS network and manage the operations of a telecom, it supports logical and physical (GIS) inventory management across its full network in the end-to-end perspective. This solution is also applicable to manage key assets of utility enterprises.
- iKEP / UCAP** iKEP, our portal platform solution, provides an integrated operational environment that can easily link diverse business processes, information and related data and materials. UCAP is our unified communication solution that integrates all corporate communication platforms (one-click calls, messengers, video conferencing, etc.).



INDUSTRY

Financial Services

Digital finance systems and finance automation services made exclusively possible by our deep insight into digital technology and the financial services industry



Financial Services



Finance IT as key requirement for changing financial services environments

The finance industry is being heavily impacted by the Fourth Industrial Revolution, embodied by “intelligent systems,” “disruptive innovation” and “digital technology”. Digital transformation is an indispensable requirement for financial institutions today.

Best reference in the industry

LG CNS sets the industry standard for finance system transformation, innovation and optimization through implementation in numerous Korean and international financial firms. Our client base is expanding to include Japan, Indonesia and other overseas markets.

Supporting business innovation through advance finance solutions

We support the development of new business models based on advanced IT technology and methodology.

Core Capabilities

- Over 20 years of experience developing and maintaining large-scale IT systems for financial firms
- Model-driven development (MDD) for innovative post next-gen system development
- Driving the digital transformation of financial institutions, including internet-only banking

Business Achievements

- Implemented next-generation IT systems for financial institutions such as Jeon Buk Bank, Kwangju Bank, Shinhan Bank, NH Bank, Shinhan Card, Hyundai Card, JB Woori Capital, PCA Life Insurance, and Woori Investment & Securities (currently, NH Investment & Securities)
- Ongoing project: Kakao Internet-only Bank, Kyobo Life Next Generation System, MetLife Digital Transformation Project, Woori Bank Big Data Platform

Service & Solution Offerings

- Implementation and operation of finance IT systems
- Offers knowhow in implementing and operating next-gen/digital finance systems and solutions for financial sector clients across the fields.

Core	Banking	Insurance	Finance	Credit Card	Securities
Channel	Mobile Internet Banking	Smart Branch	Financial Automation (ATM&TCR)	Branchless Banking	HTS (Home Trading System)
Information & Analytics	CRM| Marketing	Big Data	Compliance	Risk Management	Product Factory
Platform	Model Driven Development		Java/C Application Framework		
	Blockchain	Artificial Intelligence	Cloud	Other Digital Technologies	

No.1

Best experience in implementing next generation systems for Korea's financial sector

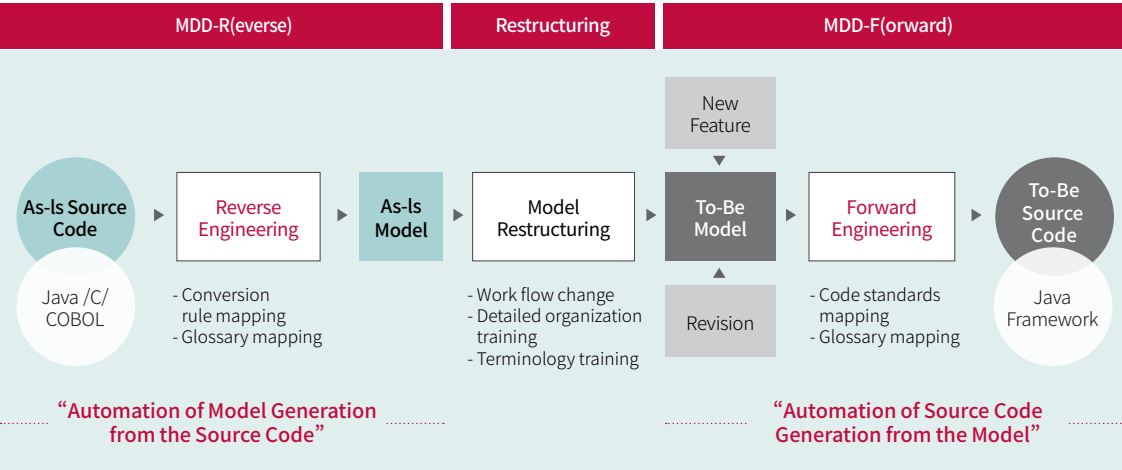
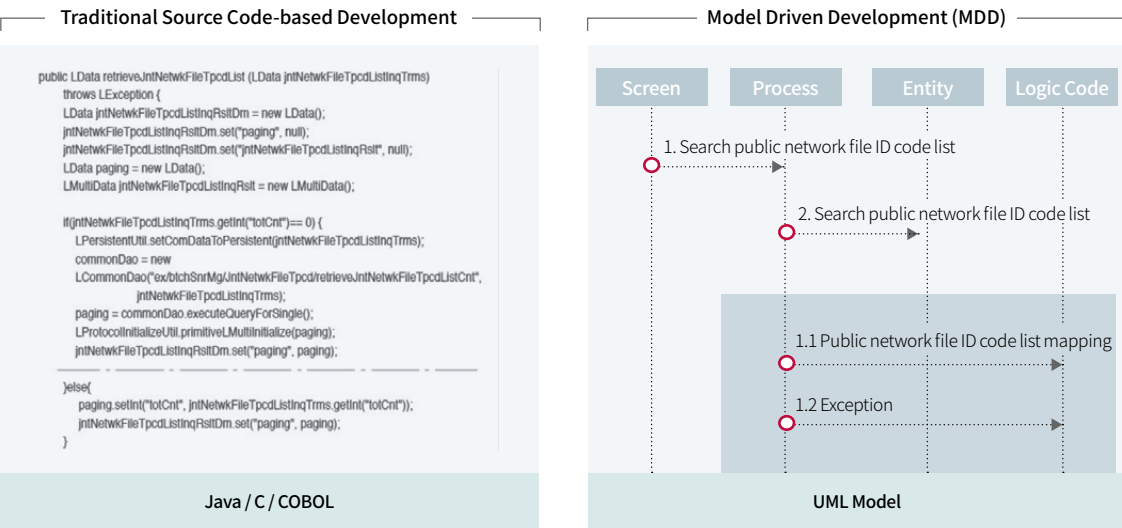


Solution Offerings

MDD (Model Driven Development)

Making the dream of automated software development come true, creating the complete source code without hard coding

Modeling tools are used to create a model for software design, and detailed logics are expressed in natural language (Korean), without the need to code in a programming language. Once the model is complete, a single click automatically crates the Java source code. In essence, a full source code is created solely from the software development design, just like inserting the design drawings into a 3D printer to create a fully-rendered three-dimensional product. Errors during software execution can be fixed by changing the design model, not the code. Composing and understanding software design documentation composed of models and natural language instead of source code is considerably simpler.



Automation



Automated machines produced based on the latest IT and mechatronics technologies boost efficiency across all industries that make cash transactions while maximizing customer value.

Delivering both efficiency and convenient user experience

Financial institutions must reduce workload while still ensuring perfect transactions, while users deserve to do banking conveniently and safely. LG CNS constantly strives to deliver excellency in both business efficiency and user convenience.

Optimal financial automation for financial institutions and end-users

LG CNS has developed automated teller machines (ATMs) and teller cash recyclers (TCRs) to provide an optimal solution to both users and financial institutions.

Over 40,000 automated machines in Ten countries worldwide

LG CNS has provided and services over 30,000 finance automation machines to Korean financial firms, together with exports of over 10,000 cash recycling ATMs, TCRs and their operation to ten countries worldwide.

Core Capabilities

- Mechatronics/control and bill recognition technology, HW design/implementation, embedded SW, nation-wide service network (installation and maintenance)

Business Achievements

- Korea: NH Nonghyup, Woori Bank, Shinhan Bank, KEB, Hana Bank, KB Kookmin Bank, Busan Bank, Korea Post, Suhyup, Shinhyup
- Overseas: United States, Italy, China and Iran

Supplied Products

- Cash Recycling ATM
 - Teller Cash Recycler
 - Smart ATM
 - Cash Dispenser
 - Cash Recycling Module
- The core ATM module that identifies bank notes and checks with high precision and controls cash recycling to allow withdrawal of an exact amount of cash.



No.1

Customer Satisfaction Quality Index



1st

First in Korea to develop cash dispenser, cash recycling ATM and the integrated cash/check processing technology



INDUSTRY

Public Services e-Government

Efficient and competitiveness-boosting administrative and government services built on unmatched public service technology capabilities



Strengthening Korea's e-Government Competitiveness

Our leading e-Government system capabilities are enabling the government to provide transparent public service and export Korea's top-ranked e-Government systems across the world.

Core Capabilities

- Top rank in the UN e-Government Development Index for three consecutive years, with over 60 percent of the world's leading e-Government systems having been built by LG CNS
- Optimal e-Government consulting/design/implementation services based on extensive experience
- Extensive overseas public project implementation experience

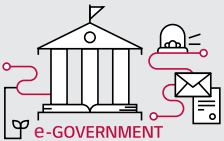
Business Achievements

- Smart School/ICT-based Education System Transformation
 - ICT Education System in Colombia
 - First Village Smart School in Sejong City
- e-Passport System
 - Participated in the Korea's e-Passport System Project from the first to sixth phase
- e-Library
 - National Electronic Library Project in Navoiy, Uzbekistan
 - National Digital Library (NDL)
- Disaster Response & Safety System
 - 112 Control Center & 119 Situation Room in Korea
 - Emergency Response System in Mongolia / Crime Information Management System in Indonesia
- Smart City
 - Cheongna/Magok/Pankyo u-City
 - Jeddah u-City Master Plan of Saudi Arabia
- Public Registration System (Internet Registry)
- Data base system for the judicial branch
- Korea Information System of Criminal Justice Service
- Mail Information System

Service Offerings

- Education: Smart School, e-Library
- Ministry of Foreign Affairs: e-Passport
- Life: Smart City, Disaster Response & Safety
- Judicial: Corporate/real-estate registrations, legal affairs
- Legal: Criminal Justice, immigration, border control
- Administration: Government services, administrative information sharing, public records
- Tax: National finance, national tax, local tax, custom duty
- Other: Mail information, weather forecast

Public ICT	Smart School/ Education ICT	Electronic Library	Public Safety LTE	Smart City	e-Passport	Disaster Safety Solution
Jurisdiction/ Judicial Affairs	Real-estate Registration	e-Court System	Criminal Justice	Immigration Administration		
Administration/ Other	Mail Information	Weather Information	Customs	National Computing and Information Service		



60%

LG CNS developed 60% of Korea's e-Government System



1st

Ranked first in the UN e-Government Survey for three consecutive times




INDUSTRY

Transportation

Smart Transportation

Building Convenient and safe transportation systems with Information Technology





40 Million

Number of daily T-money transactions



99%

T-money usage rate for public transportation fare transactions in Seoul



Creating an advanced transportation system

The LG CNS Smart Transportation solution aims to maximize operation efficiency, convenience and safety for multiple transportation modes such as bus, metro, taxi, rail and air travel.

Convenience for passengers, efficiency for operators

Our Automatic Fare Collection (AFC) solution supports both integrated fare payment and multi modal platforms that ensure convenience for travelers, while our Fleet Management Solution (FMS) enhances bus operation efficiency.

Global project references for LG CNS Smart Transportation Solution

Our successful implementation of the Seoul T-money System, the Seoul Transport Operation & Information Service (TOPIS), the Korea High Speed Rail’s Integrated Rail Information System (IRIS) and the Incheon International Airport lead to a number of other international projects in the smart transportation sector.

Core Capabilities

- LG CNS provides end-to-end services and solutions for fare collection by integrating fare information and applications across multiple transportation systems and routes
- LG CNS is fully capable of leading other Smart Transportation initiatives including the Intelligent Traffic Management System (ITMS), Fleet Management System (FMS), Smart Rail and Smart Airport.

Global References

- T-money (AFC) – Seoul (Korea)
- Tullave (AFC) – Bogota (Colombia)
- Hellas Smart Ticket (AFC) – Athens (Greece)
- Bus AFC & FMS – KL (Malaysia)
- Bus AFC & FMS – Penang (Malaysia)
- BMS¹⁾ – Incheon, Daegu (Korea)
- TOPIS²⁾ – Seoul (Korea)
- IRIS – Korea High Speed Rail

- Comm. & Security System – Korea High Speed Rail
- Comm. System – Seoul Metro (Korea)
- MRT Line 1 Comm. System – Kuala Lumpur (Malaysia)
- Monorail PSD³⁾ - Kuala Lumpur (Malaysia)
- Monorail PSD – Lusail (Qatar)
- Air Traffic Control (ATC) – Incheon, Daegu (Korea)
- Airport Security & Integrated Airport Information System – Incheon International Airport, Korea



1) BMS: Bus Management System 2) TOPIS: Traffic Operation Information System 3) PSD: Platform Screen Door

Service Offerings

Road

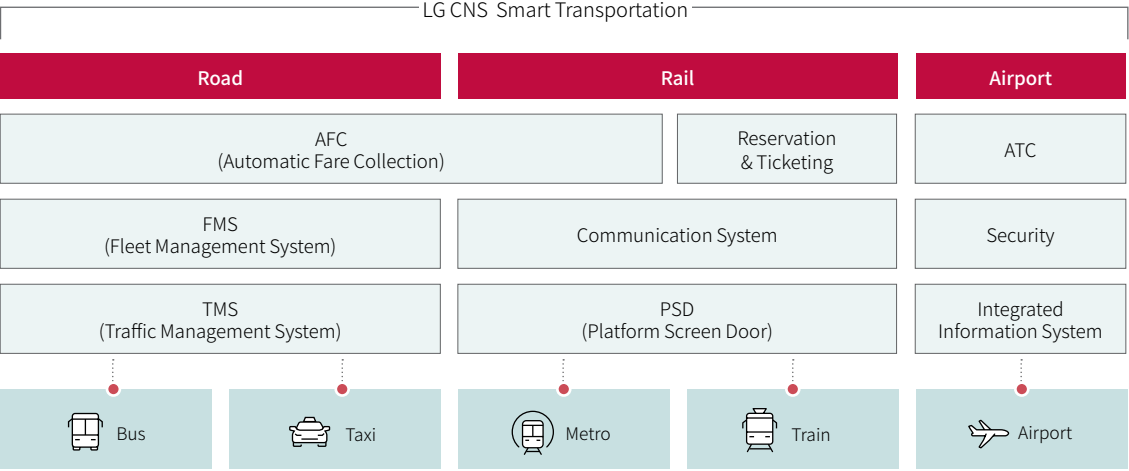
Fare Collection solutions for city transit such as bus, metro and taxi. The Fleet Management Solution is available for enhancing the efficiency of bus operation. Road traffic and public transit operation information are provided via the Traffic Management Solution (TMS).

Rail

Communication systems for rail and metro networks, Platform Screen Door (PSD) to ensure passenger safety at metro platforms, Reservation and Ticketing for both high speed rail and conventional rail networks

Airport

ICBMS-based airport security solution and integrated airport information system has been provided to Incheon International Airport. The Air Traffic Control (ATC) solution has been adopted for use by the Korean Air Traffic Control System.



Solution Offerings

AFC (Automatic Fare Collection)

Our smart card-based fare payment solution can be expanded to all city transit such as bus, metro, tram as well as taxi. The system provides flexibility for different fare types for different transit modes as well as for integrated multi-mode ticketing. City-wide fare payment infrastructure can be expanded to multi-functional sector such as retail and public services.

FMS (Fleet Management System)

The LG CNS FMS (Fleet Management System) provides planning & dispatching service from planning timetables to optimized allocation and assignment of vehicles and drivers. The solution also tracks the location of vehicles in real-time to enable bus drivers and companies to maintain appropriate vehicle intervals and optimize the vehicle dispatch process.

INDUSTRY

Energy

IT solutions that span the entire spectrum of smart energy industry including renewable power generation, energy storage and the smart use of energy

ESS

1st

Asia's no. 1 energy storage system integrator (Navigant Research, 2016)

1st

Developed the world's largest floating solar PV

LG CNS' leading IT solutions provide our customers with a competitive edge in renewable power generation, energy storage and the smart use of energy. We have successfully delivered turnkey projects in energy field in Korea and abroad, from project planning to design, construction and operation. LG CNS ranked the first in Asia in installed capacity for ESS, and holds the record among Korean IT service companies in installed capacity for solar power project. These achievements form the foundation of our position as the total energy solution provider with solid energy platform capabilities.

Service Offerings

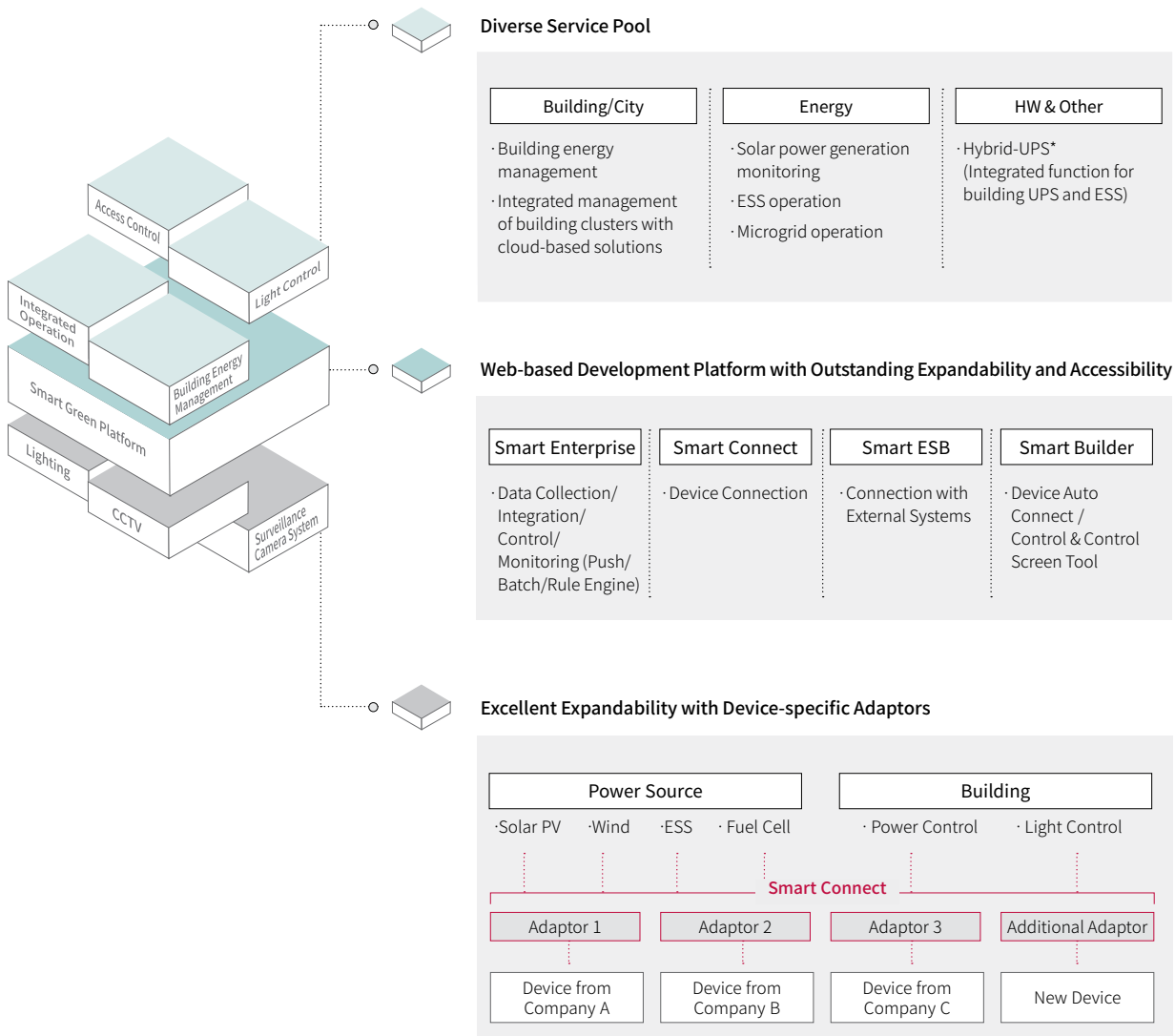


Solution Offerings

Smart Green Solution (SGS)

End-to-end support solutions from sensors to services based on our Smart Green Platform

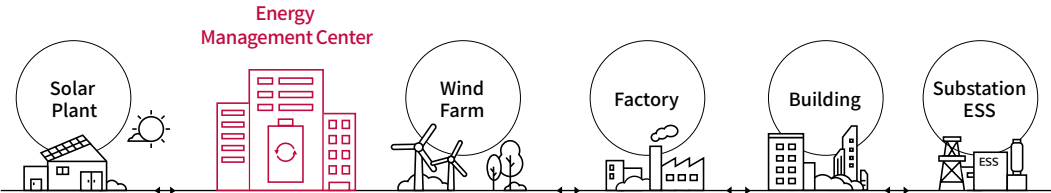
The LG CNS Smart Green Solution (SGS) combines forecasting technologies (weather forecasting, demand/output forecasting) accumulated from our extensive experience in energy projects with a variety of optimization algorithms. The SGS provides a multi-purpose EMS, which allows economical operation that can readily respond to various operational environments and site conditions. The SGS operates on the Smart Green Platform (SGP) that ensures large-scale data processing and high availability. As an expanded upgrade of the EMS, our Microgrid Control System (MCS) collects and controls device information in real-time and ensures large-scale data processing capability and high availability with extensive site references.



*UPS: Uninterruptible Power Supply

SGS Application and Expansion Model

Our highly-versatile SGS offers an extensive range of services from general EMS (for peak and load management) and BEMS/FEMS (for building and factory energy management) to microgrid EMS, which enables stand-alone operation through the monitoring and management of solar and wind power generation and the efficient management of distributed energy resources.



Our Track Record & Specialties in Energy Business

ESS

Track Record

- KEPCO frequency control ESS
- Dongbok / Gasiri ESS
- LG Chemical Iksan Factory ESS
- LG Chemical Ochang Factory I & II

Our Specialties

- No. 1 in the domestic ESS market with 85 MW / 85 MWh in cumulative capacity (2016)
- Ranked 7th in Global and 1st in Asia (Navigant Research, 2016)
- Energy consulting, energy engineering, reliable construction and maintenance
- Application-specific EMS solution optimization

Solar

Track Record

- Taeon Solar Power Plant
- Sangju Floating PV Plant
- Bulgaria Solar Power Plant
- Solar Power Plants in Japan's Tojo / Mine / Shirakawa

Our Specialties

- Installed capacity of 200 MW (Korea & overseas)
- Licensed constructor in professional design, industrial environment equipment, electric construction
- Construction of the world's largest floating solar power plant & global leader in the industry
- Expertise in integrated project management and systems

Smart Building

Track Record

- Busan International Finance Center (IBS)
- Chuncheon NHN Knowledge and Information Campus (IBS)
- Phase I of the Government Complex in the Administrative City
- Kuwait Power Consumption Management Project

Our Specialties

- Operation: Centralized and integrated control system
- Cost-effectiveness: Business/tenant-centric services
- Energy efficiency: Energy analysis and optimization/efficiency improvement

Wind

Track Record

- Jeju Wind Power Plant
- Suncheon Wind Power Plant

Our Specialties

- One-stop service and consulting from engineering to permit, construction, financing and procurement
- Vast EPC experience and industrial knowhow across energy sectors

Stand-alone Microgrid

Track Record

- Ulleungdo Island Energy-independent Island Project (construction in progress through 2025)
- Selected to carry out the same project at Jodo Island and Geomundo Island

Our Specialties

- Full spectrum of proprietary microgrid solutions from generation to transmission & distribution and consumption (power production forecast based on weather forecasting/optimization algorithms)

Fuel Cell

Track Record

- Fuel cells for the Siheung Booster Station

Our Specialties

- One-stop service and consulting from engineering to permit, construction, financing and procurement
- Vast EPC experience and industrial knowhow across energy sectors

INDUSTRY

Healthcare

Boosting health care service quality with advanced hospital information systems and integrated healthcare solutions



Healthcare services for global markets in North America, Japan and China

We are engaged in a wide range of projects in markets across the globe for hospital information systems, electronic health records (EHR), remote healthcare solutions (Interactive Virtual Care Team™, IVCT) and other key medical and healthcare areas.

Core Capabilities

- Fully integrated solutions that cover the full continuum of care
- Solutions embedded with best practices
- Solutions featuring cutting-edge mobile technologies
- Solutions that are intuitive and easy to use, requiring minimal mouse click
- Solutions that place the highest priority on increased revenue and cost reduction for the customer
- Solutions that minimize the total cost of ownership

Project Experience

- Korea
 - Implemented the Integrated Medical Information System for the National Health Insurance Corporation
 - Ilsan Hospital, the EMR System for the Wonju Christian Hospital, the Integrated Medical Information System for the Hanjeon Hospital, etc.
- North America
 - Provided the LG CNS LTPAC solution to NHC, Stonegate Senior Living and Ethica Health.
 - Provided the IVCT solution to NHC Homehealth, Eden Homehealth, and Welcome Homecare.

Service Offerings

- Hospital Information System
- LG CNS LTPAC (Long Term Post Acute Care) & Senior Living Solution
- LG CNS Telehealth Solution IVCT (Interactive Virtual Care Team™)

ONC-certifiedEHR Software

Acquired ONC, a US e-Health Record Certification

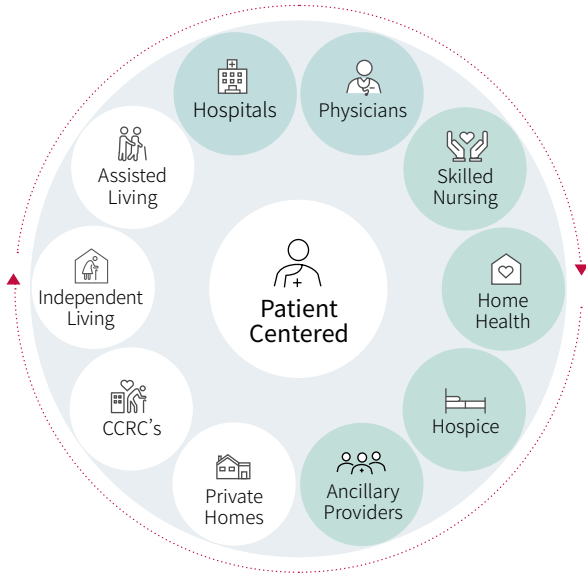


HIS (Hospital Information System)	OCS	EMR	PACS	ERP	
	Mobile Platform	RFID Data Security	Smart Card System Authorization/Billing/Parking		Automated Kiosk
Telehealth (Remote Medical Service)	Personal Medical Records	Vital Sign Monitoring	Remote Video Counseling	Medication Mgmt.	Chronic Disease Mgmt.
LTPAC	EHR for SNF/ALF	Mobile Patient Care Record Solution	Electronic Visit Verification Solution	Home Health Solution	Homecare Solution
				Home Hospice Solution	
Smart Technology	Cloud	Web/Mobile	Big Data	IoT	Smart Devices

Solution Offerings

Smart Healthcare

LG CNS has developed hospital information systems (HIS) for Korea’s leading general hospitals and is working with US healthcare institutions in LTPAC solution projects. LG CNS is helping hospitals integrate all records that occur during a patient’s treatment cycle and provide excellent patient-focused care.



EHR for SNF/ALF (Electronic Health Record for Skilled Nursing Facilities/Assisted Living Facilities)

Our solutions are developed based on best practices. Intuitive and easy to use, our solutions require minimal mouse clicks to complete a task. Our solutions minimize the total cost of ownership.

Electronic records enable paperless management of nursing homes while enhancing efficiency to provide better healthcare service to patients and increase the quality of clinical services.

EHR for HCBS (Electronic Health Record for Home and Community Based Services)

Our integrated EHR solution provides customized features for North American HCBS Multi Business Line (Home Health, Homecare, Hospice).

Our offline-ready mobile solution ideal for home care, intuitive user interface with easy navigation and a single database provides a solution-integrated work environment.

POCS (Point of Care Solution)

Our mobile solution supports nurses and nursing assistants at SNFs and ALFs.

Mobile devices allow care providers to check schedules and patient information as well as update records and logs on-site, enhancing job efficiency while delivering high-quality care service to patients.

IVCT (Interactive Virtual Care Team)

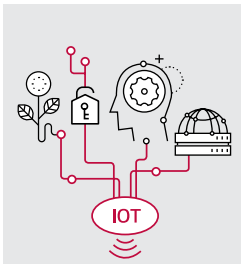
Our telehealth solution allows remote monitoring of patients using cloud, mobile and IoT technologies, and supports real-time video conferencing.

A cloud-based platform, web portal supporting a variety of web browsers, and both Android and iOS mobile applications allow all stakeholders involved in patient care including doctors, family members and the patients themselves to check patient care information anywhere and anytime and communicate seamlessly.

DIGITAL TECHNOLOGY

IoT

IoT enabling technologies and services for devices, networks, services and security



Multifaceted information collection

We provide planning, design and development engineering services for collecting meaningful sensor information in a wide range of devices in factories, buildings, automobiles and more.

Stable data delivery

Gateway solutions ensure stable transmission of a wide variety of data and the planning and design of IoT-dedicated networks that best reflect the operational environment and technical characteristics.

Flexible data processing for intelligent service

Extensive domain knowledge and detailed big data analysis provide the basis for intelligent services tailored to the needs and business models of a wide range of business segments.

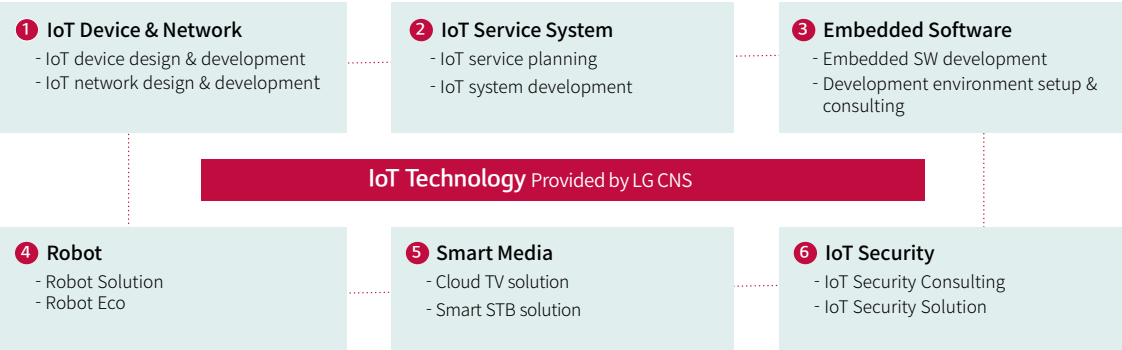
Safe and secure operation

We provide an integrated security suite across devices, networks and services to protect the entire mass of data linked to the IoT from hacking, duplicating, counterfeiting and other threats.

Core Capabilities

- Quality-based planning/development of hardware/ embedded software and production management
 - A first in the SI industry to secure the IoT international standard oneM2M platform, and acquire the TTA Certification
- Offers network security solutions based on IoT hardware
 - Offers service robots and platforms tailored to the customer's business

Service Offerings



1st

A first to acquire the TAA Certification in the SI industry



28

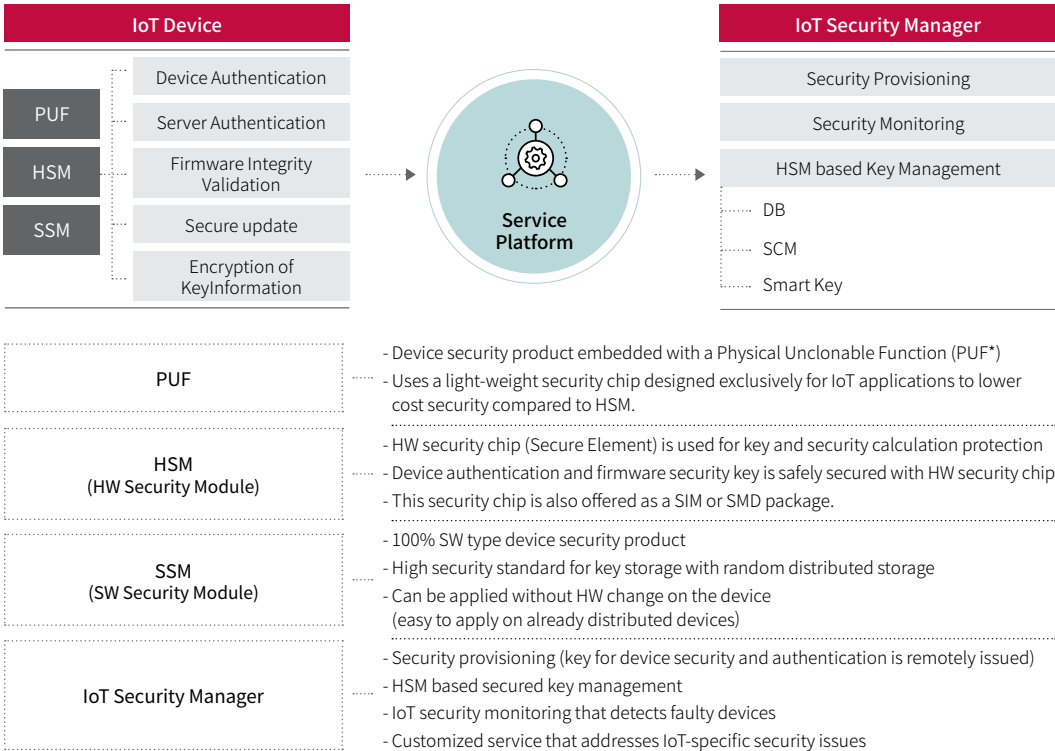
The number of companies that performed product compatibility tests with oneM2M to ensure interoperability



Solution Offerings

IoT Security Suite

Our security package provides device-server mutual authentication and firmware protection service, composed of device security modules (PUF, HSM, SSM) and server security module (IoT Security Manager).



LG CNS IoT Security Features

1 Low cost & high security ensured with a PUF-based device security solution

- Uses a light-weight security chip designed exclusively for IoT applications

- Delivers lower cost security with the use of the HW security chip

2 Partnerships for integrated security solutions

- Partnership with HW security chip manufacturers

- Partnership with vendors specializing in device security

- Compatibility with diverse HW security chips (ICTK, NXP, INFINEON, STM, Security Platform, Micro Chip)

3 High compatibility with diverse devices

- A low-spec, light-weight module for devices (operates at 8bit CPU, below 10kb memory)

- No need for device change; applicable to already distributed devices

- Support for a wide range of OSs (Window, Linux, RTOS, OS-less environment)

4 Tailored security service

- Customization of security solutions based on the customer's business needs

- Diverse service formats (On-Premise/SaaS)

- Offered as a SaaS, allows immediate and low-cost implementation

- Supports diverse authentication methods that correspond to the service (symmetric key authentication / device certificate)

*PUF: A security chip that cannot be cloned because it uses micro deviation that randomly generated during the manufacturing process

Overview

Stakeholder Engagement & Materiality Analysis

Digital Innovation Leader

Digital Technology

Focus / Fundamental Issues

Performance Review / Appendix

DIGITAL TECHNOLOGY

Cloud/Data Center

Cloud transformation and datacenter services for corporations and public organizations

Cloud

30,000 & 30PB

Number of servers/ storage serviced through the cloud

30%

Reduction in the total cost of ownership after a migration to the cloud service based on LG CNS Smart Cloud Block

Korea's leading Enterprise Cloud Transformation specialist

We provide end-to-end cloud professional services for consulting, migration and all managed services, providing backbone functional for building services and solutions based on industrial expertise and digital technology.

Core Capabilities

- Cloud consulting (based on cloud migration methodology), architecture design and cloud migration capability
- Open source software conversion and SDx capability
- Distributed architecture design/development technology
- Multi-cloud migration, operation and integrated management platform

Consulting & Implementation	LG CNS Solutions & Services				Managed Service
Cloud/Consulting	MPay	MPost	HealthCare	AFC, BIS	Monitoring
Re-hosting (Migration)	SmartFactory (ezMES)	iPhatmMES	SmartGreen Solution	ERP, iKEP	Resource Mgmt.
Re-platforming	aPaaS	Web	Integration	Data (DBaaS)	Provisioning
Re-factoring	DevOn BizActor	Web App	Storage Queue	SQL DB	Metering/Billing
Private Cloud	MDD, NCD, LENA	API Mgmt.	Service Bus	Redis	Access Control
Public Cloud (3 rd Party)	Analysis & IoT PaaS				Reporting
SaaS Provision/SI	Big Data (SRA, SBP)	Stream Analysis (SSEP)	Machine Learning	IoT Hub/ Security	Backup
	Storage		Computing		CDN
	Block	Object	NAS	VM	VPN
				VDI	IPS
				Container	Firewall
					Restore

Currently being expanded

Project Experience

 <div>Public Services</div>	<ul style="list-style-type: none">- Cloud: Korea Employment Information Service, National Computing and Information Agency, Busan NIPA- VDI: Korean Intellectual Property Office, Ministry of National Defense, Korea Institute for Curriculum and Evaluation, National Agency for Administrative City Construction, KRX
 <div>Manufacturing</div>	<ul style="list-style-type: none">- Cloud: LG Electronics, LG Chemical, LG Display, LG INNOTEK, LG Household & Health Care, Ericsson LG, LS Group- VDI: LG Electronics, LG Display, LG Chemical, Ericsson LG, LSIS
 <div>Logistics / Service</div>	<ul style="list-style-type: none">- Cloud: Summerce Platform, Kantukan, Honda Korea, Cafe Bene, Hansol, SsangYong Engineering & Construction, Chunjae Education, LG International, Serve One, Pantos, GS Home Shopping, GS Retail, Ourhome- SAP HANA Cloud: SR (Suseo Rail), Woowa Brothers, memebox- VDI: LG U+, LG Economic Research Institute, LG International, NS Home Shopping, GS Home Shopping, GS Retail
 <div>Finance</div>	<ul style="list-style-type: none">- VDI: KB Kookmin Card, KB Kookmin Bank, KB Insurance, KB Capital, Mirae Asset Daewoo, KEB Hana Bank, Woori Card

Service & Solution Offerings

<div>Consulting & Migration Service</div>	<p>LG CNS provides consulting and cloud migration based on a deep understanding of legacy systems and extensive consultancy experience in cloud computing. We provide services that are tailored to client needs, from lift & shift migration to application refactoring for cloud-native environments.</p>
<div>Hybrid Cloud Service</div>	<p>We provide the ideal cloud service customized to each client and business environment including AWS, Azure, Oracle Cloud, SFDC and SAP HEC via LG CNS' private cloud as well as partnerships with global cloud service providers who can bring their technological capabilities to the table.</p>
<div>Managed Service</div>	<p>LG CNS offers stable integrated managed services for multi-cloud environments. With optimization during the initial operational phase after adopting a cloud system being a critical factor for ensuring stable future operation, we provide a continued stream of architecture optimization and cost rationalization solutions based on usage statistics.</p>
<div>Portal & Mgmt. Solution</div>	<p>We provide an integrated management platform for multi-cloud environments, together with operational management solutions such as TunA (APM tool), UXM (service-oriented E2E monitoring tool) as per client needs.</p>

Desktop Cloud: vmCube (automated VDI total management solution)

Proprietary solution that boosts user convenience and operational efficiency through VN life cycle automation, self-repair, integrated dashboard and configuration-based portal.

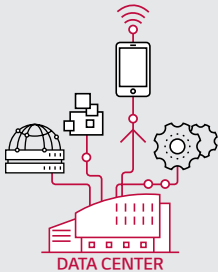
Features

- Vendor-neutral
- Single console management
- Korea's No.1 VDI implementation experience and know-how
- Responsive web based dashboard
- Largest number of users in Korea





References

- LG U+, LG Display, LG Chemical, KB Kookmin Card, KB Kookmin Bank, Mirae Asset Daewoo, Woori Card (implemented for over 100,000 users)

Data Center



Following the establishment of Korea's first dedicated data center in Incheon, LG CNS current operates data centers in Sangam, Busan and Gasan as well as in four global key locations in the United States, Europe and China. Our data centers are acknowledged for excellence throughout the world as green data centers, and feature infrastructure redundancy and seismic isolation designs, the highest level of power efficiency, and standardized and automated operational environment and processes.

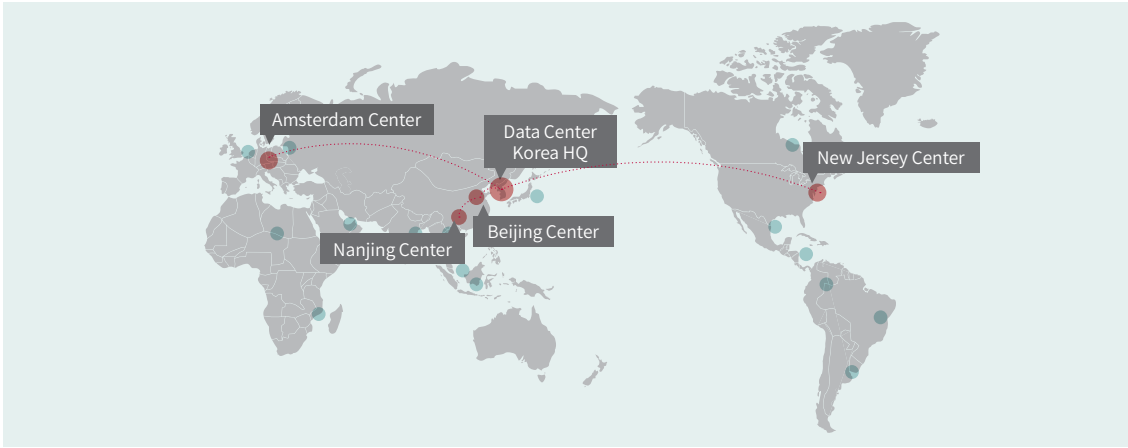
			
Busan Global Cloud Data Center	Sangam IT Center	Gasan Data Center	Incheon Data Center
Dedicated Data Center (5 aboveground floors, seismic isolation floors)	Dedicated Data Center (12 aboveground floors, 4 underground floors)	Dedicated Data Center (13 aboveground floors, 1 underground floor)	Dedicated Data Center (3 aboveground floors, 1 underground floor)
Total Area: 32,321 ㎡	Total Area: 43,808 ㎡	Total Area: 75,041 ㎡	Total Area: 14,326 ㎡
Data Room: 12,177 ㎡	Data Room: 13,686 ㎡	Data Room: 12,734 ㎡	Data Room: 4,073 ㎡
Richter scale 8.0 seismic isolation design, 40,000 KVA	Richter scale 8.0 quake-proof design, 18,000 KVA	Richter scale 7.0 quake-proof design, 18,000 KVA	Richter scale 6.0 quake-proof design, 7,000 KVA

Core Capabilities

- Guarantees end-to-end network neutrality from the center entry to the client's white space.
- Responds to client demands through groups of professionals from architecture, electricity, fire safety, security and network.
- Provides stable infrastructure environment based on 30 years of experience in error-free data center management.
- Has client references across local and international industries from cloud, internet, mobile, finance, communication and distribution to manufacturing.

Service Offerings

- Offers white space services supported by stable infrastructure.
- Provides network cables for all local and international mobile carriers.
- Operates infrastructure based on the top domestic SI/ITO business: network/security/server/DB/middleware management.
- Offers stable and efficient IT infrastructure based on more than 30 years of data center management experience, four local centers and four overseas centers.



No.1

Constructed and operated Korea's first dedicated data center in 1992



A+++

Busan Data Center acquired the highest Green DC rating



DIGITAL TECHNOLOGY

Big Data

Consulting, implementation and solution services based on sector-specific domain expertise, advanced analytics capabilities and big data technological leadership

No.1
The most extensive domestic reference in big data

200
The number of in-house experts on DW/BI and big data, making LG CNS Korea's largest big data organization

Total service package for data analytics

LG CNS provides the entire range of data-based business services including data collection, processing, storage, analysis and utilization, offering total big data management service packages to our customers in all industries including electronics, manufacturing, finance, telecom, government and services by utilizing our advanced analytic capabilities based on machine and deep learning.

Extensive stable of big data analytics solutions

LG CNS owns an extensive range of analytic solutions including manufacturing quality analysis, image recognition-based visual testing, real-time customer marketing service, social data-based R&D technology sensing, VOC analysis and quality enhancement, financial transaction FDS, and information security monitoring.

Korea's largest big data organization

LG CNS boasts the largest number of big data references in Korea. As the nation's leading big data operator with extensive project experience, we can provide the optimal solution that is tailored for any client business and IT environment.

Core Capabilities

- Model analysis based on domain expertise in industries, development and optimization of algorithms, and management of analysis life cycle
- Highest DW/BI implementation capability and most extensive big data system development experience in Korea
- Technological leadership in open source platform
 - Internal development of a proprietary platform, open source contribution and troubleshooting
- End-to-end services ranging from provision of big data platform and development to analysis solutions

Project Experience

- Electronics/manufacturing (LG Electronics, LG Chemical, LG Display, LG INNOTEK, etc.)
- Financial/government (KB Card, KB Insurance, Hyundai Card, Woori Card, KB Bank, Government's Integrated Data Center, Korea Land & Housing Corporation, etc.)
- Communication/Service (LG U+, Pantos, Kakao, Coupang)

Service Offerings

- Identification of big data analysis targets and development of implementation plan
- Consulting on big data analysis and building platforms
- Consulting on and implementation of hybrid information architecture combining DW / BI and big data architecture
- Lab services for consulting on and execution of big data architecture and developing a model and algorithm for optimization analysis (On-Promise, Cloud)
- Prototyping and lab services for the verification of new technology (On-Promise, Cloud)
- Smart R Analytics (SRA): Guarantees high productivity and performance with big data analysis tools based on open source R.

Solution Offerings

SBP (Smart Big Data Platform) & SRA (Smart R Analytics)

SBP: Hadoop big data platform providing optimized support for the entire cycle of big data collection, storage, processing and analysis

SBP is a distributed architecture multi-purpose expandable platform that provides integrated real-time, batch, interactive analytics and streaming. The platform provides convenience in execution and maintenance/repair via a GUI-driven interface and constant implementation of the latest open source technologies while maintaining competitive prices compared to other providers. In addition, we provide data collection and enterprise workflow and scheduler (EWS) tools that enable even corporate clients without previous big data development experience to focus on business logic development and enable high productivity and quality levels.

SRA: R language-based big data analytics solution

High-performance analysis of massive amount of data

Provides multi-server, multi-session functionality and parallel analysis algorithm and distributed analysis for large-volume data via big data platform link.

Integrated analysis of structured/unstructured data

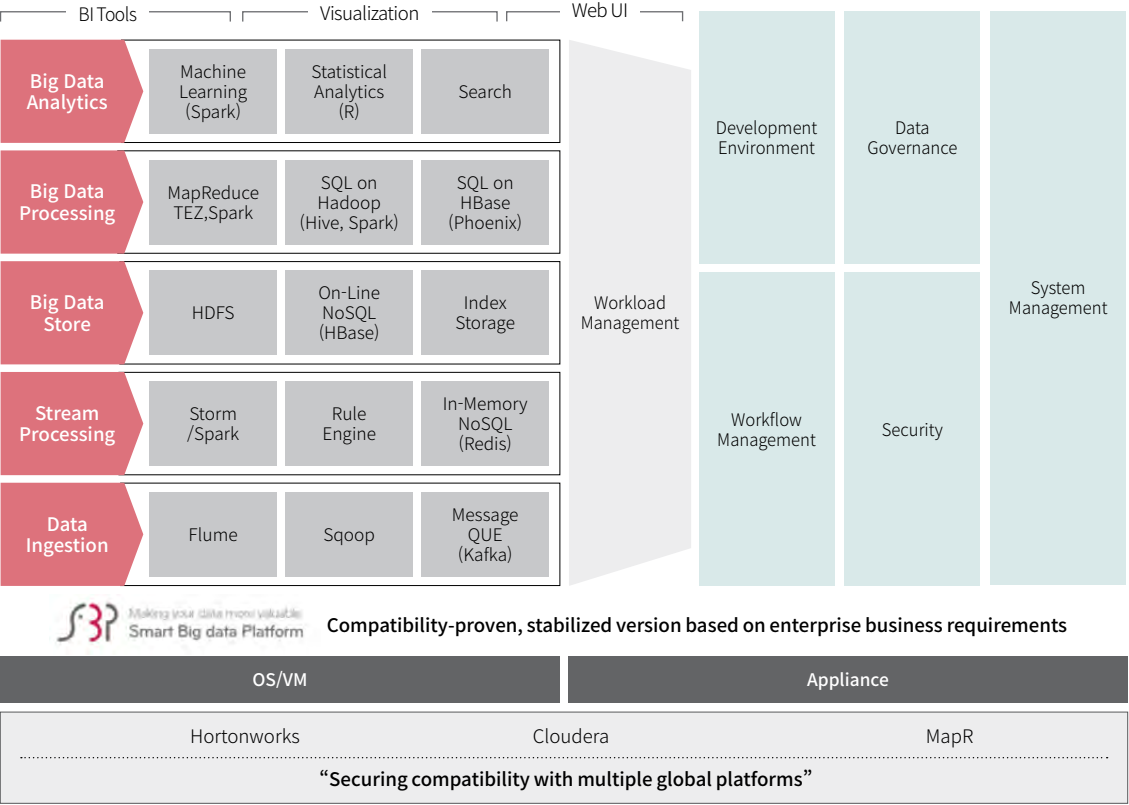
Enables extensive data analysis by providing a wide range of data and text analysis algorithms, from traditional statistical analysis to machine learning.

Stronger interfacing with external systems

Separate API for interface with external solutions and applications provides greater utility for analytic model and results.

Workflow analysis tools

Intuitive and easy-to-learn workflow analysis tool enhances analysis and development productivity while reducing the learning curve.



DIGITAL TECHNOLOGY

B2B /
O2O Biz Platform

Marketing, sales and service IT platforms, chatbot-based conversational commerce, company-specific messaging platforms

Enterprise
O2O
Commerce
Platform

10 Million

The number of Kakao page users

Digital Marketing

LG CNS provides data-based performance marketing, mobile marketing and omni-channel marketing

Digital Sales & Service

We provide new sales channels including chatbots for messenger ordering and a wide range of digital services including message-based payment systems for academic businesses and hospitals/clinics.

Core Capabilities

- Simple payment solutions with Kora's highest security certification, chatbot solutions, and Korea's best big data analysis solutions
- Capability to conduct electronic financial business based on LG CNS' own IDC infrastructure; offers expandability/reliability/security
- Extensive project reference in the enterprise commerce platform business

Project Experience

- Kakao Pay simple payment service
- Hallym University Hospital message payment service (Talk Pay)
- LG Electronics global digital marketing service
- BC Card vendor commerce platform
- Shinhan Card big data analytics service

Service Offerings

- Simple payment and payment gateway service
- Smart messaging services including Kakao Notification Talk and MPost
- Interactive commerce such as chat ordering

- Digital marketing service
- Big data analytics service including social media analysis
- Commerce platform development and provisioning service

2,000

The number of vendor agreements with airlines, shopping malls, and restaurants

Solution Offerings

CNSPay/MPay

CNSPay/MPay is a convenient payment solution that only requires a single password to carry out e-commerce transactions.

Key features

- Supports password-only payment for credit card payments of over 300,000 won, without public key authentication.
- Reduces payment failure rate by removing the need to install additional payment apps.
- Secures personal data by segregating information between the smart phone and authentication server.
- Enhances payment success rate by supporting multiple browsers, with no ActiveX requirement.

Chatbot

Within 1 min.

The time required from ordering to payment for home shopping

Chatbot messenger-based ordering service

LG CNS provides mobile messenger-based automated ordering services by integrating our chatbot technology with messenger APIs from Kakaotalk, Facebook, Line and other operators.

Chatbot customer service center

We provide automated customer care service with chatbots for responding to specific customer inquiries.

Core Capabilities

- Deep understanding of commerce business and the legacy commerce system
- Extensive experience in commercialization (Korea's first commercialization and the largest number of commercialization cases)
- Deep understanding of the chatbot technology such as KakaoTalk, Facebook, etc., and ability to apply the technology to other areas


Project Experience

- The world's first commercialization of real-time broadcasting and catalog ordering service for GS Shop's TV home-shopping channel
- Commercialization of real-time broadcasting, O Shopping + (T Commerce), catalog ordering, and customer center services for CJ O Shopping's TV home-shopping channel
- Hyundai Home Shopping real-time broadcasting, catalog, data broadcasting service
- Pulmuone Customer Happiness Center

Service Offerings


Chatbot-based automated ordering & product consultation

Smart Messaging



1st

The largest number of push messages transmitted in Korea



Secure messaging platform

LG CNS offers messaging platforms that enable real-time/large-scale service with minimum costs via highly optimized SMS and push messaging.

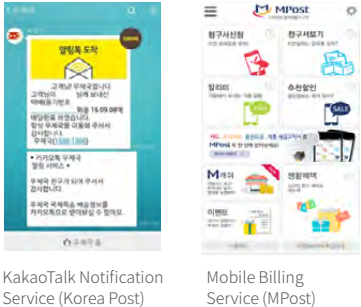
Proven track record in finance, government, logistics, retail

We provide payment solutions to over 100 top companies in a wide range of sectors including Shinhan Card, Samsung Card, Hyundai Card, Korea Post, Korean Air and Interpark, with our client base continuously expanding to include healthcare and retail companies.

Core Capabilities

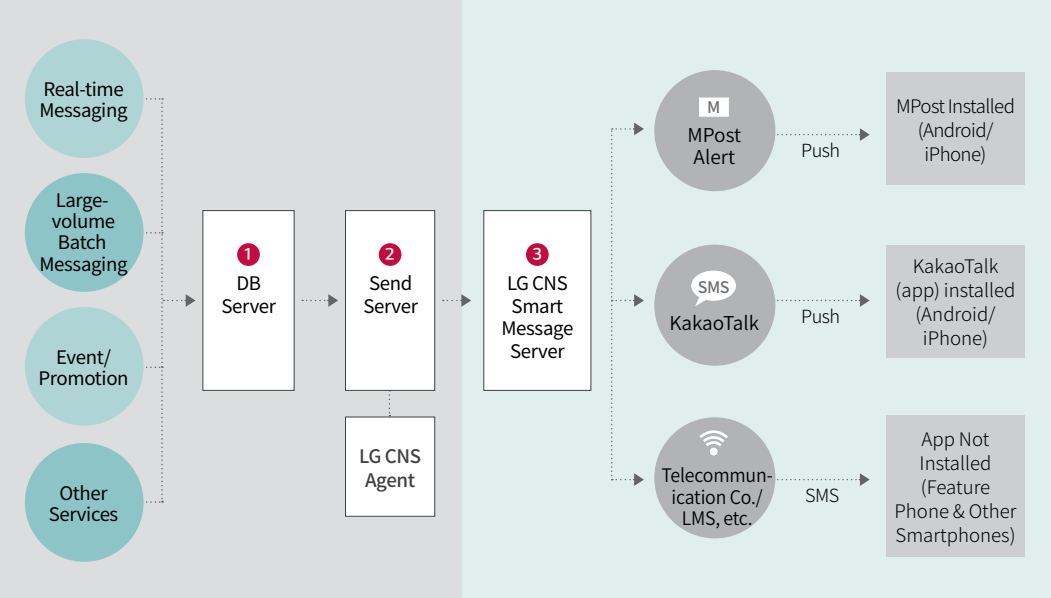
- Provides integrated messaging platforms that integrate app-based push messages / SMS / LMS such as KakaoTalk based alert and MPost
- The only proven provider of large-scale messaging service in financial and public sectors
- Offers customized services for each industry by combining processing, messaging, ordering, payment, and customer services
- Our own IDC infrastructure offers flexibility, expandability, safety and security

- Project Experience**
- Implementation for Korea Post and other credit card companies (Shinhan, Samsung, Hyundai)
 - Korea's first implementation case (Korea Post)
 - Stable infrastructure for large-volume message transmission
 - MPost mobile billing
6.4 million application downloads, 3 million unique users, 8.5 million in monthly transmission, 32 corporate clients from financial, government, and communication sectors



Service Offerings

- Smart Messaging & MPost



DIGITAL TECHNOLOGY

Smart Signage

Cutting-edge IT convergence solution integrating digital displays and content



Taking leadership of the global signage industry with ICT tech excellent

LG CNS has engaged in a wide range of signage projects, from FSE canopy system design and construction in the United States to projects in Europe, Asia, Middle East, North Africa, United States and China for clients in both public and private sectors.

Integrated operational platform

Our integrated platform enables diverse displays to operate within a single platform.

IT technology convergence

From initial design to system-optimized content, bi-directional operational and control system and convergence with IoT, big data and other IT technologies, LG CNS is expanding the scope of cutting-edge signage applications.

Core Capabilities

- Experience in the implementation of various media systems both in Korea and overseas, such as wall-mount, roof-top, canopy, pole type, street furniture, etc.
- Provision of integrated operating platform that facilitates one-point multiple operation
- Proprietary PM and execution methodology for quality control

Project Experience

- Installation of the OLED Video Wall at the Incheon Airport: Used 140 of the world's largest (55 inch) curved OLED panels
- Curved LED Sky Screen in Las Vegas
The world's first LED Sky Screen with 12 million LED lamps
- LED screen in the home field of Manchester City, a Premier League football club in the UK
Provides two large-sized screens and a 456 m-ribbon screen as well as their operating systems.
- Dongdaemun Design Plaza (DDP) Signage System: Implemented a signage exterior design that corresponds to the DDP's organic architectural concept, as well as the remote mobile management system.
- The largest LED screen in Ulan Bator, Mongolia: A media facade screen with a slim-depth design that harmonizes with the building design. Also, the system design supports the operation in the extreme temperatures down to negative 40°C.

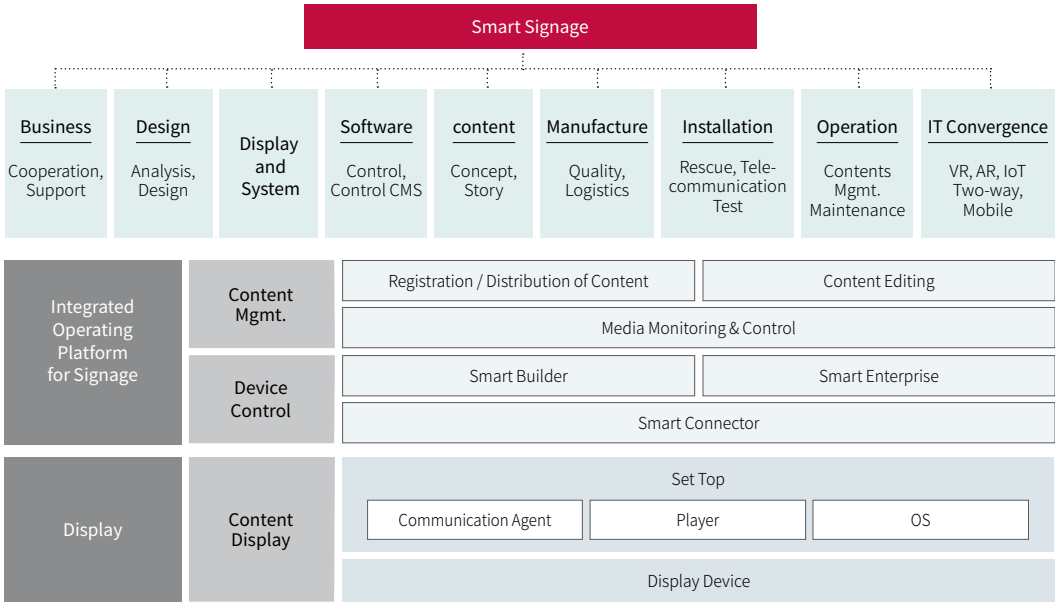
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Multi-device operations enabled by Smart Signage



Service Offerings

- Displays and controllers for indoor/outdoor LED, monitor signage, etc.
- 2D/3D content, interactive applications such as VR / AR and IoT / big data
- Integrated operating systems

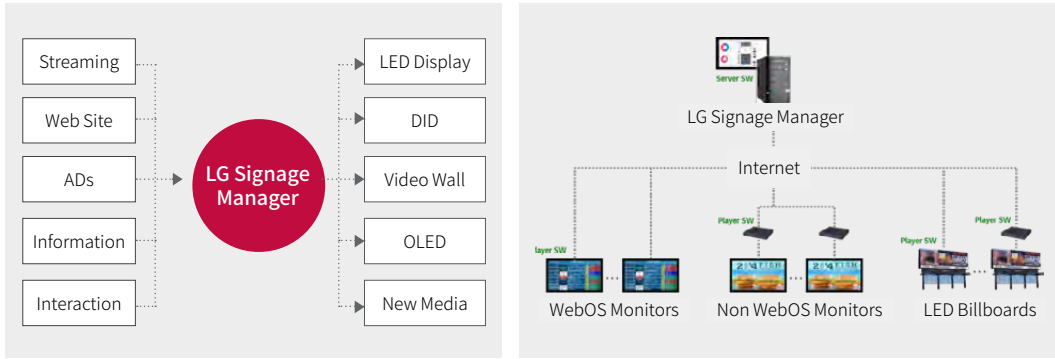


Solution Offerings

LG Signage Manager

Integrated solution for simultaneous operation of heterogeneous digital displays, powerful remote control and distribution environment

LG Signage Manager is composed of a server that can distribute content to a wide variety of displays including DID, OLED, LED and VideoWall and media player that can output content according to schedule. Drag & drop based on HTML5 protocol enables fast and easy manipulation with optimal UI for both PC and mobile access. A powerful monitoring and remote-control feature enables operators to check display status at a glance and boost signage operation efficiency.



CONSULTING

Consulting

Entrue Consulting—delivering real value to clients as the industry's leading digital business innovator



Premier digital business think tank

LG CNS plays a preemptive role as a digital innovator in expanding client business capabilities based on business environment changes and developing new markets, supporting the full identification/execution/implementation of sustainable business model as well as new tech convergence businesses.

Expert business design consultant

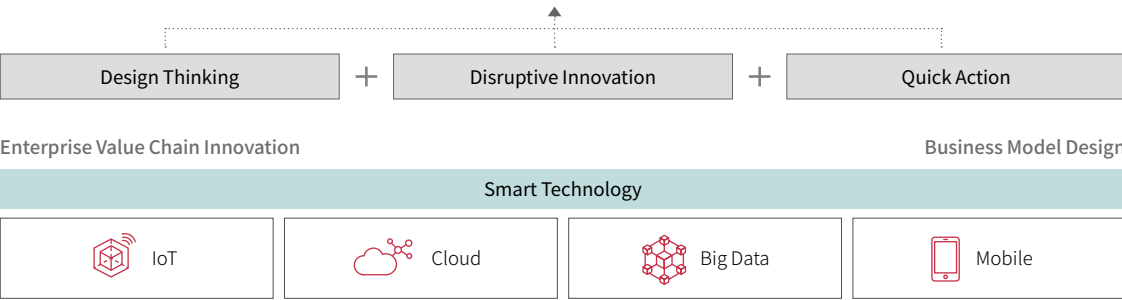
Our consultants including top experts from diverse fields who can solve the client's deepest-rooted and most fundamental issues.

Project Experience

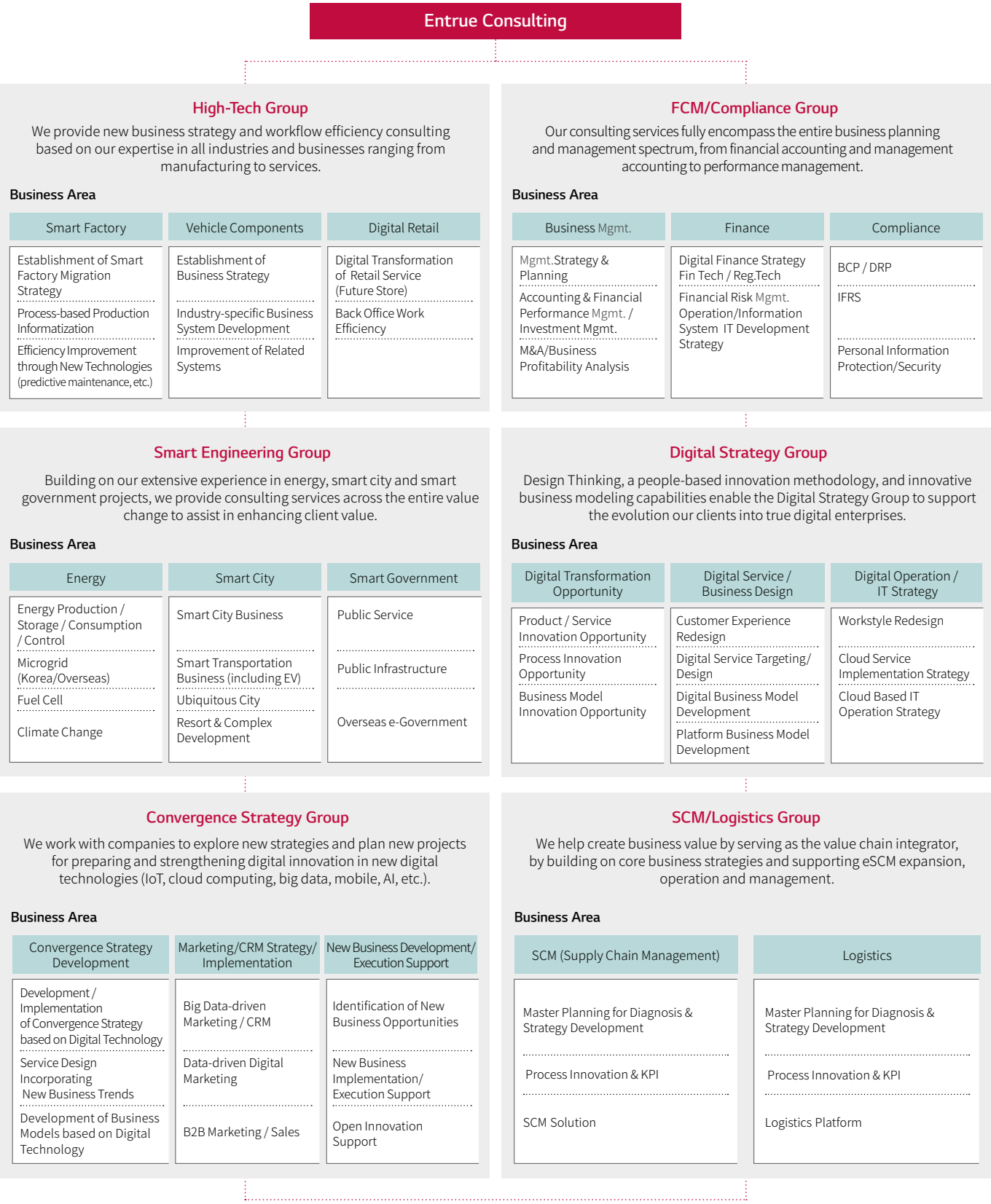
- Strategy consulting for LG automobile component business LG Corp, LG Electronics, LG Chemical
- Reevaluation of LG energy business strategy
- Consultation for LG strategy for digital technology convergence AR/VR, AI, robot, drone, healthcare, etc.
- SCM/logistics diagnosis and roadmap development LG Electronics, LG Display, LG Chemical, LG INNOTEK, Pantos, GS Home Shopping, CJ Korea Express
- Digital Marketing/CRM/e-commerce consulting LG Electronics, Jeju Air, financial holding companies, credit card companies, consumer product manufacturers
- Advanced weekly management system consulting for LG suppliers
- Established battery industry development strategy for LG Chemicals smart factory
- Established LGU+ big data strategy and enhanced services
- Established mid- to long-term IT innovation plan for GS Retail
- Microgrid Planning for the GUAM Power Authority
- FATCA consulting for the Korea Federation of Banks and the General Insurance Association

Vision - Smart Technology Based Digital Business Innovation Leader

No.1 Digital Business Consulting Company by 2020



Business Areas



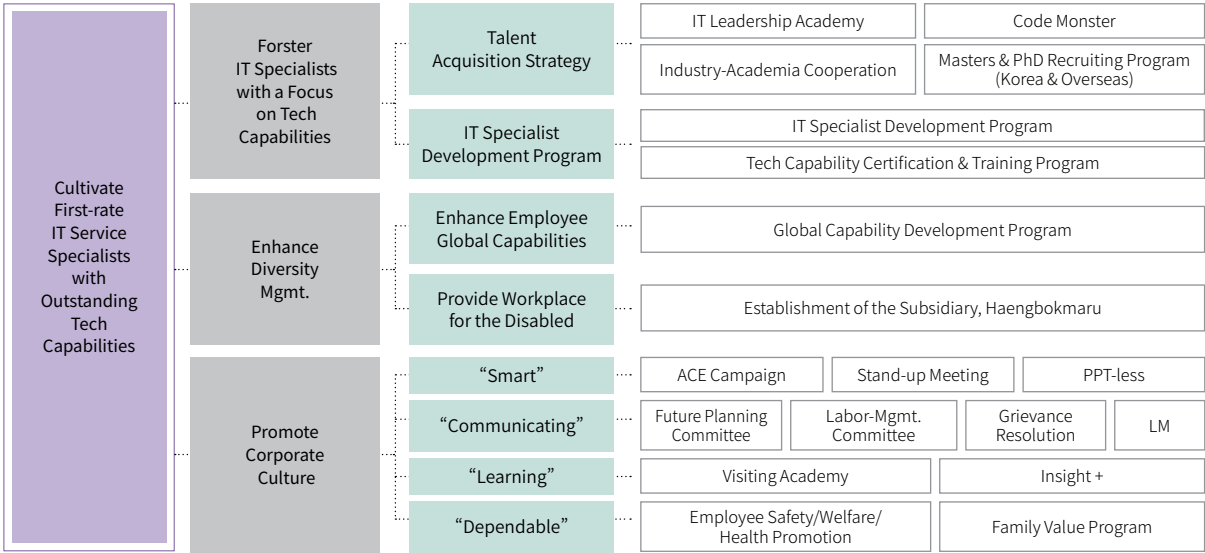
HR Management



Talent Acquisition & Cultivation

The vision of LG CNS is to become a digital innovation leader, and we are striving to achieve this vision with our organizational capability built on technology. We also understand that the key enabler of our vision is our people, the primary source of our competitiveness and the value we create. Based on this recognition, LG CNS has in place a comprehensive talent acquisition strategy and a broad range of capability development programs to build a “crack team” of information technology specialists, carefully nurturing talented individuals on a systematic development roadmap to thrive in the constantly changing IT business environment.

LG CNS HR Management System



Nurturing IT Specialists with Outstanding Tech Capabilities

Our Strategy for Acquiring Top Technical Talent

LG CNS spares no effort in recruiting talented individuals and nurturing them into topnotch software specialists who can drive the digital transformation, augmented by our hiring channels and training programs that are best suited for an IT business.

IT Leadership Academy

An entry-level recruiting program unique to LG CNS, our IT Leadership Academy targets candidates whose career vision is to become IT specialists. We employ an internally-developed methodology to identify candidates who possess exceptional software programming capability and great potential as a software engineer. As part of our efforts to discover talented software engineers, we operate the Winter & Summer Internship Program, the Code Monster Competition and the LG CNS Mentoring Program. Our in-depth evaluation of candidates is carried out in two parts: employment test and interview. Our employment test consists of the standard LG Group personality and aptitude test and the LG CNS Software Capability Test and the LG CNS ITQ Test, internally developed assessment tools designed to scientifically measure candidates’ competence and potential as an IT engineer. A panel of field experts, business leaders and executives conduct our interviews and identify candidates who are attuned to the value promoted by the LG Way and exhibit qualities that LG CNS

seeks in its people. Our interview process is also designed to assess the candidate’s aptitude as an IT engineer and their career fit. In order to ensure fair and accurate assessment of candidate’s software capability, we also use “Boot Camp,” a training program built around our internally-developed methodology. The program not only serves as an assessment tool for LG CNS and but also extends a learning opportunity for the candidates.

Recruiting Programs for Masters and PhD Candidates

In order to recruit future digital transformation leaders, LG CNS conducts a regular campus recruiting program for masters and PhD candidates. With a particular emphasis on science and engineering talent in AI, big data, the IoT, mobile technology, smart energy and consulting, LG CNS visits major US universities known for excellent science and engineering programs twice a year and hosts campus recruiting events. We also participate in the LG Techno Conference, a global recruitment event hosted by our holding company, LG Corp. in the United States, and engage in recruiting activities and leadership interviews of candidates. Masters and PhD holders recruited through these events undergo a fast-track training and development program to take leadership positions in the R&D and new business efforts of LG CNS and the LG Group.

Code Monster

In 2016, LG CNS hosted a programming competition titled “Code Monster” at our Sangam DDMC location in Seoul, Korea. The competition was organized to identify talented individuals based entirely on programming skills, in line with our ongoing effort to create a recruitment process that places value on the individual merit of candidates over their academic performance and other credentials. The event attracted more than 1,500 college students, with the final round winners receiving a cash prize and a job opportunity at LG CNS. We plan to continue the Code Monster competition as an annual event hosted in the fall.

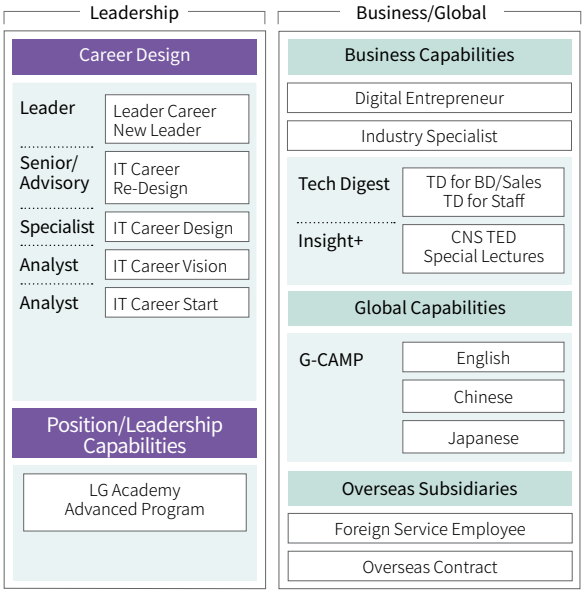
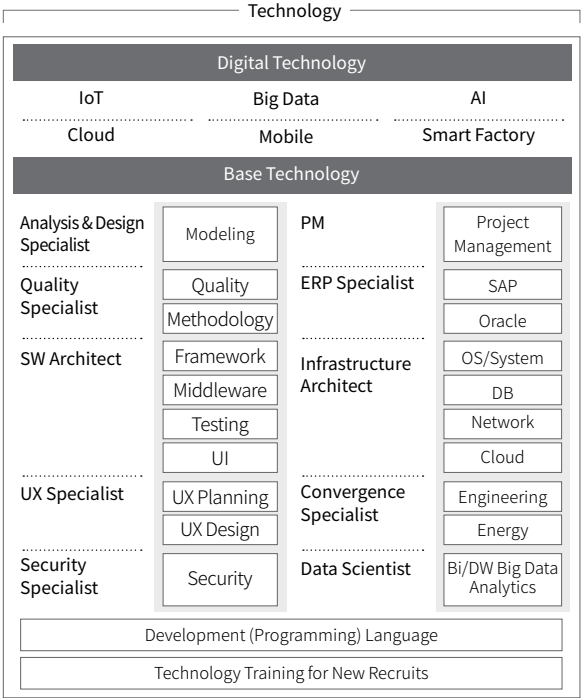
Industry and Academia Cooperation

LG CNS operates a broad range of industry-academia cooperation programs with major universities in Korea, as part of our effort to secure high quality talent and fulfill our corporate social responsibility by promoting joint research between industry and academic institutions. LG CNS teamed up with the Computer Engineering Department of Seoul National University to develop a software engineering course, which is offered to juniors and seniors from the undergraduate program as part of the regular curriculum. Leading IT specialists from LG CNS serves as the lecturers for the course that presents cases from actual IT projects and solutions to provide an empirical study that strikes a balance between theory and practice. Additionally, we offer the LG CNS Mentoring Program, under which college students receive career advice from their LG CNS alumni. The program also combines mentoring with training and offers students with an opportunity to learn cutting-edge information technology.

IT Specialist Development Program

LG CNS has in place a systematic HR development program to strengthen our technological competitiveness on a fundamental level and transform ourselves into an organization of experts that delivers first-rate performance. Since 2016, LG CNS has been expanding our technology certification and training programs to enhance technological expertise across the organization, as part of our HR initiatives to produce stronger results by upgrading our tech capabilities to drive the Fourth Industrial Revolution and achieve HR innovation centered on the cultivation of IT specialists.

IT Specialist Development Program



Tech Capability Certification & Training Programs

As part of our initiatives to help our employees acquire and upgrade tech capabilities that are immediately relevant to our business and performance, LG CNS in 2016 consolidated our business functions and reorganized the required skillsets accordingly, and introduced an examination-based technology certification program. In parallel, we overhauled our technology training program based on the new skills map to organize core training courses for each skill and skill level, and implemented new channels for transferring the knowledge and knowhow of top internal and external experts to enable our employees learn how to facilitate a virtuous cycle of tech capability development. In the same year, we introduced a tech capability certification program that combines technology training and certification test for employees in technical business functions, and formulated a three-tiered expert development track from “Tech. Expert” to “Tech. Meister” and finally “Research Fellow/Expert.” In 2017, we plan to expand the certification program to include employees in tech-related business functions and non-technical functions.

Growing Emphasis on Diversity Management

Helping Employees Develop Global Capabilities

As a global corporation, LG CNS strives to understand the different cultures and customs of the countries in which we have operations and meet the disparate needs of our multinational customers. In order to effectively support these efforts, we continually endeavor to create a work environment that promotes maximum performance through management training, business function training and performance management at overseas subsidiaries.

Global Workforce

(Unit: Person)			
China	342	Malaysia	25
United States	85	Greece	21
Brazil	52	Indonesia	20
Colombia	44	Japan	16
Europe	30	Other*	6
India	30	Total	671

* Other: Thailand, Uzbekistan, Qatar and Bahrain
* The figures include both locally-hired employees and resident employees (based on location).
* As of the end of 2016

Language Program for Core Global Employees

LG CNS also has in place language programs to strengthen the global capabilities of our employees. In 2016, we introduced the language teaching program G-CAMP to foster elite global business specialists who can lead our overseas businesses. Developed based on the global business experiences of LG CNS throughout the project cycle from project acquisition to completion, this program is designed to help our employees acquire and enhance their capabilities in on-site IT business communication. Our internal experts participated in the development of the program and also serve as lecturers for these language courses. Currently offered in English, the G-CAMP program will be expanded to provide courses in Japanese and Chinese.

Creating a Workplace for People with Disabilities

LG CNS Finds a “Standard Workplace for the Disabled,” Haengbokmaru, Co. Ltd.

In October 2016, LG CNS founded Haengbokmaru, a “Standard Workplace for the Disabled.” Established as a subsidiary of LG CNS, the company performs employee welfare related jobs, with their employees serving as cafeteria, sanitation and health & fitness facility staff at LG CNS business locations including the Yeouido headquarters, the Sangam DDMC location and the Sangam IT Center.

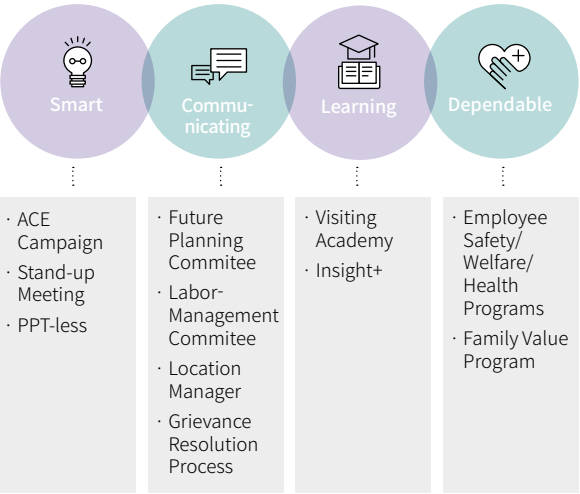
Of the 55 Haengbokmaru employees, 50 have disabilities with 46 of them being severely disabled. The four of the six managers who supervise on-the-job performance of the employees and support their career development are also people with disabilities. Haengbokmaru offers its employees with convenience facilities for the disabled, dedicated rest areas and group insurance plans to create a comfortable work environment. LG CNS and Haengbokmaru will continue to develop jobs for LG CNS operations to expand job diversity for the disabled and grow into an organization that celebrates shared and inclusive growth.



“Standard Workplace for the Disabled,” Haengbokmaru, Co. Ltd.

Corporate Culture

LG CNS promotes a corporate culture that encourages employee creativity and autonomy with a wide range of internal communication programs.



“Smart” LG CNS

Work “ACE”!

“ACE” is the acronym for our workstyle innovation slogans: “Arrange Well (clearly organize the topic before meeting/reporting),” “Communicate Briefly & Frequently (keep communication short and frequent),” and “Execute Thoroughly (Make sure to arrive at a conclusion and see it through). With “ACE” as our action guideline, LG CNS continues to create new value for customers and focus our energy on what is most pertinent to business performance.

Stand-up Meeting

In order to facilitate efficient and dynamic meetings, LG CNS introduced meeting rooms for stand-up meetings, which allows participants move around freely and is conducive for a free-flowing discussion. A meeting held while standing keeps the meeting short and to-the-point and helps participants concentrate by allowing them to stretch their legs, move around and boosting blood flow to the brain. It is also much more healthful than a sit-down meeting.

PPT-less

LG CNS understands that accuracy and timeliness are the key elements that directly affect our performance. As part of our initiatives to promote efficiency, we are engaging the “PPT-less” campaign to free our employees from non-essential tasks and focus on substance, and to ensure that our valuable resources are not wasted on formalities. We encourage our employees to avoid the PowerPoint presentation format wherever possible in producing internal communication documents, except for instances where PowerPoint presentations are effective or required such as client presentations or training materials.

“Communicating” LG CNS

Future Planning Committee

The Future Planning Committee is an internal junior board that serves as the change manager and innovation driver in making LG CNS a greater workplace and creating a positive corporate culture. The primary mission of the committee is to promote communication between employees and top management and present ideas for driving the growth of the company and employees.

Labor-Management Committee

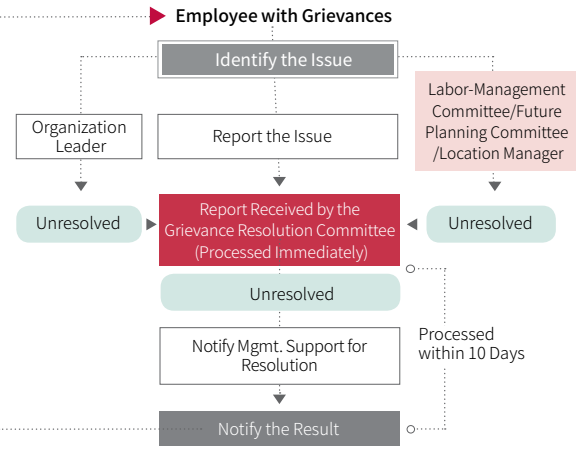
First established in February 1998, the LG CNS Labor-Management Committee is composed of eight employee representatives and eight management representatives. Convened on a quarterly basis, the Labor-Management Council discusses a broad range of labor-management issues such as employee grievances, working conditions and management strategies, creating a positive model for labor-management cooperation.

Location Manager System

As part of our efforts to address issues concerning regional business sites, LG CNS implemented the Location Manager System that assigns a regional leader for the Seoul metropolitan area, Paju, Gyeongam, Gyeongbuk, Jeolla, Chungnam and Chungbuk. These location managers oversee a wide array of activities geared towards boosting the loyalty and morale of employees working at regional locations.

Employee Grievance Resolution Process

LG CNS scrupulously collect employee grievances and spares no effort in resolving the issues fairly, as part of our efforts to protect the labor rights of employees, improve employee satisfaction and create a positive work environment. To this end, we operate diverse on- and offline grievance resolution channels. We also have an on-line reporting form on our intranet to accommodate our employees working at many different locations offsite, which is often the typical work arrangement for an IT business, and help them report their grievances free from the confinements of time and location.



Process for Resolving Employee Grievances

“Learning” LG CNS

Visiting Academy

In order to accommodate the training needs of our employees working offsite for different projects, LG CNS introduced the “Visiting Academy” program through which our training staff visit the project site to conduct employee training. In 2016, LG CNS broke away from the conventional view of “training that waits for trainees to come” to “training that seeks out trainees,” and implemented a training program that provides training content for the capabilities required at system management (SM) and system integration (SI) project sites on a format requested by training recipients. For a small group of employees, we also offer online training, providing training videos via the training portal. In 2016, LG CNS visited thirteen different project sites and provided training to more than 1,400 employees. As of April 2017, we were in the process of conducting capability development and change management training at twelve system management (SM) sites and fourteen system integration (SI) project sites for over 1,000 employees, with a plan for continuously expanding the program.

Adding Insights to LG CNSers with Insight+

“Insight+” is the umbrella brand for LG CNS knowledge sharing programs introduced in 2016, organized to offer insights to our employees. Composed of the Special Lecture Series, the CNS TED and CEO Tech Session, these knowledge-sharing sessions invite external experts to expose our employees to the latest IT and business trends and offer insights and inspirations for creating differentiated customer value. Insight+ also serves as a forum for our employees to share their experience, knowledge and knowhow on different topics and promotes a corporate culture that encourages collective professional growth. In 2016, a total of 38 Insight+ sessions were presented with the participation of 3,738 employees. These sessions are video recorded and posted online to help our employees revisit the topic anytime they want. LG CNS plans to continually expand the program to include topics and formats that meet the needs of our employees.

Insight + Knowledge Sharing Programs

Program	No. of Participants	Topic
Special Lecture Series: Invites external experts to seek insight relevant to LG CNS business	1,537/ 5 sessions (Bimonthly)	· Technology trends, hot business trends, humanities, etc.
CNS TED: Shares employee experience, knowledge and knowhow	1,010/10 sessions (Monthly)	· Topics unlimited from liberal arts, to personal hobbies, management, etc. · Share job experience, knowledge and know-how
CEO Tech Session Internal expert groups organize sessions and introduce the latest trends in IT & other technology	1,191/23 sessions (Year-round)	· LG CNS Solutions · New technology trends in the IoT, cloud, big Data, mobile, and AI · IT related overseas conferences & global megatrends

“Dependable” LG CNS

Promoting Employee Safety, Welfare and Health

As part of our efforts to promote employee health, LG CNS provides employees with an ongoing support package that includes regular medical check-ups and group personal accident insurance. For instance, LG CNS provides a comprehensive medical check-up to all of its employees to protect, maintain and promote their health (on an annual basis for employees aged 35 or older and on a biannual basis for employees aged under 35). We also offer the same package to the spouse of our employees on a biannual basis (35 or older) to help our employees and their family members lead a healthier life. LG CNS also operates a counseling center on our premises to help our employees and their family members who struggle with personal, professional and family issues with counselling sessions and psychological tests conducted by counselling psychology professionals.

Family Value Program

In line with our commitment towards promoting employee work-life balance, LG CNS has in place a variety of employee family care programs. For instance, we operate the LG CNS Childcare Center at the Yeouido FKI Tower headquarters and celebrates memorable moments of our employees and their family members through a family care program that sends out a small gift to employees for welcoming a new member to their family, employees’ children to congratulate their matriculation to elementary school, or to wish them their best on their college entrance exam.

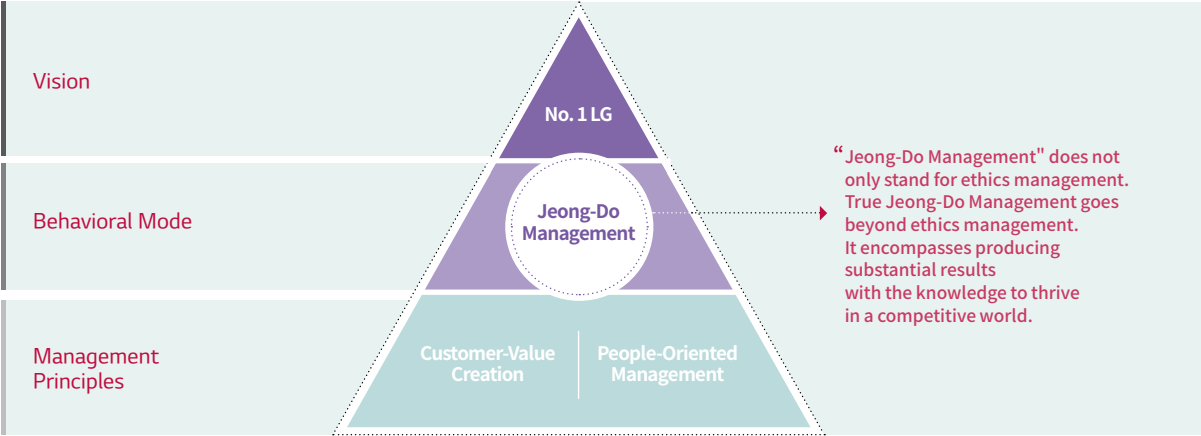
“Maeum” Counseling Center Programs

Program	Details
Psychological Test	· Offers Personality Test, Aptitude Test, Job Stress Test, Mental Health Analysis, IQ Test, Inter-personal Skills Analysis, etc. · Psychological test for employees’ children
Counseling	· Offered in strict confidence and anonymity · Offered at major business locations as a visiting service
Stress Mgmt. Clinic	· Space for relaxation and aroma therapy · Offers simple health checks, i.e. blood pressure, blood sugar levels and the body mass index
Newsletter	· Sent via email



LG Way & Jeong-Do Management

Representing LG’s unique corporate culture, the LG Way articulates our belief in attaining the vision of becoming “No. 1 LG” through “Customer-Value Creation” and “People-Oriented Management” as we stay true to the principles of “Jeong-Do Management” in our everyday practice. Jeong-Do Management expresses our commitment for building up fundamentals continuously and competing fairly as we base our practices on ethical management, through which we can ultimately achieve the LG Way.

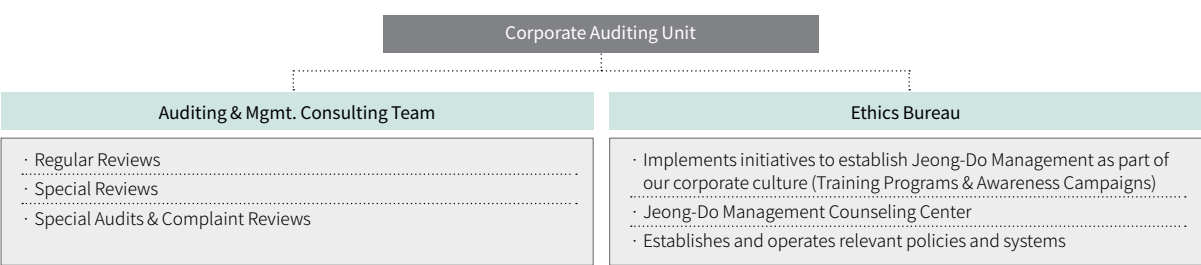


Code of Ethics

LG CNS established the Code of Ethics as the guiding principle for all of our employees in their conduct and value judgement, and we apply these principles to our everyday practice. Produced in Korean, English and Chinese, the Code of Ethics Handbook was distributed to employees who speak the respective languages, and made available to all of our stakeholders on the Jeong-Do Management section of our corporate website and the Jeong-Do Management board on our intranet.

Jeong-Do Management Organization

In order to ensure systematic implementation of Jeong-Do Management, LG CNS established the Ethics Bureau within the Corporate Auditing Unit, and tasked the organization with establishing and operating the policies and systems concerning Jeong-Do Management. The Ethics Bureau also implements a broad range of activities that help our employees practice Jeong-Do management, such as handling related reports and inquiries received through internal and external channels.



*LG Jeong-Do Management Website (<http://ethics.lg.co.kr>)

Jeong-Do Management Initiatives

Jeong-Do Management Training & Awareness Campaign

LG CNS conducts Jeong-Do Management training and awareness campaigns on a regular basis to underscore our belief that “Jeong-Do Management is not an option but an implicit requirement for the very survival of the company” and help our employees fully embrace the shared principles behind this philosophy. In 2016, LG CNS conducted twelve group training sessions on Jeong-Do Management for over 660 employees from LG CNS, subsidiaries and suppliers. In 2017, we plan to strengthen our Jeong-Do Management training for everyday applications and for different business functions. We also continually develop training content tailored to the disparate needs of employees in different jobs and business departments to improve the effectiveness of Jeong-Do Management training, while engaging in campaigns to firmly establish Jeong-Do Management as part of our corporate culture. For instance, we encourage our employees to abstain from the customary exchange of gifts during the holiday season, a practice that often creates impropriety issues. As part of our efforts to motivate our employees to become active practitioners of Jeong-Do Management, we produce and distribute Jeong-Do Management newsletters that introduce non-compliance cases to inform employees and share articles on Jeong-Do Management written by employees and executives.

Jeong-Do Management Training (2016)

Category	Target	No. of Sessions	No. of Participants
Employee	· Group training for all leaders (to raise awareness across the organization)	2	262
	· Online training for all employees (biannual)	-	-
	· Training for new recruits (entry-level)	1	79
	· Training for new hires (with prior experience)	1	23
	· Training for new managers	1	70
	· Organization-specific training (PMO, CPO)	2	40
	· Job-specific training (management at overseas subsidiaries)	1	7
Subsidiary	· Training for BnE Partners (for leaders & sales staff)	1	15–20
Supplier	· Training for CEOs from suppliers (CEOs & Sales Executives)	1	163 suppliers

Whistleblower System

Hotline for Reporting Irregularities and Unethical Conducts

LG CNS has in place a whistleblower system to receive reports concerning any conduct in violation of the Employee Code of Ethics and Jeong-Do Management, such as exploiting one’s position of power to impose unfair terms and accepting gifts from interested parties. We follow up on all reports of misconduct and launch an internal investigation. If our investigation produces evidence of misconduct, we implement appropriate measures such as disciplinary action, business process improvement and Jeong-Do Management training to promote transparent and accountable business practices across the organization. We also receive reports through other channels including phone, facsimile, postal mail or visit, and have strong measures in place to thoroughly protect the identity of whistleblowers.

Whistleblower System Results

Status	Pro- cessed	Completed & Results Notified	Unfound- ed	Other (Transferred)	Total
2014	29	19	7	1	56
2015	19	5	10	2	36
2016	13	94	5	-	112

Whistleblower Reward Program

LG CNS operates a reward program for whistleblowers to promote transparency and accountability in our business practice and eliminate irregularities and corruptions that undermine customer values. The reward review board is convened if a report of misconduct has been deemed qualified for a reward, and officially approves a reward to the whistleblower.

Jeong-Do Management Pledge

LG CNS requires all of our employees to sign and submit an online pledge for “Jeong-Do Management” and renew their pledge on an annual basis. We also require our suppliers to do the same by submitting a pledge for Jeong-Do Management as part of the Master Purchase Agreement. Our pledge for Jeong-Do Management is an expression of our commitment towards our customers, suppliers, shareholders, employees and community as well as of our intention to become a market-leading company respected for its integrity.

Gift-Exchange Reporting System

LG CNS strictly prohibits our employees from receiving any gifts (cash and/or valuables) from interested parties. Employees who have received such gifts in unavoidable circumstances must report such incidents and return the items. If returning the gift is impossible, employees must report the incident and forward the item to the Ethics Bureau, which either donates the item to charity or auctions it off internally and uses the entirety of the proceedings to purchase and donate supplies needed at welfare facilities.

Jeong-Do Management Counseling Center

In order to respond to employee inquiries on Jeong-Do Management, LG CNS operates the Jeong-Do Management Counseling Center and offers counseling on the everyday practice of Jeong-Do Management through diverse channels including online (intranet), phone and email to ensure convenience and ready access to employees. If inquirers wish to remain anonymous, we make every effort to keep their identities and the details of their inquiries confidential. Employee inquiries generally cover topics such as the interpretations of the Code of Ethics, giving/accepting congratulatory/condolence cash gifts, appropriate procedures for handling gifts received and how to deal with business expenses. The counseling center supports our efforts to firmly establish Jeong-Do Management as part of our management practice and corporate culture through effective and accessible counseling.

Jeong-Do Management Survey

LG CNS participates in the LG Group-wide Jeong-Do Management Survey conducted on an annual basis to assess our employee compliance with the principle and their awareness levels, as well as to identify improvement points. We also conduct the survey on our suppliers to identify risks associated with unfair business practices and use the results in enhancing our partnerships with our suppliers.

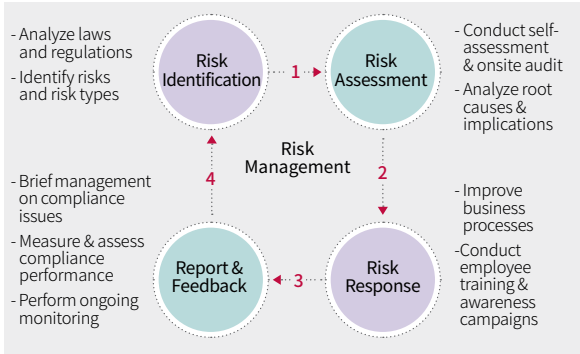
Compliance Risk Management Program

In 2015, LG CNS introduced a compliance risk management program as part of our initiatives to ensure effective response to constantly changing business conditions and the regulatory climate, and monitor and manage employee compliance with laws and regulations. LG CNS and all of our employees recognize that compliance is an important part of our obligation as a responsible corporate citizen, and strive to earn the trust of customers through strong performance in compliance.

Compliance Risk Management Program

Our compliance risk management program consists of activities for identifying, assessing and responding to potential risks preemptively as well as for establishing voluntary compliance as part of our business practice and corporate culture through employee training and monitoring. Through these efforts, LG CNS strives to prevent risks from developing into serious issues, enhance the efficiency of our risk management efforts, and raise brand profile by staying true to the principles of Jeong-Do Management.

Compliance Program



Our compliance risk management activities are organized into five categories: regular assessment, self-assessment, awareness promotion, issue response, monitoring and reporting, and implemented accordingly.

Activity	Detail
Preventive Assessment	· Self-assessment based on checklist
	· Risk prevention through regular assessment by risk type
Promotion of Employee Awareness	· Compliance training and awareness campaigns for employees
Response to Potential Issues	· Response to business conditions and the regulatory climate
Monitoring	· Ongoing monitoring of legal and market trends
Reporting	· Management briefing on major/critical issues and compliance activities

Compliance Risk Management Organization

LG CNS established the Compliance Team under the Corporate Legal Department, and tasked the organization to manage compliance issues and make timely responses in collaboration with related business divisions and departments. As part of our initiatives to promote fair transactions, our Marketing Division established a management system against cartel-forming, predatory subcontracting practices and intra-group transactions, and engages in ongoing monitoring and training programs accordingly.

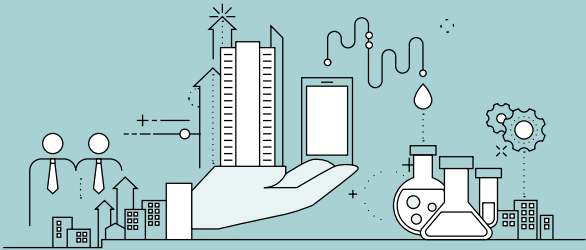
Major Compliance Initiatives (2015–Present)

LG CNS has identified anti-corruption, anti-cartel, predatory subcontracting and permit & licensing practices as the core targets for compliance risk management and is focusing our compliance efforts, while effectively responding to newly-introduced laws and regulations and shifts in policy initiatives. In order to establish compliance as part of our everyday business practice, we are also stepping up compliance risk management efforts at our subsidiaries in Korea as well as overseas.

Key Compliance Activities

Category	2015	2016	2017
Target	· Three business divisions · Domestic subsidiaries	· Four business divisions · Overseas subsidiaries · Domestic subsidiaries	· Five business divisions · Domestic subsidiaries
Training	· Compliance Risk Management (ten offline sessions)	· Compliance Risk Management and the Anti-Graft Law (24 offline sessions) · Anti-Graft Law (one online session) · Anti-Graft Law help desk	· Compliance Risk Management (29 offline sessions)
Newsletter	· Issue 1: Compliance · Issue 2: Anti-Graft Law · Issue 3: Unfair Practices · Issue 4: FCPA · Issue 5: Technology Theft	· Issue 6: Anti-corruption · Issue 7: Permit & Licensing Part I · Issue 8: Anti-cartel · Issue 9: Anti-Graft Law · Issue 10: Permit & Licensing Part II · Issue 11: Copyright	· Issue 12: Corporate Seal Management · Issue 13: Trademark · Issue 14: Fair Trade Commission
Publication	· Guide to Compliance	· Permit & Licensing Checklist · Regulations	· Guidelines on Requesting Tech Data

Shared Growth



LG CNS is fully committed to creating a sustainable system for shared growth based on partnerships defined by trust and cooperation. To this end, we continually search for innovation-ready suppliers provide ongoing support to help them grow into business partners with strong business competitiveness.

Key Performance Indicators (KPI)

Win-Win Growth Partnership Index (Released in 2016)	Amount of Win-Win Growth Fund Raised / Administered (including direct financing)	Number of Suppliers Completed CSR Risk Assessment
Rated “Most Outstanding”	KRW 19 billion / KRW 15.1 billion	183

Performance summary

Key Management Issues	Implemented	Major Activities
Expanding communication with suppliers	Year-round	<div>- Workshops for CEOs from the supplier side</div> <div>- Operation of the Supplier Cooperatives (a form of a supplier council)</div> <div>- Year-round operation of the VOS program</div> <div>- Support for the Technology Escrow Service</div> <div>- Support for the Original Certificate Service for the Trade Secret</div> <div>- Support for suppliers establishing overseas operations for LG CNS projects</div> <div>- Financing support for suppliers (Direct financing, Win-Win Growth Fund, and Network Loan)</div> <div>- Fulfillment of 100 percent cash payment (100% cash payment for subcontractors)</div> <div>- CSR risk assessment on major suppliers</div>
Strengthening support programs for promoting supplier competitiveness	As Required	
Expanding financing programs for suppliers	As Required	
Increasing fairness and transparency in business transactions	May to August	

Promoting Fair Business Transactions

Compliance with Fair Trade Guidelines

LG CNS adopted the Four Action Guidelines for Fair Trade as part of our initiatives to ensure full compliance with the “Fair Transactions in Subcontracting Act” as well as to protect our suppliers from unfair treatment in their business transactions with LG CNS.

Action Guidelines for Fair Contracting Practices	Action Guidelines on the Subcontract Review Board	Action Guidelines for Fair and Transparent Selection (Registration) of Suppliers	Action Guidelines for Documentation & Record Keeping
Fair trade guidelines to be complied in contracting a supplier	Guidelines for ensuring compliance with the Fair Transactions in Subcontracting Act for subcontracts exceeding the reference amount & guidelines for reviewing the selection and operation of suppliers	Guidelines on procedures and standards to be complied to ensure fairness in supplier selection and operation	Guidelines on documents to be issued and maintained in transactions with suppliers

Adoption of the Standard Subcontracting Agreement

LG CNS adopted the “Standard Subcontracting Agreement,” developed and recommended by the Korea Fair Trade Commission (KFTC), in the early stage of its implementation. In 2012, we participated in the public-private taskforce led by the KFTC on improving subcontracting practices in the software industry, and helped the commission in developing the “Standard Subcontracting Agreement for the Software Industry”. LG CNS became one of the first companies to adopt the revised standard agreement, taking leadership of the industry’s effort to establish fair contracting practices among large software companies and SMEs. In addition to our transactions with suppliers from the four major software business categories, we use the Standard Subcontracting Agreement in our business transactions with construction companies (four categories) and consignment manufacturers (three categories), in full implementation of the standard throughout our business operations.

Pledge for Jeong-Do Management

As part of our initiatives to eliminate unfair practices and irregularities/corruption in our business transactions with suppliers, LG CNS requires a pledge for Jeong-Do Management to be signed and submitted on all of our subcontracting agreements.

Support Programs for Enhancing Supplier Competitiveness

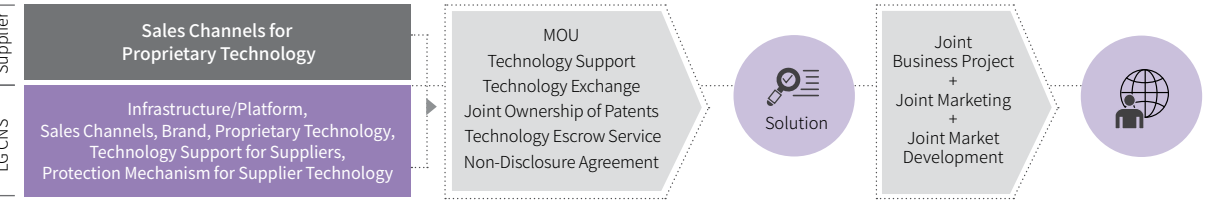
Joint R&D, Marketing and Business Projects

LG CNS strives to share our vision with suppliers through joint R&D, marketing and business projects with suppliers that possess technological capabilities. In particular, we provide support to our suppliers who establish overseas operations for LG CNS projects in order to secure future growth drivers and create a sustainable system of mutual growth.

Supplier Support for Developing and Protecting Technology

As part of our initiatives to promote supplier competitiveness, LG CNS actively pursues joint R&D projects with suppliers to create an opportunity for technology support and exchange. In order to better protect supplier technology, we also seek joint ownership for patents on the products of our joint projects and utilize the Technology Escrow Service for new technologies developed through our collaboration.

Technology Escrow Service	Original Certificate Service for the Trade Secret	NDA (Non-Disclosure Agreement)
A technology protection service under which professional organizations take stewardship of suppliers’ technology to safeguard the supplier’s rights as well as ensure large corporation’s stable access to the technology	A protection mechanism for the proprietary information of suppliers, under which the information is registered to the Korea Institute of Patent Information for protection	A legal agreement between two or more parties that outlines confidential material, knowledge or information that the parties wish to share with one another, but wish to restrict access to or by third parties



Financial Support

In 2010, LG CNS established the Win-Win Growth Fund and has since provided financial support to our suppliers, i.e. working capital for day-to-day operations and financing for mid- to long-term initiatives for building competitiveness (R&D, investment support for new businesses, etc.).

Direct Financing	Zero-interest loans offered from the fund raised independently by LG CNS
Win-Win Growth Fund	Lower interest rates offered from the joint fund raised in conjunction with a financial institution (IBK Bank) with the deposit by LG CNS as the seed capital
Network Loan	Low-interest loans offered by financial institutions based on suppliers’ track record in their business deals with LG CNS

Improvement of Payment Terms

As part of our initiatives to promote the financial soundness of our suppliers, LG CNS does not maintain a fixed payment cycle and makes payment to our suppliers for each contract upon the completion of the internal verification process for project delivery, placing no monthly limit on the number of payouts (made in cash within ten days of verification).

Waiver of Surety Insurance

LG CNS does not require our suppliers to submit surety insurance on all contracts payable after delivery, unless the client makes a specific request.

Cost Adjustment

In business dealings with our suppliers, LG CNS maintains an accommodating position on cost adjustment. In the occurrence of cost-impacting factors, we review and adjust the cost (or contract amount) based on the standard more favorable than the terms specified in the Korea Fair Trade Commission’s Standard Subcontracting Agreement.

HR Support for Suppliers

As part of our HR support for our suppliers, LG CNS operates the U-CAMP Software Developer Training Program to address one of the major HR challenges faced by our suppliers—acquisition of quality talent.

U-CAMP Software Developer Training Program

First introduced in 2006, this recruitment and training program for entry-level employees was developed to help our SME suppliers address challenges in recruiting and training entry-level employees as well as to promote job creation in the software industry. The 15-week program offered for free has recruited and trained over 1,000 entry-level employees for our suppliers through 25 cycles, as of 2017.

Dedicated Organization & Facility for Supplier Training

In addition to a business department that oversees our corporate initiatives for shared growth, LG CNS has in place a training team and facility dedicated to training supplier employees.

Dedicated Organization for Supplier Training
- Operates a supplier training part under the Tech Capability Development Team
Dedicated Facility for Supplier Training
- Operates a training facility at the Sangam DDMC - Operates a supplier training portal, the Partner Campus (http://partnercampus.lgcns.com)

Industry-Academia Cooperation
(Large Corporation/SME/University)

LG CNS organized a tripartite cooperation system between the Yonam Institute of Digital Technology, LG CNS and our suppliers, as part of our efforts to help our suppliers address recruiting and training challenges and create more job opportunities for top programming majors. Through this program, we provide scholarships to the future employees of our suppliers and offer on-the-job training to these students in their final semester before graduation.

Management Support

LG CNS offers management support to our SME suppliers who are comparatively vulnerable to business management risks.

*Sexual harassment prevention training for employees, training for on-site representatives, management consulting for HR and finance

Support for Suppliers Establishing Overseas
Operations for LG CNS Projects

Encouraged by our positive experience in the Korean market and close partnerships with our suppliers, LG CNS is actively developing business opportunities overseas and producing meaningful results in various business areas, most notably in smart transportation. Our endeavors for greater opportunities will serve as a strong driver for sustainable and shared growth with our suppliers.

Open Communication

Year-round VoS (Voice of Supplier) Program

LG CNS operates a dedicated supplier portal, Partner Plus (<http://partnerplus.lgcns.com>), which features a section for open communication to collect the real voice of suppliers year-round and incorporate their feedback into creating a powerful culture of collaboration.

• Collaboration Proposal	Suppliers can make a business proposal that leverages their products or solutions at any time.
• Grievance Resolution	Suppliers can make inquiries and receive counseling on difficulties they experience in their collaboration with LG CNS.
• Improvement Request	Suppliers can raise issues on unreasonable and inconvenient business practices and request improvement.

Workshops & Talk Sessions with Supplier CEOs

LG CNS organizes workshops and talk sessions with suppliers on a regular basis to share our performance and business issues as well as to inform our suppliers on related laws and regulations (data security, protection of personal information, etc.) pertinent to our business transactions with suppliers. These efforts promote mutual understanding and strengthen the foundation for our shared growth.



LG CNS Workshop & Talk Session with Supplier CEOs

Participation in Large Corporation–SME Cooperation Meeting

The Large Corporation–SME Cooperation Meeting offers an opportunity for LG CNS to introduce our policy on business partnerships to SMEs interested in collaboration with LG CNS, as well as for obtaining information on the technology and business strengths of potential SME partners. LG CNS actively participates in these events as part of our ongoing efforts to discover and build business partnerships that create synergy.

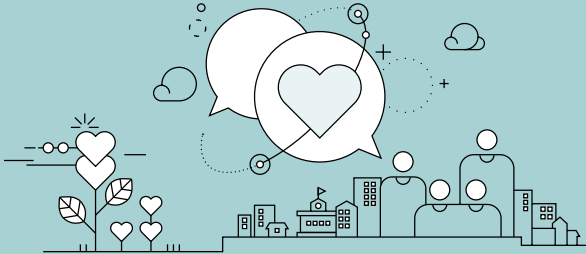
Supplier CSR Risk Assessment & Management

Since 2015, LG CNS has conducted supplier CSR risk assessment on an annual basis. In the assessment, our suppliers are evaluated on their CSR compliance performance in five categories: ethical management, working conditions, labor rights, industrial safety and health, and the environment; the annual review is composed of a self-assessment, request for CSR guidelines and pledge for CSR compliance, and a CSR audit. The Corporate Procurement Department selects assessment targets from suppliers who are subject to our regular supplier assessment, and the results will be incorporated by stages into our regular purchasing review. LG CNS is in the process of establishing a support system, including CSR templates, to provide assistance to our suppliers in their improvement initiatives. Additionally, we provide a comprehensive range of CSR awareness training programs such as lectures on CSR to CEOs and executives from our suppliers, employee CSR training offered as part of our CSR audit, and CSR newsletters.

Supplier CSR Management Performance

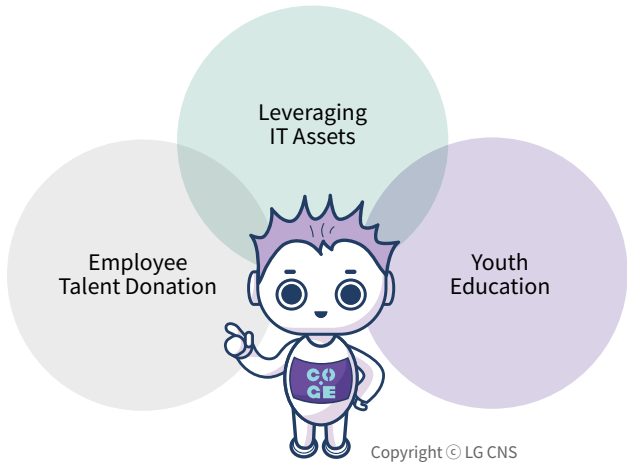
Year	2015	2016
Number of Suppliers Participated	14 (Pilot Run)	183 (Regular Assessment)
Major Activities	- CSR awareness training - Request for CSR guidelines - CSR self-assessment/audit	- CSR awareness training · W/S for supplier CEOs · Employee CSR training offered as part of CSR audit - Request for CSR guidelines - CSR self-assessment/audit - Provision of CSR templates
Criteria for Pledge/Assessment	- Labor rights - Industrial Safety & Health - Environment	- Ethical Management - Labor Rights - Industrial Safety & Health - Environment

Social Contribution

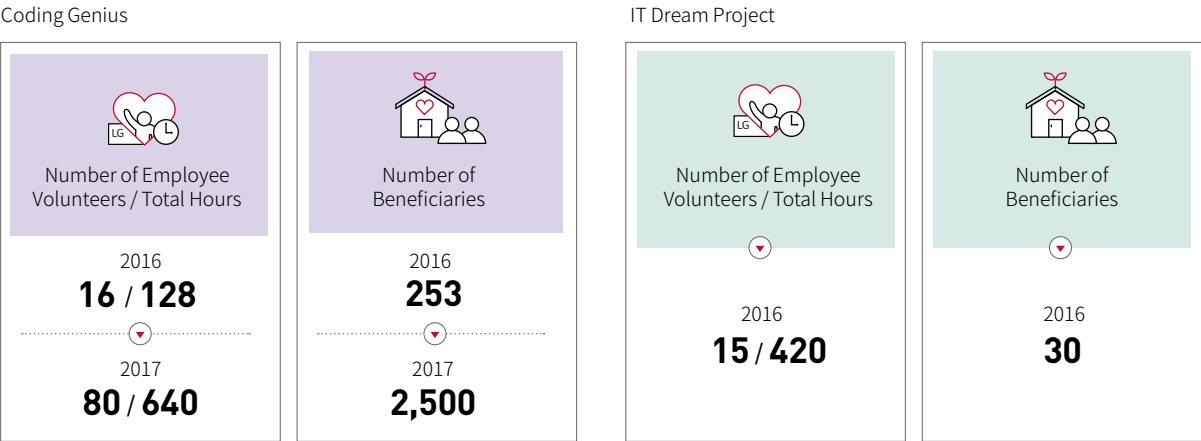


In an effort to create greater impact with our social contribution initiatives, LG CNS does not rely on simple cash donations; we select the beneficiary groups based on a clear strategy and strong principles to identify the most effective means of support, while enhancing the impact of our programs through partnerships with government agencies and professional organizations. LG CNS established the followings as the governing principles for our social contribution efforts: 1) leverage our IT assets, and 2) with the direct participation of our employees, 3) provide youth education programs. Guided by these principles, LG CNS focuses our capabilities and resources on addressing social issues, while carrying out our corporate social responsibility by nurturing tomorrow’s IT experts.

Social Contribution System of LG CNS



2016 Social Contribution Key Performance Indicators (KPI)



*The program will be offered at 20 schools selected by the Seoul Metropolitan Office of Education throughout the year 2017.

Coding Genius

“Coding Genius” is LG CNS’ signature social contribution program that aims to offer an opportunity to learn coding skills to young students, the future leaders of the Forth Industrial Revolution, and help them explore their interests, dreams and future careers through a broad range of experiences and intellectual stimulations that can stoke their curiosity and imagination.

Espousing the highest standards of creative and original convergence education, this program is designed to help young students, regardless of their knowledge of IT, acquire computing concepts and experience and develop problem-solving ability through courses on the concepts and principles of software architecture.

Based on an MOU with the Seoul Metropolitan Office of Education, LG CNS offers this program as part of a broader effort to promote the implementation of the exam-free semester system, the Korean equivalent of the “bridge year” or “gap year” program, in partnership with the Midam Scholarship Committee, an NGO specializing in youth education.

Cases for Software Education

As part of their initiatives to nurture the talent of future generations, national governments around the world are actively embracing software education, with advanced nations like the United States and the United Kingdom having completed their implementation of software education as the core component in their formal education curriculum. Korea also plans to implement software education as mandatory courses in the primary and secondary curriculums from 2018, but software education programs tailored to young students as well as the necessary infrastructure for such programs are still lacking in the country. As a responsible corporate citizen, LG CNS has stepped in to bridge the gaps with our expertise in software and software education and is leading this important initiative for our future generations.

Professional Program Design & Review

Our software education programs have been proven for their effectiveness in a review by the Computer Engineering Department of Seoul National University and the Education Engineering Department of Hanyang University. Designed to motivate students, our curriculum places an emphasis on creativity and collaboration, and utilizes interactive and hands-on learning processes to help students develop capabilities required in the IT environment of the future.




Employee Talent Donation

LG CNS employees actively participate as instructors as well as mentors for students in our youth education programs to offer guidance to young students in their exploration of future careers and help them shape their future.

Program Details

Formulated based on our core solutions, the “Coding Genius” program consists of three components: basic programming, physical programming, and app development & career experience. Young students with varying levels of knowledge in IT can take full advantage of these courses designed to teach the fundamentals of software programming.

Program Details

	Coding Itself Basic Programming <ul style="list-style-type: none">1 Understanding Information System & Software2 Practicing Logical Problem Solving through Flow Charts3 Programing Fundamentals: Learning through Java
	Dynamic IT Physical Programming <ul style="list-style-type: none">1 Introduction to Lego Mindstorms EV32 Making the Robot Move3 The “Do-It-Yourself” Autonomous Bus System
	My Future IT App Development & Career Experience <ul style="list-style-type: none">1 Introduction to IT Professions in the Information Age2 Creating My Own Mobile App (Unplugged)3 Healthy Use of Smartphones

IT Dream Project

The IT Dream Project is our social contribution program that extends effective support to young students who aspire to become IT professionals and help make their dreams come true. This program is organized with a broad range of activities that are designed to help these young students further develop their vision to become IT specialists, such as mentoring by IT specialists from LG CNS, specialized software training, the IT Dream Camp and field trips to IT firms.



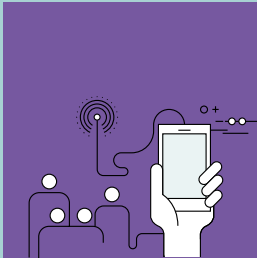
Students participating in a “physical programming” class (Coding Genius)



Students in a mentoring session with an LG CNS employee (IT Dream Project)

Customer Satisfaction

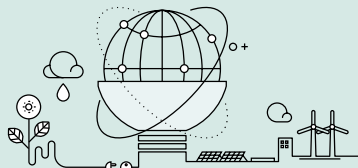
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Environment, Safety & Health

Environmental Safety and Health Management

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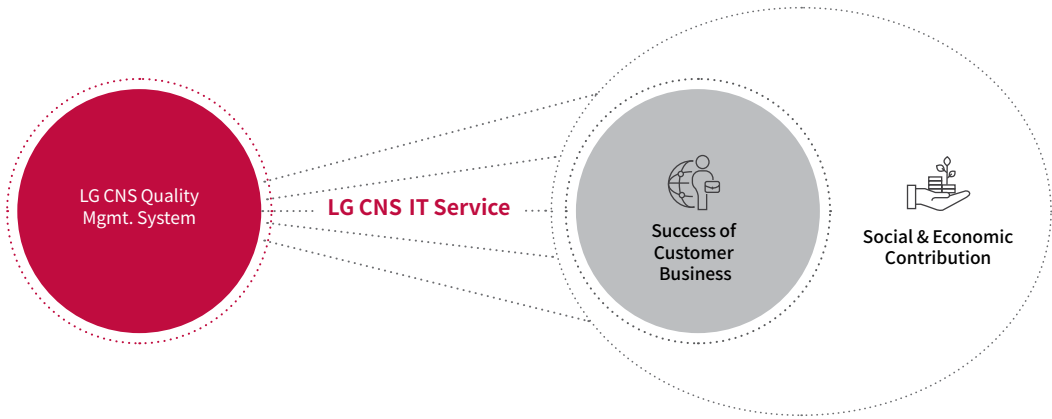
FUNDAMENTAL ISSUES

Customer Satisfaction



Our Quality Management System

LG CNS believes that our business mission is to create customer value based on our technological expertise. We also fully understand that preemptive risk management and quality assurance are essential in large-scale projects, particularly those for the public and financial sectors, as they have overarching economic and social impact. In order to raise employee awareness on quality and accountability, LG CNS has in place a corporate-level quality management system as well as a quality policy to ensure that our quality standard is clearly communicated and implemented internally.



Global Standard Quality Management System

In July 1994, LG CNS became the first SI in Korea to acquire the ISO 9001 certification, an international standard on quality management system, for all of our business locations. We also successfully completed the post-certification assessment as well as the comprehensive recertification process conducted every three years. Over the course of this intensive certification process, we made ongoing business process innovations and completed a quality management system that help our employees deliver best performance.

*ISO 9001 (Quality Management System)

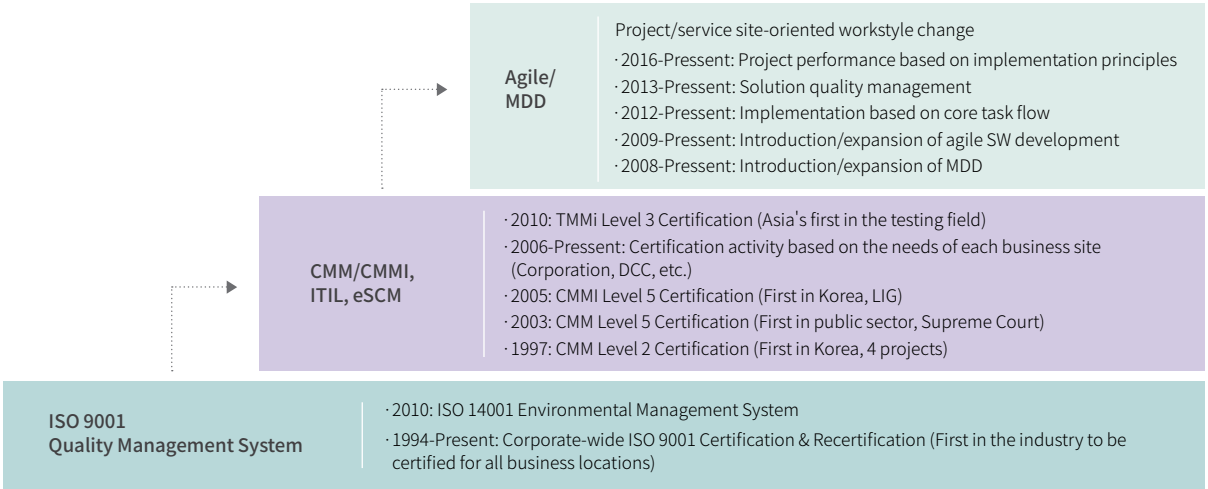
Developed by the ISO (International Organization for Standardization), ISO 9001 is the international standard that specifies requirements for a quality management system (QMS). This standard is used to demonstrate the quality of a QMS (through which products and services are produced and supplied), not the quality of products or services.



*CMMI

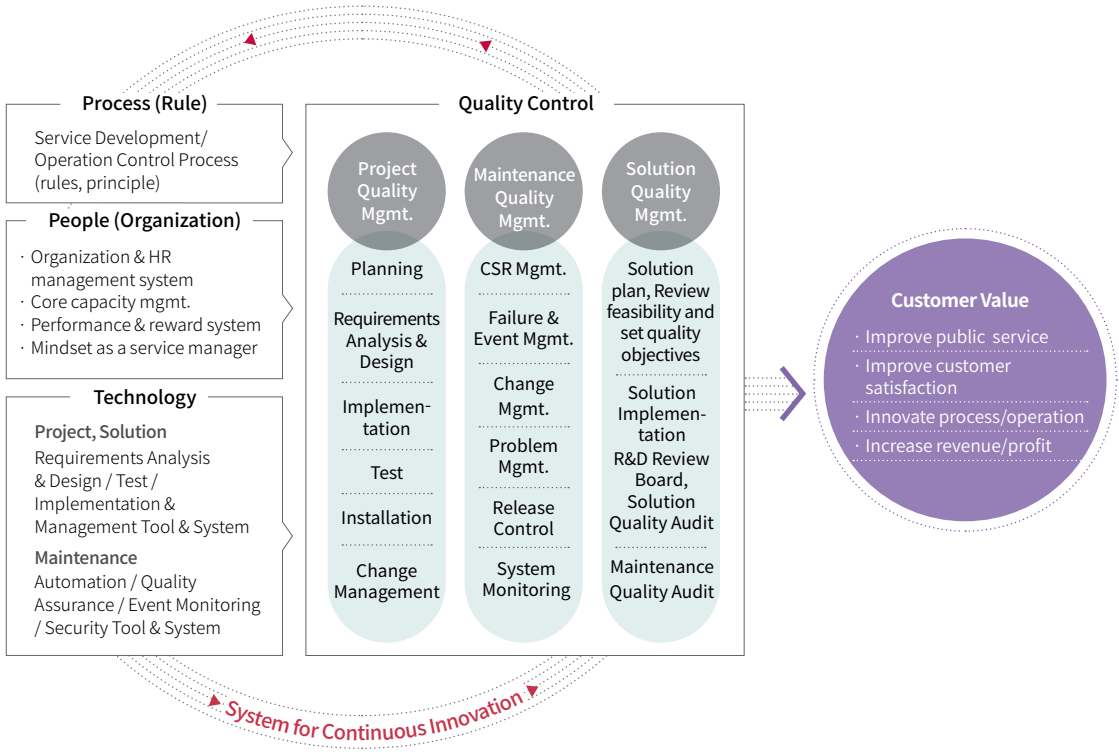
CMMI (Capability Maturity Model Integration) is a standard for software and system quality management jointly developed by the Software Engineering Institute (SEI) of Carnegie Mellon University and the industry. Business organizations use this standard to demonstrate the level of their capability in information system development. A follow-up model to the earlier CMM, a widely adopted standard for software quality appraisal, CMMI is a process-level capability improvement model for software and system technologies and is used for comprehensive assessment of the overall system, including software quality, implementation quality, maturity of operation and process and executorial capability.

Implementation of Global Standard Quality Management System



LG CNS Quality Management

LG CNS operates an integrated quality management system that integrates people, process and technology to comprehensively manage project quality, operation/maintenance service quality and solution quality from the IT service perspective.



Project Quality Management

In order to break from the conventional quality management framework that primarily relies on follow-up management, LG CNS established a quality management process that allows us to preemptively identify risks and address them. As part of these process-based internal quality assurance efforts, we developed implementation rules for mandatory adherence during project performance and established an ongoing monitoring system to ensure strict employee compliance at our offsite projects.

In 2016, we carried out the assessment on 33 major projects through which we identified over 200 improvement points and completed improvement initiatives. LG CNS will continue to establish disciplined internal management as part of our business practice and provide reliable services to our customers.

Operation/Maintenance Service Quality Management

As part of our ongoing efforts to ensure service integrity, deliver uninterrupted IT services and make ongoing improvements, LG CNS established core action requirements that serve as a basis for employee action at our maintenance service sites and ensure the stability and reliability of our services. We also have in place an E2E (End-to-End) quality management system that combines real-time event monitoring with a rapid response system to enable detection immediately following, or prior to, an event.

Solution Quality Management

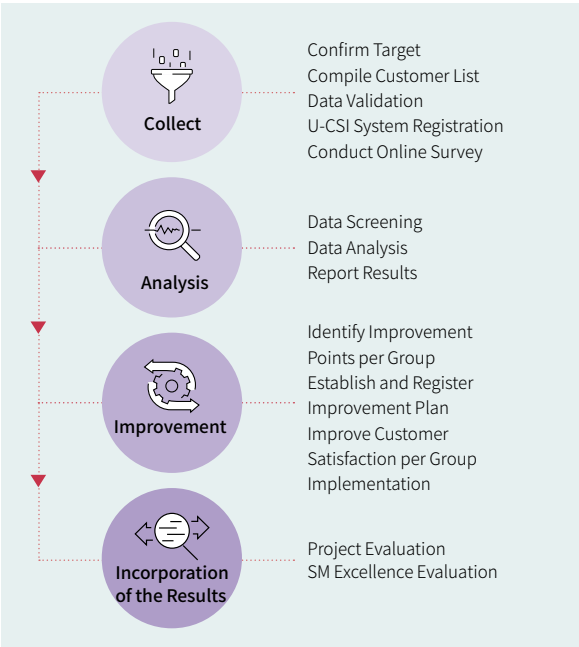
LG CNS operates a solution quality management system to facilitate our quality management efforts throughout the lifecycle of our solutions, from planning and development to maintenance. We also implement quality audit as the final step in our quality assurance process, which includes a review of the sales and maintenance system and screening against intellectual property and information security issues, in order to ensure that only the highest quality solutions are delivered to our customers.

Increasing Customer Satisfaction with Greater Customer Value

As part of our efforts to drive customer business innovation with best-in-class IT service capabilities, LG CNS utilizes diverse channels for customer engagement such as satisfaction surveys tailored to individual customers in improving our service quality and customer satisfaction based on close communication with our customers.

Customer Satisfaction Survey Process

LG CNS performs a broad range of analysis (index analysis, average analysis, loyal group analysis, cross analysis, gap analysis and portfolio analysis) on the quantitative data produced by our customer satisfaction surveys, and based on the results, develops customer satisfaction strategies and carries out improvement initiatives. We also included customer satisfaction and performance in improvement initiatives in the criteria for our internal project and maintenance service assessment to raise employee awareness on customer satisfaction.



Customer Satisfaction Index System (U-CSI)

In 2009, LG CNS developed a customer satisfaction management model based on consultation on customer satisfaction management system provided by the Korea Management Association, and established the U-CSI (Customer Satisfaction Index) to conduct a systematic customer satisfaction survey. Based on the system, we developed a questionnaire tailored to each customer group and conduct a customer satisfaction survey in the second half of the year for maintenance service customers and upon completion for project customers.

Customer Satisfaction Survey Results

In 2016, LG CNS conducted the customer satisfaction survey on 63 internal teams (including five overseas subsidiaries), 36 client companies and 23,331 customers, with a total of 5,853 customers responding to the survey. A close analysis of the results shows that our customer satisfaction increased 1.3 percent from 2015 with an average satisfaction rate of 79.6 percent. It was particularly encouraging that actual service users expressed increased levels of satisfaction across the board, while positive responses increased by 2.4 percentage points from the previous year in the VOC survey, which is directly filled out by customers.

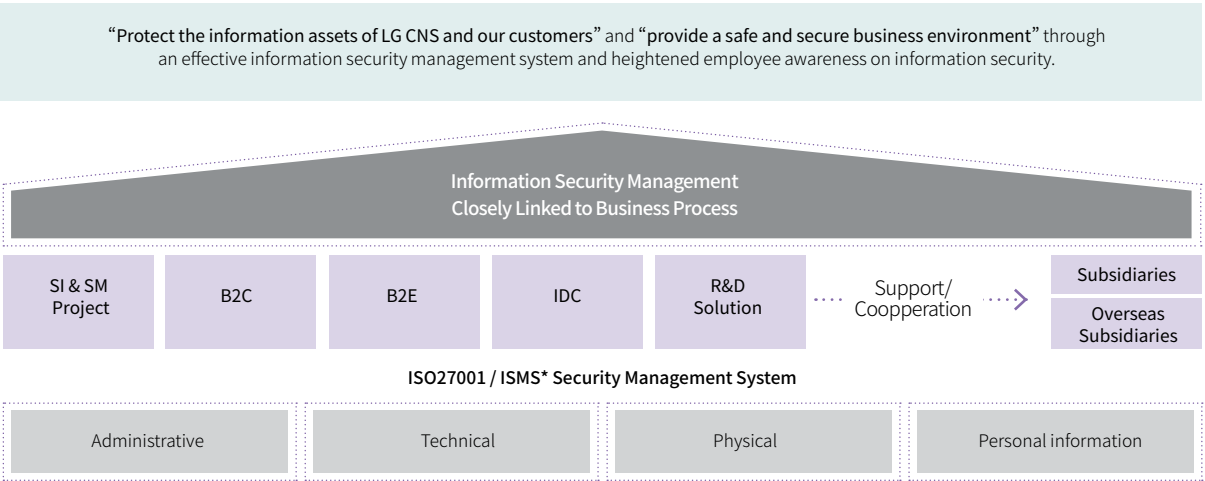
Items		2014	2015	2016
Customer Satisfaction (points)		5.57/7	5.50/7	5.57/7
Customer Satisfaction (%)		(79.6)	(78.6)	(79.6)
Customer Loyalty (%)	Contract Renewal	67.6	65.0	67.6
	Recommend	63.7	61.2	63.7
	Contract Increase	67.9	67.7	70.1

Information Security

Our Response System for Information Security

As part of our strong initiatives to safeguard the valuable personal data and information assets of our customers, LG CNS developed an information security management system based on relevant local and international laws and regulations, including the “Act on Promotion of Information and Communications Network Utilization and Information Protection, Etc.” and the Personal Information Protection Act.”

Information Security System of LG CNS



Establishing Information Security as a Requirement

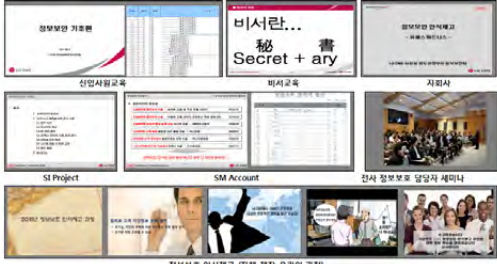
In addition to the official appointment of a CISO (Chief Information Security Officer) and a CPO (Chief Privacy Officer), LG CNS requires all of our business departments to assign an information security officer and an information security manager in order to increase accountability in our information security efforts. The information security manager at each department assists the information security officer (department head) and performs various security management tasks (personnel management, core asset management, communicating security issues, etc.) in his or her organization. LG CNS also holds the Information Security Conference with the participation of business department and B2C division leaders on a semiannual basis to discuss major security policies, security measures and related business plans.



Information Security Conference

Employee Training & Awareness on Information Security

LG CNS requires all of our employees to submit a pledge for information security and to receive training on information security and protection of personal information on an annual basis. In particular, business departments that handle personal information are required to assign a personal information protection manager to further our efforts to protect personal information and prevent data breach. In an effort to raise employee awareness on information security, we also visit our major SI and SM project sites to provide employees with information security training, and send out regular information security bulletins.

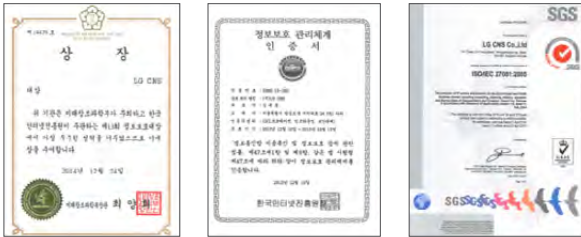


On- and offline Information Security Training

*ISO 27001: International standard and certification on information security management system from the International Organization for Standardization
*ISMS (Information Security Management System): Information Security Management System in Korea

Global Standard Information Security Management System

Our information security management system has acquired local and international certifications such as ISMS, PIMS* and ISO27001, and received the “Best Protection Award” in 2014 for our outstanding efforts in infrastructure protection. LG CNS continuously engages in information security efforts based on a management system in compliance with local and international standards to safeguard the valuable assets and information of our customers.



Local and International Certifications

Eliminating Breach of Personal Data & Core Solution Data

In response to the increasing risk of data breach incidents as well as greater accountability, LG CNS assigned controlled areas in our business locations (2015) and implements stronger security measures compared to general office spaces. In addition to security speed gates, we also utilize metal detectors, X-ray inspections and document inspections to strengthen our physical security barriers, ensuring that no attempt at data theft bypasses our security measures.



Physical Security Control

Strengthening our Personal Information Management System

As part of our efforts to effectively manage personal information, LG CNS provides annual training to employees who handle personal information and conducts annual inspection on our contractors that processes personal data to monitor their practices. We also utilize a system specifically developed to process personal information to perform automated self-assessment and conduct site inspections to monitor employee practices in handling personal information—all of which lead to tangible improvement. Additionally, we conduct regular data-breach drills with all of our employees to raise employee awareness on data breaches and enhance our information security levels.

1	Collect a minimum amount of personal information absolutely needed in providing the service.	5	Implement all necessary security measures such as internal management plan, access control, firewall & vaccine, etc.
2	Do not collect any identification information such as resident registration number and sensitive information such as health data.	6	Destroy the personal information that served its purposes without delay and ensure that the information is completely destroyed and unrecoverable.
3	Use of Information within the collection purposes and do not provide the information to a third party.	7	If personal data is breached, immediately inform the fact to the data subject.
4	In personal information, Disclose the privacy policy if personal information is used.	8	Install notification that informs the operation of surveillance cameras.

Privacy Policy

Information Security Assessment

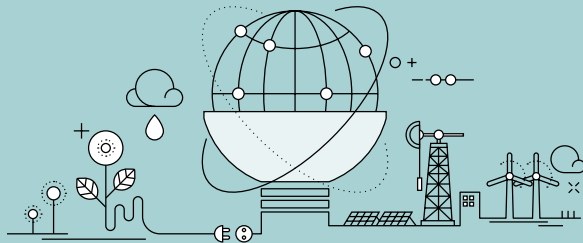
LG CNS manages information security as one of the measures of our organizational performance to systematically and effectively address security risks. We included the information security performance of the organization in the performance assessment criteria for department leaders to further motivate them to monitor the information security performance of their organization and implement measures to prevent security issues. We also conduct monthly security checks on employee PCs and any personal information stored on these machines to thoroughly protect employee PCs, delete personal data not required for the employee's job performance and encrypt the personal data required for the employee's job performance. Additionally, we engage in diverse information security campaigns such as “Clean Desk” and project security compliance activities, and incorporate the results into the information security rating.

Information Security Assessment – Security Rating for Each Organization (Illustrative)

	Status	Security Violations
Current Month	☀	0
Cumulative	☀	0

*LG CSN manages the results of our diverse security efforts in real-time by incorporating them into the Information Security Rating.

Environment, Safety & Health
Environmental Safety and Health Management



LG Safety & Environment Policy and Seven Principles for the Safe Working Environment

Following LG Group's Safety and Environment Policy, LG CNS developed safety and environment policies for the continued implementation of management philosophies and practical actions in response to ever-changing demands. LG CNS further established the seven major principles that all employees must adhere to.

LG Safety & Environment Policy

Based on the philosophy of “human-oriented management,” we recognize that creating a safe work environment is one of the critical factors in our sustainable management and making the world a better place with our smart technologies and services. Thus, we pledge to put the following guidelines in place.

- ✓ We will comply with relevant regulations and meet stakeholder requirements as well as operate safety & environment management systems on a global scale.
- ✓ We will set goals and conduct performance reviews throughout the lifecycle of our services and products to ensure continuous innovation.
- ✓ We will establish a culture of adhering to basic principles and promoting safe and pleasant work environments.
- ✓ We will provide active support to ensure safer work environments for our business partners and communities.
- ✓ We will disclose information transparently and communicate with our stakeholders sincerely.

To ensure compliance with these guidelines, we place the highest priority on implementing safe work environments in all business activities.

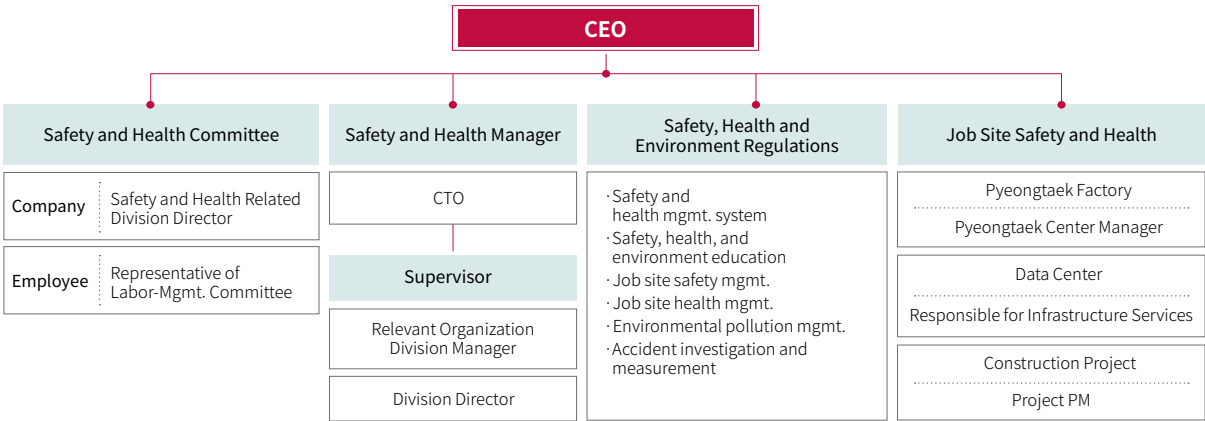
Seven Principles for the Safe Working Environment

- 1 LG CNS should make efforts to prevent safety accidents.
- 2 LG CNS must continuously evaluate safety hazards, eliminate risk factors and conduct safety inspections.
- 3 All employees must comply with regulations and procedures on implementing a safe work environment to prevent accidents.
- 4 All employees should place the highest priority on activities to implement a safe work environment and make efforts not to expose themselves to any danger.
- 5 LG CNS should conduct trainings to ensure compliance, and employees should participate in these trainings whenever possible.
- 6 LG CNS should establish emergency response procedures, and employees should familiarize themselves with their roles and responsibilities in emergency situations through emergency response drills.
- 7 Any safety accidents must be reported immediately after they occur, and corrective and preventive measures must be in place through root cause analyses.

*Personal Information Management System (PIMS)

Safety and Health Management System

In order to promote corporate growth and safety and health for our employees, LG CNS has established and is currently operating the Industrial Safety and Health Committee. We also engage in a series of initiatives including the development of an accident prevention plan, establishment and revision of safety and health management regulations, safety and health training, inspection and improvement of the working environment, and investigation and recurrence prevention of industrial accidents.



Performance summary

Key Mgmt. Issue	Major Activities in 2016	Plan for 2017
Increase Environment, Safety & Health Compliance	Workplace (Data Center, Pyeongtaek Center) safety and health mgmt. system maintenance and internalization	Strengthen safety inspection activities at construction sites, and implement site risk evaluation program
Climate Change Response	Activities for reducing emissions at our data centers in response to the emissions trading scheme - External ventilation for the Sangam IT Center Data Room (Fl. 2-9) - Replacement to High Efficiency UPS at the Sangam IT Center (Fl. 2-9)	Activities for reducing emissions at our data centers in response to the emissions trading scheme - Replacement to Thermo-Hygrostat at the Incheon IT Center - Replacement to High Efficiency UPS at the Gasan IT Center

Workplace Initiatives

Industrial Safety and Health Committee

LG CNS is currently operating the Industrial Safety and Health Committee in order to improve workplace safety and employee health through active employee participation. The committee brings together management and employee representatives on a quarterly basis, discussing and making decisions on important issues concerning workplace safety and employee health.

Emergency Response Drills

Headquarters and Office Facilities

LG CNS conducts regular emergency response drills as part of prevention measures that ensure the safety of all employees in the event of emergency. The corporate headquarters at the FKI Tower works in close cooperation with relevant organizations such as the Seoul Metropolitan Fire & Disaster Headquarters and the Yeongdeungpo-gu Construction and Facilities Team. The headquarters also has in place manuals for diverse scenarios in preparation of disasters such as potential fires and earthquakes.

Data Centers

Asides from regular business offices used by management and employees, our data centers have in place additional response scenarios for all risk factors including natural disasters, power outages, and infrastructure failures that may potentially interrupt center operations. These scenarios were developed as prevention measures to ensure customer information security and stable operations. The data centers conduct weekly situational emergency action drills and comprehensive emergency response drills at least once or more per year. In case of power outages, our data centers have emergency power supply systems and a three-phase emergency power supply plan. Additionally, we have designated a team that protects the lives and safety of the people on the premises and ensure the stable operation and recovery of the data centers in emergency and disaster situations. Our data centers are also equipped with emergency response plans to protect the safety of our employees as well as our facilities.

Workplace Safety Inspection

In order to ensure that no accidents or disasters occur at project sites, the Safety and Environment/Construction Management Team conducts regular safety inspections of workplaces, investigates potential hazards and risk factors, and makes improvements accordingly.

Results of the 2016 Environment & Safety Assessment

Item	Safety Inspection Activity
Business Location	<div><div>FKI Tower Sangam DDMC</div><div>Pyeongtaek Data Center</div></div> <div><div>· 1H/2H Workplace safety inspection (July and December)</div><div>· Office space environment hazard assessment (October)</div></div> <div><div>· Safety and health management system maintenance and internalization in accordance with laws and company regulations</div><div>· Response measures on the results of LG Safety and Environment Diagnosis</div><div>· Sangam IT Center: Improvements - 43, Actions Taken - 42, Completion Rate - 98%</div><div>· Pyeongtaek Center: Improvements - 73, Actions Taken - 71, Completion Rate - 97%</div></div>
Construction Project	<div><div>· Education on compliance with industrial safety and health regulations at the start of the project and danger assessment</div><div>· Job site safety inspection and frequent monitoring during construction stage</div></div>



Corporate-wide Safety and Environment Seminar

Visiting Safety Academy (Aug 2016-Sep 2016)

To alleviate inconveniences of LG Group employees who may have difficulties participating in offsite training programs, LG CNS operates the visiting safety academy program. In 2016, LG CNS conducted safety training on “the importance of safety and response guidelines in case of accidents” at five different locations including LG Display (Paju, Gumi), LG Chem (Ochang, Yeosu), and LG Electronics (Gumi). In 2017, LG CNS plans to conduct training sessions on the importance of safety management, regulation compliance, risk assessment, and on-site safety management activities for LG Group employees as well as for construction workers at our construction project sites.

Environment, Safety & Health (ESH) Certifications

Environment, Safety & Health (ESH) Management System Certifications

LG CNS has in place the Environment, Safety & Health (ESH) Management System. Based on the system, we develop action plans (Plan), act and operate according to said plans (Do), and perform checks (Check). Afterwards, we share feedback on the results and act (Action) accordingly. Through this P-D-C-A cycle, we continuously make improvements. These efforts have led to the acquisition of the Environment Management System Certification (ISO14001) in 2010 and the Safety and Health Management System Certification (OHSAS 18001) in 2014, which have been maintained through post-certification and recertification processes.

Change Management

Environment, Safety & Health Training

LG CNS seeks to develop safety, health and environment capabilities of our employees and establish the Environment, Safety and Health Management (ESH) System. To that end, LG CNS provides employees with on- and off-line training including safety and environment seminars tailored to project managers and ESH staff.

LG Safety and Environment e-Learning (Dec 2015-Jan 2016)

LG CNS clearly recognizes the importance of safety and environment as an important market-leading management and acts accordingly. In order to prevent accidents and establish LG’s unique culture of safety and environment, LG CNS conducted an e-learning program for all of our employees, touching on the “importance of safety and environment and compliance with policies and basic principles.”

Corporate-wide Safety and Environment Seminar (May 2016)

In order to contribute to accident prevention and the establishment of a culture of safety for all of employees, LG CNS hosted a corporate-wide safety and environment seminar with the participation of employees involved in workplace and construction site safety and health and other employees interested in safety and environment. The seminar featured the Director of Disaster Prevention Division of the Seoul Nambu district branch of the Ministry of Employment and Labor as a guest lecturer.

ISO 14001

The ISO 14001 is a certification system that determines whether an environment management system, which identifies all factors at all levels of corporate operation that affect the environment and improves environmental outcomes, complies with international standards.

OHSAS 18001

The OHSAS 18001 is an international certification system that assesses whether an organization’s safety and health management system, which identify and continuously manage potential risk factors in the organization’s operations, complies with international standards in order to create a safe and healthy work environment.

Data Center Environment Certifications & Awards

LG CNS has sought to improve public opinion and create a foundation for the industry growth through the improvement of energy efficiency (consumption reduction) of our data centers, which have high energy consumption. Accordingly, LG CNS has been engaging the following initiatives:

Green DC Certification

LG CNS has received the Green Data Center Certification, which is presented by the Korea Information Technology Service Industry Association to environment-friendly data centers. The LG CNS Sangam IT Center has received consecutive A ratings from 2013 to 2015. The Busan data center has received the highest rating, A+++, consecutively from 2014 to 2016. Furthermore, the Incheon center has received a rating of A+ in 2016. These ratings demonstrate LG CNS’s achievements in the creation and operation of eco-friendly data centers.

Brill Awards

In recognition of unique, technology-intensive innovations in 2014 (having considered energy efficiency and safety as early as the design stages), the LG CNS Busan Data Center received the Brill Award for Outstanding Data Center in Design Category—the most prestigious annual award presented by the only data center certification organization in the world, the Uptime Institute. The design of the Busan Data Center included innovations such as the world’s first and only “wind path,” a data center air duct, as well as a “built-up exterior air conditioning system,” a proprietary patented technology. In particular, it is the first data center in Korea to feature a seismic isolation system, which ensures uninterrupted services even in the event of an earthquake of magnitude 8.0 on the Richter scale. Such attentive disaster and accident prevention received recognition within the industry.

*Brill Awards: The Brill Award is the most prestigious award in the data center industry, presented by the only data center certification organization in the world, the Uptime Institute. Of the 23,000 data centers around the world, 100 facilities from 19 countries are chosen in the initial phase. Following an assessment by 90 experts, a total of 18 data centers are chosen for the Brill Award for Outstanding Data Center.

Climate Change Response

Based on the recognition that climate change not only poses a threat but also presents an opportunity for business growth, LG CNS engages in a broad range of initiatives to make our business locations greener such as creating environment-friendly office spaces and green data centers. We are also developing new growth engines by integrating our capabilities in information technology with energy business models. For instance, we believe that our experience and capabilities in energy efficiency can drive multifaceted CO2 reduction efforts in the power plant sector and the building management sector (hospitals, hotels, resorts and mega skyscrapers), and that these new and integrated business models may expand opportunities for group-wide collaboration to create greater synergy.

Response to Environmental Regulations

Pursuant to the Framework Act on Low Carbon, Green Growth, the Korean government introduced the GHG and Energy Target Management System (TMS), under which the government allocates GHG emissions allowance to a business and encourages businesses to achieve their reduction targets through voluntary reduction efforts and emissions trading.

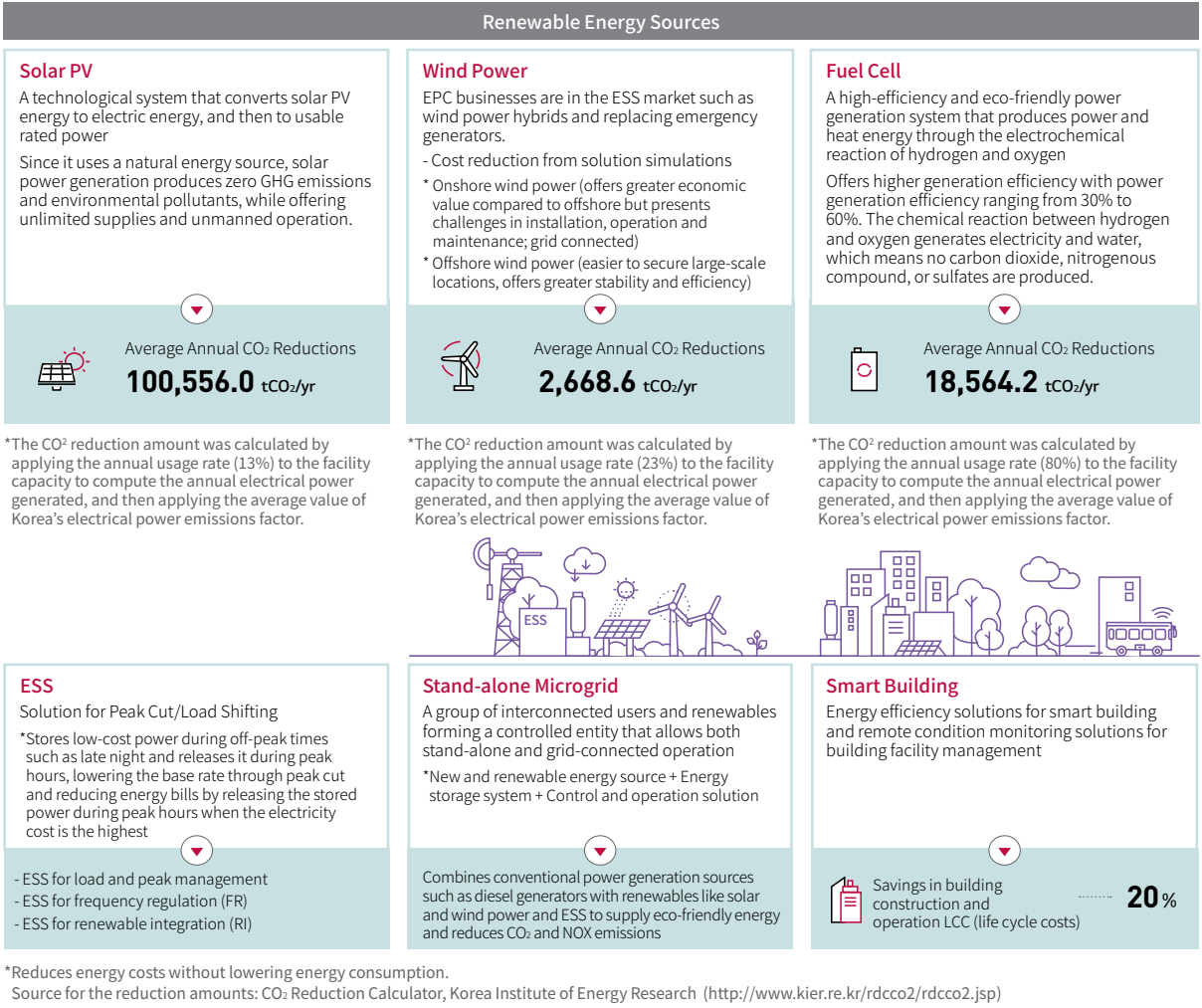
Our Sangam Data Center was designated as a controlled entity for the TMS in 2015. In order to effectively respond to energy related regulations, LG CNS developed and implemented the GHG Inventory System, which automatically measures the amount of energy used at the data center and calculates the amount of GHG emissions generated in real-time. We also participate in the CDP (Carbon Disclosure Project), a global project that enables companies, cities, states and regions to measure and manage their environmental impacts, as part of our active response to external demand for environmentally-minded business management and practices.

Climate Change Response Initiatives & Our Performance

Environment-friendly IT System

LG CNS integrates information technology with energy business models to offer solutions for all energy industries and sectors, from renewable power generation to energy storage and energy consumption. For instance, our Smart Green Solution (SGS) is loaded with forecasting technologies (weather forecasting, power demand and load forecasting) and a broad range of optimization algorithms acquired from our energy business experience and allows economical operation via a multi-purpose EMS that adapts to any operational environment and site conditions.

Our highly-versatile SGS offers a wide range of services from general EMS (for peak and load management) and BEMS/FEMS (for building and factory energy management) to microgrid EMS, which enables stand-alone operation through monitoring and management of solar and wind power generation and efficient management of distributed energy resources. Having proven its reliability with a large number of successful applications, the SGS is continuously building its extensive portfolio of green reference cases through site application for different energy sources.



Environment-friendly, Green Data Centers

As part of our efforts to reduce the power consumption of our data centers, one of the most power-intensive facilities in all of industry, LG CNS continuously develops energy efficiency solutions and implements them in our data center operations. We are also continuously improving our building energy consumption by introducing renewable energy sources and retrofitting our facilities with energy efficiency equipment.

LG CNS also continuously develops and implements GHG emissions reduction solutions to make our data centers greener. For instance, we developed the Smart Green Solution (SGS) to facilitate the integrated operation of data center infrastructure. The SGS enables the integrated monitoring of facility infrastructure (electricity, mechanical, temperature/humidity, lighting, etc.) and security facilities, which allows the effective management of server room energy efficiency based on failure detection, analysis and control and thereby contributing to the reduction of GHG emissions.

In addition, LG CNS developed the world’s first and eco-friendly “built-up exterior air conditioning system,” a proprietary patented technology that utilizes natural exterior air, and implemented this

system to all of our data centers, while developing a dedicated HVAC system for cooling the heat from data center servers and introduced high-efficiency UPS and LED lighting to all of our data centers as part of our efforts to further reduce GHG emissions.

Energy Saving Performance from the Environment-Friendly IT System (Sangam IT Center)					
Item	LG CNS Sangam IT Center				Total
Detail	LED Lighting Replacement (FL: All)	Mechanical Room External AC (FL: B3-4)	Computer Room External AC (FL: 2-9)	High-Efficiency UPS Replacement (FL: 2-9)	-
Reduction (tCO ₂ eq)	2014 : 223 2015 : 446 2016 : 446 2017 : 446 Cumulatively : 1,562	150 : 404 404 : 404 404 : 404 404 : 404 1,362 : 1,362	- : 560 - : 1,366 560 : 1,366 1,366 : 1,366 1,926 : 1,926	- : 69 69 : 278 278 : 278 278 : 278 625 : 625	373 : 919 919 : 1,689 1,689 : 2,495 2,495 : 2,495 5,475 : 5,475

SUSTAINABLE PERFORMANCE	
Economic Performance	73.P
Social Performance	74.P
Environmental Performance	76.P

SUSTAINABLE PERFORMANCE & APPENDIX

APPENDIX	
GRI Index	77.P
UN SDGs	79.P
Human Rights Policy	80.P
Report Summary	81.P

Economic Performance

Consolidated Income Statement

(Unit: KRW M)

Item	2014	2015	2016
Sales	3,315,367	3,227,462	3,036,923
Cost of Sales	2,888,203	2,862,980	2,624,213
Gross Profit	427,164	364,482	412,710
Selling & Marketing Expenses	272,786	279,947	256,223
Operating Income	154,378	84,535	156,487
Financial Income	5,571	7,748	8,496
Financial Expenses	21,977	24,718	23,272
Gain (or Loss) from Investment in associates	1,997	-259	5,690
Other Operating Income (or Expenses)	-17,495	697	-13,746
Profit before Income Tax Expense	122,474	67,581	133,654
Income Tax Expense	42,895	24,208	43,044
Profit from Continuing Operations	79,579	43,373	90,610
Profit from Discontinued Operations	372	-796	-1,228
Profit for the Year	79,952	42,577	89,382

Consolidated Balance Sheet

(Unit: KRW M)

Item	2014	2015	2016
1. Current Assets	1,504,232	1,556,376	1,495,346
Trade Receivables, net	1,041,684	961,886	764,892
Inventories, net	106,413	117,038	63,643
Other Current Assets	356,135	477,452	666,811
2. Non-Current Assets	731,860	803,261	859,618
Affiliate and Joint Investments	45,276	54,331	64,959
Property, Plant and Equipment, net	537,772	588,294	615,463
Intangible Assets	67,883	65,861	55,781
Other Non-Current Assets	80,930	94,775	123,416
Total Assets	2,236,092	2,359,637	2,354,963
1. Current Liabilities	1,043,179	976,648	1,036,389
2. Non-Current Liabilities	367,923	530,871	380,290
Total Liabilities	1,411,102	1,507,520	1,416,679
1. Capital	93,820	93,820	93,824
Issued Capital	47,188	47,188	47,198
Capital Surplus	46,632	46,632	46,626
2. Retained Earnings	735,363	763,316	851,321
3. Accumulated Other Comprehensive Loss	-2,202	-2,953	-1,467
4. Other Reserves	-6,419	-6,522	-7,296
5. Non-Controlling Interests	4,428	4,456	1,903
Total Shareholders' Equity	824,990	852,117	938,284
Total Liabilities and Shareholders' Equity	2,236,092	2,359,637	2,354,963

*For more detailed information, please refer to our Business Report (<http://dart.fss.or.kr>)

Social Performance

Government Subsidy

(Unit: KRW M)

Project Name	Lead Division	Amount
Small Airplane Integrated Avionics System Development Project	CEO of KAIA	104
Development of Hybrid Energy Storage System with Emergency Power Features	KETEP	27
NIA Big Data Applied Smart Service Pilot Project	NIA	2
2016 CHAMP	HRD Korea	286
ICT based ESCO Project	KEMCO	40

Economic Performance Distribution

(Unit: KRW 100M)

Item	Stakeholder	Item	Amount
Korea	Employee	Salary & Bonus	3,820
		Benefits	314
		Severance Compensation	642
		Training Budget	52
	Supplier	Goods Outsourcing Expenses	5,562
		Repair Expenses	1,984
		Outsourcing Expenses	4,687
	Central and Local	Corporate Taxes	258
		Donations	26

*The 2016 data was prepared based on a separate standard.

Employee

1. By Region

Category	No. of Employees	Percentage (%)
Korea	5,891	89.8
China	342	5.2
USA	85	1.3
Brazil	52	0.8
Colombia	44	0.7
Europe	30	0.5
India	30	0.5
Malaysia	25	0.4
Greece	21	0.3
Indonesia	20	0.3
Japan	16	0.2
Other*	6	0.1
Total	6,562	100

*Other: Thailand, Uzbekistan, Qatar, Bahrain

2. By Job

(Unit: Number of Employees)

Category	By Job	Total
Korea	Office Staff	5,816
	Production Staff	53
	Executives	22
	Total	5,891
Overseas	Office Staff	670
	Production Staff	0
	Executives	1
	Total	671
Overall	Office Staff	6,486
	Production Staff	53
	Executives	23
	Total	6,562

3. Female Employees

unit	2014	2015	2016
No. of Employees	1,663	1,582	1,428
Percentage (%)	24.3	24.2	24.2

4. By Age Group

(Unit: No. of Employees)

Age Group	2016
20s and under	623
30s	2,230
40s	2,680
50 or older	358
Total	5,891

5. Percentage of Irregular Employees

(Unit: No. of Employees)

2014	2015	2016
1.62	1.02	0.42

6. Employees with Disabilities

(Unit: No. of Employees)

Category	2016
With Disabilities	66*

*LG CNS: 37, Haengbokmaru: 29

Job Creation

(Unit: No. of Employees)

Category	2014	2015	2016
Male	152	147	100
Female	40	50	32
Total	192	197	132

Industrial Accident

Category	Unit	2014	2015	2016
No. of Cases	Case	1	2	1
Accident Rate	%	0.01	0.03	0.01

Employee Education & Training

Category	Unit	2014	2015	2016
No. of participants	No. of Employees	6,733	6,353	6,289
Training hours per employee	Time	78.4	71.7	49.0

*Including HQ employees based in overseas business locations

Parental Leave

(Unit: No. of Employees)

Category	2014	2015	2016
Parental Leave Beneficiaries	100	103	147

*Data presented here is based on our operations in Korea.

Memberships & Associations (71 in total)

ITSA	KOITA	KSA	KOPIA
KOSA	KECA	KENCA	KNREA
FKII	KACI	KDIA-Seoul	KOTRA
KORCHAM	DMC Tenant Association	KCLA	KFCF
*As of 2016			

Management System Certifications

Certification Title	First Certification (Y. M.)	Validity (Y. M.)	Certification Range	Remarks
ISO14001	2010.09	2018.09	Smart Energy Biz Div. Fin/Gov Biz Div. Gov Biz Officer Fin/Gov Biz Div. Transport Biz Officer Fin/Gov Biz Div. Fin/Gov Implementation Officer	Planned for corporate-wide expansion in 2018
OHSAS18001	2014.08	2020.07	Smart Energy Biz Div. Fin/Gov Biz Div. Gov Biz Officer Fin/Gov Biz Div. Transport Biz Officer Fin/Gov Biz Div. Fin/Gov Implementation Officer	
ISO27001	2016.04	2019.04	Busan Data Center	
ISMS	2016.12	2019.12	IDC Operation (co-location, infrastructure operation, security control)	
ISO9001	1994.07	2020.07	The Provision of IT (Information Technology) Construction and Maintenance Services including Consulting, Analysis, Design and Development of Software and Systems Integration for Energy, Transportation, Manufacturing, Healthcare, Banking & Finance, Financial Automation, Public, Defense, Telco & Media, ICBMA (Internet of Things, Cloud, Big Data, Mobile, Artificial Intelligence), Business Commerce and Cross industries	

Environmental Performance

Key Environmental Index

Item	Criteria	Unit	2014	2015	2016
Energy	Consumption	TJ	713	698	585
Greenhouse Gas	Emissions	tCO ₂ eq	33,107	31,843	26,610
Water (water and sewage usage volume)	Consumption	Ton	12	12	13
Waste Water	Consumption	Ton	16	15	16
COD	Amount	Ton	0	0	0
Waste	Amount	Ton	12	25	8

*The data presented here is based solely on the environmental performance of the Sangam IT Center (pursuant to the “Environmental Information Disclosure Policy” from the “Enforcement Decree of the Support for Environmental Technology and Environmental Industry Act”).

*Included in the emissions calculation for the Greenhouse Gas Emission Trade Scheme are: electricity, cold/hot water, diesel fuel (power generator) usage volume

*Not included in the emissions calculation for the Greenhouse Gas Emission Trade Scheme are: water consumption and waste discharge volume

Appendix

GRI G4 Index (Core Option)

GENERAL STANDARD DISCLOSURE					
Aspect	Index	Indicator	Page	Remarks	Internal Validation
Strategy & Analysis	G4-1	The statement from the most senior decision-maker about the organization's sustainability	2		●
Organization Profile	G4-3	The name of the organization	4		●
	G4-4	The primary brands, products, and services	4		●
	G4-5	The location of the organization's headquarters	4		●
	G4-6	The number and name of the countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report	4		●
	G4-7	The nature of ownership and legal form	6		●
	G4-8	The markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	4		●
	G4-9	Scale of the organization (i.e. number of employees, operations, net sales, etc.)	4		●
	G4-10	The total number of employees	4		●
	G4-12	The organization's supply chain	56-58		●
	G4-13	Any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	N/A	No significant changes	●
	G4-14	The precautionary approach or principle is addressed by the organization	81		●
	G4-15	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	76-80		●
	G4-16	Memberships in associations (such as industry associations) and/or national/ international advocacy organizations in which the organization.	76		●
Identified Material Aspects and Boundaries	G4-17	All entities included in the organization's consolidated financial statements or equivalent documents	73	Business Report	●
	G4-18	The process for defining the report content and the Aspect Boundaries	81		●
	G4-19	All the material Aspects identified in the process for defining report content	8-11		●
	G4-20	Aspect Boundary, for each material Aspect, within the organization	8-11		●
	G4-21	Aspect Boundary, for each material Aspect, outside the organization	8-11		●
	G4-22	The effect of any restatements of information provided in previous reports, and the reasons for such restatements	N/A	None (the first CSR Report)	●
Stakeholder Engagement	G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries	N/A	None (the first CSR Report)	●
	G4-24	List of stakeholder groups engaged by the organization	8		●
	G4-25	Basis for identification and selection of stakeholders with whom to engage	8		●
	G4-26	Organization's approach to stakeholder engagement	8		●
Report Profile	G4-27	Key topics and concerns that have been raised through stakeholder engagement, and the organization's response to them	8-11		●
	G4-28	Reporting period (such as fiscal or calendar year) for information provided	81		●
	G4-29	Date of most recent previous report (if any)	N/A	None (the first CSR Report)	●
	G4-30	Reporting cycle (such as annual, biennial)	81		●
	G4-31	Provide the contact point for questions regarding the report or its contents	81		●
	G4-32	Report the 'in accordance' option the organization has chosen (including GRI Index, External Assurance Report, etc.)	81		●
	G4-33	The organization's policy and current practice with regard to seeking external assurance for the report	81		●
Governance	G4-34	The governance structure of the organization, including committees of the highest governance body	6		●
Ethics and Integrity	G4-56	The organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	53		●
SPECIFIC STANDARD DISCLOSURE					
Environmental					
Energy	EN3	Energy consumption within the organization	76	The environmental data is based solely on the performance of the Sangam IT Center (the only LG CNS location under the scope of the 'Environmental Information Disclosure Policy').	●
	EN6	Reduction of energy consumption at the Sangam IT Center	70-71		●
Water	EN8	Total water withdrawal by source	76		●
Emissions	EN15	Direct Greenhouse Gas (GHG) discharge (Scope1)	76		●
	EN19	Reduction of Greenhouse Gas (GHG) emissions	70-71		●
Labor Practice and Decent Work					
Employment	LA1	Total number and rates of new employee hires and employee turnover by age group, gender, and region	75		●
	LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	52		●
Training and Education	LA9	Average hours of training per year per employee by gender, and by employee category	75		●
	LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	49, 50, 52		●
Diversity and Equal Opportunity	LA12	Composition of governance bodies and breakdown of employees per employee category	74		●









SPECIFIC STANDARD DISCLOSURE					
Aspect	Index	Indicator	Page	Remarks	Internal Validation
Society					
Local Communities	SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	76	100%	●
	SO2	Operations with significant actual and potential negative impacts on local communities	70~71	None	

G4 General & Specific Standard Disclosures, Full List

GENERAL STANDARD DISCLOSURE					
Aspect	Index	Indicator	Page	Remarks	Internal Validation
Strategy & Analysis	G4-2	Description of Key impacts, risks, and opportunities	9~11		●
Governance	G4-38	Top governance committee and the committee composition	6		●
	G4-39	Whether the Chair of the highest governance body is also an executive officer	6		●
	G4-48	The highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered	7~9		●
	G4-51	The remuneration policies for the highest governance body and senior executives		Business Report p.348~350	●
Ethics and Integrity	G4-57	The internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines	53~54		●
	G4-58	The internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines	53~54		●
SPECIFIC STANDARD DISCLOSURE					
Economic					
Economic Performance	EC1	Direct economic value generated and distributed	3, 5, 73~74		●
	EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	70~71		●
	EC4	Financial assistance received from government	74		●
Market Presence	EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation		No difference in basic salary by gender	●
Indirect Economic Impacts	EC7	Development and impact of infrastructure investments and services supported	59~60		●
	EC8	Significant indirect economic impacts, including the extent of impacts	3, 56~61		●
Procurement Practice	EC9	Proportion of spending on local suppliers at significant locations of operation	74		●
Environmental					
Products and Services	EN27	Extent of impact mitigation of environmental impacts of products and services	70~71		
Labor Practices and Decent Work					
Occupational Health and Safety	LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	75		●
Equal remuneration for women and men	LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation		No difference in basic salary by gender	●
Human Rights					
Non-discrimination	HR3	Total number of incidents of discrimination and corrective actions taken		No such incidents	●
Society					
Anti-corruption	SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	53~55		●
	SO4	Communication and training on anti-corruption policies and procedures	53~55		●
	SO5	Confirmed incidents of corruption and actions taken	53~55		●
Grievance Mechanisms for Impacts on Society	SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	54		●
Product Responsibility					
Product and Service Labeling	PR5	Results of surveys measuring customer satisfaction	64		●
Customer Privacy Communications	PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data		No complaints or breaches	●

The United Nations Sustainable Development Goals (SDGs)

In September 2015, at the United Nations, 193 world leaders officially adopted the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) as a new global commitment for sustainable development. Expected to serve as a roadmap for sustainable development from 2016 through 2030, this future development framework comprises seventeen goals and 169 targets covering a broad range of economic, social and environmental issues, and places a particular emphasis on the role of civil society by highlighting the importance of the investments, solution development and business activities carried out by private corporations across the world. Through these initiatives for sustainable growth, the U.N.'s new development framework aims to reduce the negative impact of business on the sustainable development agenda and encourages corporations to make positive contributions. After carefully reviewing the seventeen Sustainable Development Goals and associated targets, and assessing their relevance to our own goals and businesses, LG CNS set a strategy that incorporates the SDGs with high relevance to our businesses into our sustainability management efforts, disclosing to our stakeholders our progress and performance in this area.

	.....	Ensure healthy lives and promote well-being for all at all ages	| 52p
	.....	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	| 49-52P
	.....	Achieve gender equality and empower all women and girls	| 75P
	.....	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	| 48-53P
	.....	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	| 14-46P
	.....	Make cities and human settlements inclusive, safe, resilient and sustainable	| 70-71P
	.....	Take urgent action to combat climate change and its impacts	| 70-71P
	.....	Strengthen the means of implementation and revitalize the global partnership for sustainable development	| 79P

LG CNS Global Labor Policy

As part of our commitment for our management principle, “Human-oriented Management,” LG CNS established and implemented the Global Labor Policy to ensure that all of our stakeholders—our employees, customers and suppliers— are respected as human beings and have their dignity valued. LG CNS fully complies with the labor laws and regulations of the countries where we operate, and strives to ensure employment stability and provide our employees with the prevailing wage to fulfill our social and economic responsibility. As a responsible corporate citizen, LG CNS strongly supports the principles prescribed by the United Nations Universal Declaration of Human Rights and the United Nations Commission on Human Rights Guiding Principles on Business and Human Rights.

Article 1. (Respect for Human Dignity)	All employees shall be respected, and they shall not be treated in any severe and inhumane way including sexual harassment and abuse, corporal punishment, mental and physical coercion, verbal abuse, and irrational restriction at work.
Article 2. (Prohibition of Discrimination)	The operation of our human resource system including employment, promotion, compensation, and training opportunities, and the provision of products and services, all stakeholders shall not be discriminated on the grounds of nationality, race, age, gender, sexual orientation, disability, pregnancy, religion, membership of political organization and/or labor union, and marital status.
Article 3. (Avoidance of Forced Labor)	All employees shall not be forced to work against their free will with their mental and/or physical freedom restricted by means of assault, threat, and confinement. All labor shall be based on free will, and all employees shall not be required to hand over their identification card, passport, and/or work permission card issued by the government on condition of employment.
Article 4. (Women and Child Labor)	Children shall not be employed for any kind of job position. “Children” signifies those aged under a certain minimum age standard, and the minimum age for work is determined by the regulations of each country and region. Underage and/or pregnant employees are excluded from dangerous tasks. In accordance with ILO agreements ratified by each country, working conditions including age regulations shall be observed.
Article 5. (Working Hours)	Working hours and days shall be determined in accordance with the regulations of each country and region concerning regular and overtime working hours and holidays.
Article 6. (Wage and Welfare)	All employees shall be paid in accordance with the labor-related regulations of each country and region concerning minimum wage, overtime working hours, and legal welfare.
Article 7. (Freedom of Association)	In accordance with the labor-related regulations of each country and region, the freedom of association and the right to bargain collectively shall be secured. All employees should be guaranteed an environment where they can communicate with the management with no fear for discrimination, retaliation, threat, and harassment.
Article 8. (Protection of Personal Information)	The personal information of all stakeholders shall be strictly protected, and shall not be leaked or utilized for any other use without prior approval of the relevant stakeholder. The company shall deliver only true information, avoid any false information, and shall fulfill this promise.

Report Summary

Report Overview

LG CNS hereby publishes our inaugural edition of sustainability report to disclose our progress and performance in sustainability management. This report will serve as a communication channel with our stakeholders, through which we present a transparent account of our initiatives and progress to stakeholders, seek their opinions and incorporate them into our business management activities.

Reporting Period

The report was prepared based on data from the calendar year 2016, from January 1 to December 31. In some instances, we have disclosed historical data for the three years since 2014 in order to compare changing trends and patterns. We also included data from 2017 in instances where we considered the timeliness and importance of the information to be critical.

Reporting Scope

LG CNS holds different levels of control on our business locations, which is typical for an IT business, and our business locations have varying levels of impact on material issues. As such, this report limits the boundary of qualitative and quantitative performance reporting to LG CNS based on the standalone financial statement under the IFSR. However, the sales figures presented in this report, the key performance indicator for all of our business locations, are based on the consolidated financial statement to further enhance the comprehensive understanding of our stakeholders regarding our performance. We have also noted any use of a different standard wherever such instances occur in this report.

Reporting Principles

This report was prepared based on the Core Options prescribed by the G4 guidelines of the Global Reporting Initiative (GRI), an international reporting standard on sustainability. We also incorporated other indicators such as the United Nations Sustainable Development Goals (SDGs). This is a self-declaration report and has not received third-party assurance. LG CNS plans to undergo a third-party assurance process in the future to ensure the objectivity and accuracy of our reporting standard.

Further Inquiries

Please consult the contact information presented below for additional inquiries on this report.

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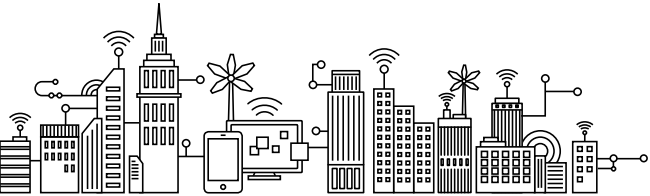
FSC™-certified Paper Stock & Soy Ink Printing

This report was printed with soy ink on FSC™-certified paper, which was produced with pulp products from responsibly managed forests. The paper stocks used for this report (both covers and inside) received the Forest Stewardship Council™ mark, which is given to paper and pulp products that meet the strict standards set to ensure forests are managed responsibly and remain a truly renewable resource.

In contrast to traditional petroleum-based ink, soy-based ink is more environmentally-friendly and has low levels of VOCs (Volatile Organic Compounds), which helps reduce air pollution by minimizing toxic emissions.



LG CNS
Sustainability Report
2016-2017



Cover Story



Leading the Fourth Industrial Revolution with best-in-class tech capabilities, LG CNS effectively delivers our exceptional IT services to customers across the world with the Global Center as the center of our operations.
The cover of this report conveys a great digital universe created by LG CNS, which brings digital intelligence to hospital, financial and transportation services to fundamentally transform the lives of our customers.