KT Value Enhancement

Through over 130 years, KT has been leading the telecommunication industry in Korea
by providing innovative solutions to the challenges of the times in every corner of history.
KT is now embarking on new challenges to maximize corporate, environmental,
and social values through propelling corporate-wide sustainability management.

Sang-Chul Kim, A smart farmer with developmental handicaps,
KT Smart Farm at Namyangju, Korea

KT operates a smart farm for the handicapped in Namyangju, Gyeonggi Province, to enable challenged people to farm using ICT solutions.
We continue to support more handicapped people to find jobs and become self-reliant in society.

**Innovating
Future Core Technology**

**Securing
Customer-First Management**

**Establishing
Environmental Leadership**

**Cultivating
Innovative Talents**

**Advancing Strategic
Social Contribution**

**Enhancing Value Chain
Competitiveness**

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Innovating
Future Core Technology

https://www.digieco.co.kr

KT's View

Future core technology is a basis for realizing the future of KT and a solution to complete GiGAtopia.
With the advent of the fourth industrial revolution era, communication networks have been evolving into 'intelligent networks' where 5G, big data, artificial intelligence, and block chains are combined with each other. As a platform operator based on 5G intelligent networks, KT is opening the era of warm technology that considers human beings centering on 5G innovative platform services.

R&D Technology Innovation Vision and Strategic Goal

GiGAtopia

R&D Vision			
	Completion of GiGAtopia through the Best Technologies		

R&D Goal	**Present Business**	**Future Business**	**People's Business**
	Securing No.1 technolgies to change the market	Securing innovative technologies for future business	Securing creative technologies for people's benefit

R&D Leadership	**No. 1 KT**	**Single KT**	**Customer First**
	Winning Strategy Strategist who creates differentiated market with forward thinking	**Implement Now** Activist who achieves best performance with cooperation and a tenacious spirit from thebeginning	**Next Leadership** Cultivating tech-Innovator whotakes customer experience as first priority

5G Innovative Platform

Media	Smart Energy	Financial Transaction	Disaster/Safety/Security	Corporate/Public
VR/AR, Hologram Contents	KT-MEG, Energy Control	Fintech, Robo-advisor	Convergence Security, Disaster, Social Safety	Building, Hotel Managed Solution

5G Infrastructure

5G Intelligent Network based ICT Convergence

Core Technology	**IoT** Data Collector	**Cloud** Data Storage	**Big Data** Data Analytics	**Security** Data Guard
Core Infrastructure	Networking Power (GIGA/5G)		Computing Power (AI)	

2018 Performance Evaluation

13 Companies	**150** Million People	**1,800** Employees
The Number of Participating Companies to 5G Open Lab	The Number of GiGA Genie Subscribers Exceeded 1.5 Million for the First Time in South Korea (As of March 2019)	Number of Employees Who Participated in the 2018 R&D Road Show

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Advancing R&D Technology Innovation

Management Strategy

KT's vision of R&D technology is 'Completion of GiGAtopia through the best technology'. In order to complete GiGAtopia, KT will advance the realization of the fourth industrial revolution by realizing the 5G infrastructure for the first time in the world while developing first-class innovative technologies to differentiate the experiences and services of customers based on 5G innovative platforms.

Promotion of Technological Innovation

Strengthening Technological Innovation Strategies

KT is carrying out R&D innovation under the goal of converting its business into a 'platform operator' based on 5G Intelligent Networks by 2020. To this end, KT promoted technological innovation in 2018 to secure differential competitiveness in the field of next-generation technologies such as '5G', 'AI (artificial intelligence)' and 'Blockchain'. In 2019, KT is striving for R&D aiming at leading UX and securing differentiated technological competitiveness in diverse fields such as 5G, media, B2B, and platform.

Intensively Promoted R&D Activities In 2018

Goal	No. 1 R&D Strategy to Turn the 'Tables' with Differentiated UX		

Strategy

Innovative Cost Saving	Premium Service	Shift the Market with Innovation and Future Technology
automation, intelligence, efficiency	differentiated speed and intelligence, new customer value provision	AI, block-chain, digital transformation, etc.

Improving Technological Innovation Process

Innovation and cooperation are essential, from the planning stage to the commercialization stage. KT has strengthened its technological innovation process by operating a fast and seamless feedback system to create a work environment that enables KT's unique 'differential innovation and cooperation'. Representatively, KT holds first-class technology commercialization meetings, periodic workshops, and occasional seminars, while making discussions regularly or occasionally by organizing consultative groups at each of the stages of planning, development, and commercialization. In particular, the R&D Laboratory discovered disruptive ideas and business models, and is making efforts to develop first-class innovative technologies, verify and secure first-class quality, and construct optimized resource systems.

Strengthening Technological Innovation Organizations and Infrastructures

AI Tech Center

5G Open Lab

Enhancing Competitiveness of Technological Innovation Organization

After establishing the 'Experience Design' team, which is a professional organization that differentiates technologies based on customer experience in 2015, KT has been continuously strengthening its capabilities in the field of technology commercialization. In order to strengthen its executive ability for commercialization, KT has been operating expanded 'Technology Commercialization Design TF', etc. from 2016.

Due to the rapid evolution of telecommunication technology, the capability to quickly connect technology innovation to commercialization is more important than ever before. In order to promote rapid commercialization, KT has established a step-by-step collaboration system between R&D, business divisions, and top decision-making bodies, and has developed research and development environments one step further to enable rapid decision-making based on the importance and urgency of technical issues.

In order to transform the existing organization, which was centered on fixed tasks and fields, into a flexible project-type organization, KT constantly removed barriers to collaboration and secured R&D synergy through collaboration between projects directed by officers.

Expansion of Technological Innovation Infrastructures

KT is expanding its investments in R&D infrastructure to strengthen its future core technologies. After establishing the 'AI Tech Center' to establish a process for business organizations and R&D organizations to rapidly develop AI services in 2017, KT established the '5G Open Lab' in September 2018 to implement a series of technological innovation projects to discover diverse 5G services jointly with external partners and promote commercialization. As a result, KT implemented 10 technical innovation projects with 13 companies in total for four months from September to December 2018.

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Securing Future Core Technology

Management Strategy

As the 'intelligent network', in which 5G communication technology and ICT technology such as big data, artificial intelligence and block chain are combined, becomes the core of the 4th industrial revolution era, the importance of development and convergence of each core technology is increasing.
KT is conducting research and development in various fields in order to preemptively respond to global trends and secure new growth engines.

Artificial Intelligence Technology

the Number of GiGA Genie Subscribers Exceeded 1.5 Million for the First Time in South Korea

1.5 Million People

Artificial Intelligence Home Secretary 'GiGA Genie'

KT launched the world's first artificial intelligence TV 'GiGA Genie' in January 2017 and is leading the artificial intelligence service market such as achieving 1.5 million subscribers for the first time in South Korea in March 2019. Under the goal, 'No. 1 AI Core Technology, KT is expanding the AI terminal lineup by internalizing voice technologies and voice synthesis technology that are highly noise-tolerant into the GiGA Genie service and developing new AI Devices such as personalized dialogue recommendation function, multi-language, image recognition and analysis, and image creation and synthesis technologies. KT is enhancing services by applying Video AI with enhanced intelligence having world-highest level voice recognition and authentication technologies, and advanced speech technology, and is promoting the development of realistic image generation / expression technologies.

KT differentiates GiGA Genie based on AI core technology, extends services to diverse business areas such as hotels, commerce, advertising, and intelligent call center, innovatively improved GiGA Genie platform structure in order to expand cloud-based AI ecosystems, and makes effort to lead the market by improving our domestic artificial intelligence capabilities through the launch of differentiated education programs.

Voice Processing Technology	Language Processing Technology	Video Processing Technology
KT is developing voice recognition technology that can improve customer convenience with real time voice detection technology and free speech voice recognition and can be quickly applied to diverse domains / terminals.	KT is developing probability-based dialogue reasoning technology and multi-domain dialog tracking technology for differentiated language intelligence and customized discourse.	KT is developing next generation Video Analytics service that can understand media through embedded type deep running image analysis technology.

Big Data Technology

Commencement of Construction of GEPP In Kenya in 2018

Big Data is the core technology of the 4th Industrial Revolution. KT's five major platforms and artificial intelligence services are also based on 'intelligent network' through Big Data. KT has expanded its activities to solve social problems and increase the value of data by applying the Big Data Analysis capabilities and data assets that have been built up through the Group's Chief Data Officer (CDO) system

Global Epidemic Prevention Platform	Public Big Data Cooperation (Seoul Metropolitan Government, National Police Agency)
GEPP is a global platform proposed by KT for the first time in 2016 at the UN General Assembly. Through roaming data cooperation of telecommunication companies around the world, this platform provides information on contaminated area visits to the Centers for Disease Control and Prevention to prevent the spread of infectious diseases. In December 2018, KT began the construction of this platform in Kenya for the first time among countries vulnerable in responses to infectious diseases and is gradually expanding the platform to Ghana and Malaysia.	Since it's the opening in March 2018, the 'Seoul City Living Population Analysis Data' prepared through a joint study with Seoul Metropolitan Government has been widely used as a basic data for the establishment of Seoul City policies. In addition, KT developed digital crime prevention service jointly with the National Police Agency in December 2018 and it is applied to crackdown activities of frontline police officers to take the lead in making safer environments.

Block Chain Technology

KT Block Chain

KT has secured differentiated technical skills through research into and development of block chain core technologies for several years and has been promoting commercialization in earnest from 2019 based on the technologies secured as such. KT is promoting 12 projects in BaaS and local currency platforms with the aim of becoming a block chain-based Biz Transformation and Digital Asset distribution business operator is leading the block chain commercialization such as winning seven B2B / B2G projects.

Launching of BasS (Blockchain As A Service) Products	Local Currency Commercialization	B2B / B2G Project Winning
This is a service that can be used by companies who want to introduce commercialized block chains. It enables reducing the time required to construct a block chain development environment by 95% and reducing infrastructure development costs by 85%. BaaS will be applied across all industries including finance, real estate, and medical care.	KT has commercialized Good Pay, a local currency platform, and Kimpo-si's local currency 'GimpoPay', which is provided based on the foregoing, has reduced the merchant fee to ZERO and the issuing cost by 30%. KT plans to attract various policy allowances and tourism / energy coins from local governments.	Based on the differentiated technology of GiGA Chain, KT has been entering into major market areas by winning the MaaS project of the Ministry of Land, the e-mail mailbox construction business of the Korea Post, and the mhows / BC card settlement system construction project.

Strengthening R&D Networks And Capacities

Management Strategy

For KT to lead the fourth industrial revolution era through the acquisition of future core technology, the activities to share the newest R&D trends and operate partnerships with companies, research institutes and partners that have the highest R&D capabilities are very important. To this end, KT is expanding its R&D ecosystem through the operation of diverse R&D platforms and consultation channels.

R&D Platform Operation

5G Open Lab

https://5gopenlab.com/

5G Open Lab Operation

KT opened '5G Open Lab', a collaborative space aimed at developing 5G service together with suppliers in September 2018 and has been operating it. This space is divided into Infrastructure Zone, Media Zone, and Smart Zone and plays the role of developing and testing 5G infrastructure, realistic media, and entertainment services.

Eco Alliance	Supporting Commercialization of External Ideas	Partners Fair	Development of New Product Under the Condition of Purchase	Performance Sharing System
'Eco-SCM-Business Division' are connected to operate a virtuously cycling open-type technical consultative body	Programs that review external ideas and support commercialization	Mutual cooperation for essential communication of new technologies / ideas, etc. between KT and suppliers	When small or medium sized suppliers develop products needed by KT, KT pays the development costs together with the Small and Medium Business Administration and guarantees the purchase of the relevant products	Perform system improvement and technology development jointly with suppliers and share the results

AI Tech Center Operation

The 'AI Tech Center' is an open type artificial intelligence development platform built by KT based on its artificial intelligence development infrastructures such as supercomputer to lead the artificial intelligence market. This center plays the role of a hub that leads the intelligence of media, platforms, and networks in the AI ecosystem in which not only KT but also all its affiliates participate.

R&D Sharing and Competency Reinforcing

Operation of R&D Consultative Bodies

To secure future core technologies, KT operates a variety of R&D consultative bodies and collaborative channels such as first-class technology commercialization conferences, workshops, and seminars. These consultative bodies and collaborative channels are operated centering on breakthrough of technical limitations focused on creative solutions, reinforcing business capabilities reflecting customer experiences, and discovery of new businesses focused on ideation and rapid incubation.

The 'single consultative bodies', which are knowledge sharing activities, are acting throughout the company. The single consultative bodies contribute to finding the best answers by sharing technical and business directions at all stages from planning to commercialization and sharing opinions on commercialization and resolution of current issues.

2018 R&D Road Show

R&D Road Show Holding

KT holds 'R&D Roadshow' once a year to introduce KT's major research achievements to employees and group companies. The roadshow is divided into future-oriented technologies, technologies that can be commercialized immediately, and technologies at the commercialization stage for exhibition, and it is used as a forum for internal opinion exchanges for technology commercialization. The '2018 R&D Roadshow' exhibited 69 innovative technologies in nine areas and over 1,800 employees participated in it.

Securing R&D Talents

In order to lead the market through developing differentiated products and technologies, securing and fostering excellent R&D talents is important. KT is expanding its employment in the field of convergence technologies such as 5G, artificial intelligence, block chains, connected cars, and quantum communication in an effort to secure the best talents who will lead the fourth industrial revolution. To this end, KT is making diverse efforts such as holding recruiting briefings at leading overseas universities and securing talent through a sponsoring recruitment systems.

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Securing Customer-First Management

https://corp.kt.com/eng/html/sustain/customer/customer.html

KT's View

Customers are KT's most important stakeholders while being the closest companions. As a representative national company that has been working with the history of communication of Korea, KT has transformed the lives of its customers dynamically through innovative services that pioneer the era. KT will continue to do its best to become the best service provider that will impress customers with new experiences by providing the best service in all meetings with customers hereafter too.

Customer Satisfaction Vision and Strategic Goal

Vision for Customer Satisfaction (CS)

World-class CS company through continual communication and trust between KT and its customers

Model of Customer Satisfaction (CS)

KT will continue to be a trustworthy company to its valued customers who have trusted and relied on KT over the years

Promoting Total CS in Customer-First Perspectives

Quality of Customer Experience	Turning to Customer First Mindset	Differentiated Customer Service
Quality First	Customer Needs	Competitive Performance
Starting from quality of detailed customer experience that satisfies hidden needs	Increasing simplicity and convenience and solving Pain Point for higher quality of onsite & customer experience	Developing into the Global No. 1 & 1st and winning the quality competition

Management Activities

Customer-oriented Products	Customer-oriented Services	Customer Information Protection	Customer Value Creation
Customer-centered Rate, KT Product Verification Team	Customer-oriented Accessability, Network Stability	Information Protection Measures, Information Protection Service	Brand Value Creation, Customer Engagement Campaigns

2018 Performance Evaluation

1st	**AAA** (P)	**Winner**
Ranked First in National Customer Satisfaction Index (NCSI) in the Wired Telephone Sector for 20 Consecutive Years	Result of Information Security Readiness Assessment by the Ministry of Science and Technology Ministry of Information and Communication	German iF Design Award Winner (Brand Identity Sector)

Strengthening Customer First Management

Management Strategy

KT is pursuing customer-first management that prioritizes customers with "world topmost customer-satisfaction company that communicates with the heart and approaches with faith" as its customer satisfaction vision. To this end, KT is making efforts to constantly innovate wired/wireless products, services, and customer contact point channels, and provide luxury customer service that can impress customers.

Customer Experience Quality Innovation

Customer Experience Quality Innovation Policy

Customer satisfaction begins with service innovation. Based on the corporate culture that gives priority to customers, KT has provided distinctive customized services to its customers to present more comfortable daily lives thereby providing larger values to customers. KT has strengthened its 'Customer Experience Quality Management (CEQM)' system to respond quickly to changes in customers and market environments, such as customer experience quality innovation, VOC innovation, process redesign to secure service competitiveness and is striving to create a consensus that 'KT is true number one in customer perception empathized by customers and employees'.

Customer Experience Quality Innovation	VOC Innovation	Process Redesign	Fostering Customer Contact Point Field Specialists

Customer Experience Quality Innovation Activity

KT has established customer service, networks, products, and channels as four core areas since 2014, subdivided customer experience into 2,000 segments to measure customer satisfaction and derived and improved tasks to improve customer satisfaction as company-wide efforts for customer experience-based quality innovation.

With KT's efforts as such for complete differentiation of the quality of customer experience, the scope of customer experience improvement was expanded from individual customers to enterprise customers in 2015, and 'Customer Effort Scores' were newly introduced in 2017 in order to measure the efforts of customers involved in the process of using services. In particular, from 2019, KT has been striving to improve customer perceptions by effectively communicating the superiority of KT products and services to our customers, and to secure 'number one customer experience quality' in the fields of 5G, Media, and SMB-BIZ.

Customer Experience Quality Innovation Organization

To provide differentiated quality experience to customers, flexible and expeditious operation of company-wide organization operations is essential. To this end, KT has established an officer-centered company-wide collaboration system including group companies, to operate a 'Customer First Executive Committee' to quickly secure executive ability with the aim of achieving number one in customer perception and operate customer-oriented performance verification systems. KT is actively reflecting improvement requirements on management activities.

Fostering Customer Service Specialists

Companies that communicate with customers can co-exist with customers. In order to communicate with customers to understand customers' perspectives, KT strives to externally and internally change each employee at customer contact points such as customer centers, agencies, plazas, and opening/AS centers where actual meetings with customers occur. In order to transform and foster all employees at customer contact points as 'field experts who explain well', KT is implementing continuous and diverse activities such as holding 'KT Explanation King Competition', appointing consultants with the best skill as 'KT Master' and utilize as know-how teaching and education lecturers, and holding the 'Number One Consultant & Engineer Award of the Month' to reward excellent employees. Through such activities, KT strengthens the pride of employees at customer contact points and promote CS branding unique to KT.

Number One Consultant & Engineer Award of The Month
Overview To spread the field culture to cultivate the ability to create the performance of triple number one and self-esteem
Reward Provide selection prize money

KT Master Selection
Overview Continuously select and foster best field experts in the field of KT Group's customer contact point as role models of employees at contact points
Reward Provide selection prize money and symbols

KT Explanation King Competition
Overview Foster 'top-level field experts who explain well' to strengthen customer contact point competitiveness (once a month)
Reward Provide prize money and overseas training to participating teams

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Customer-First Products And Services

Management Strategy

The capability to deliver innovative products and services that can provide 'best customer experience' in rapidly changing communications environments is becoming the essence of competitiveness. By constantly innovating customer-centered products and services, KT meets the needs of diverse customers and helps customers enjoy benefits from communication in their daily lives.

Customer-First Service

VOC Improvement Trend
(Unit: Daily average per million customers)

Complaint VOC: 13.6% Reduction

2018	6,405
2017	7,414

Risk VOC: 18.2% Reduction

2018	577
2017	705

Customer-First VOC Innovation

To always listen to the voice of customers, KT runs 'Voice of customers of the day', and the executives of the whole company share the "Voice of Customer" recorded in the call center every day. In addition, KT has established a VOC improvement process to spontaneously communicates with customer contact points to listen to the sounds of the field and discover and improve the problems, and based on this, in 2017, KT intensively improved risk VOCs that degrade customers' trust as activities to recover customers' trust.

Furthermore, in 2018, KT organized TFs and intensively managed them to improve VOC quality thereby completing VOC innovation from the viewpoint of customer-first. As a result of these efforts, complaint VOCs decreased by 13.6% and risk VOCs by 18.2% compared to the previous year. From 2019, in order to provide more reliable and homogeneous services to customers, KT introduced a 'Six Sigma' system to intensively improve quality VOCs with relatively poor service quality.

Artificial Intelligence-Based Customer Center Innovation

To promptly process customer opinions, KT operates an integrated call center with a capacity of 11,000 seats, which is the largest in South Korea. In 2018, KT introduced the AI innovation technology at the highest level in South Korea to significantly improve the convenience of GiGA Genie Our Home Customer Center. In addition, KT has loaded chatbot functions on the 'Visual ARS' and 'SMS Customer Center' to provides upgraded customized consulting services thereby effectively handling responses to KT product related inquiries and problem solving.

In particular, the convenience of using ARS was dramatically improve through the introduction of Call Assisted with Visible Operation (Call-Avo) ARS. In addition, a system that can certify customers' voices was introduced to innovative streamline the identity verification process and greatly improve customer satisfaction. In 2019, KT plans to expand the 'Consultation Assist', of which the effect has been proven through pilot tests, to all customer centers. It is expected that if the simple work processing time is shortened (shortened by 15 sec./ call) through the 'Consult Assist', customer responses will be carried our more quickly.

Advancement of AI Innovation Technology to the Highest Level in South Korea	Groundbreaking Shorting of Average ARS Stay Time through Call Avo ARS (60 seconds ⋯ less than 10 seconds)	Shortening of Self-authentication Calling Time through Voice Authentication by 15 sec.	Providing Integrated Consultation on Wired and Wireless Products for the First Time in South Korea (fostered 300 employees)	First Call Completion Rate (FCR) was Improved by 2% Compared to 2016

Customer Counseling Service Innovation

As for the customer counseling service, KT made effort to dramatically improve the customer experience at the counseling stage by introducing the "new complete counseling system". Simple inquiries are handled firsthand by customer through the AI customer center, while in the case of complex and difficult inquiries/requests, the trend to demand solution through direct counseling is increasing. Reflecting this customer trend, KT provides responsible counseling so that not only the problem faced by the customer but also connected future problems can be completely solved.

KT Customer Service Center Taking Commemorative Photos for Celebration

KT Customer Center, Ranked NO. 1 In the Call Center Quality Index for Four Consecutive Years

KT has been ranked No. 1 in both the wireless and wireless sectors for four consecutive year in the evaluation of the Korea Call Center Quality Index (KS-CQI), a prestigious customer center quality index sponsored by the Korea Standards Association in 2018 thereby being recognized for its efforts thus far. KT Customer Center has built an intelligent ARS that utilizes Big Data to reflect customers' usage patterns, thereby achieving groundbreaking outcomes of shortening customer waiting time to eliminate the inconvenience of customers having to listen to the ARS menu for a long time and to ensure fast connection for counseling.

Customer-First Products

Product Verification Team Welcome Day Event

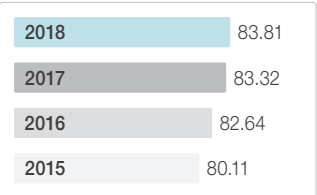Product Verification Team Size
(Unit: Persons)

2019	493
2018	406
2017	272
2016	261
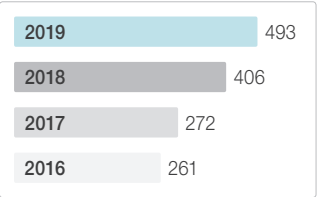
Unlimited 5G Data Service Plan

No. 1 In Customer Satisfaction

KT Integrated Customer Satisfaction
(Unit: Points)

2018	83.81
2017	83.32
2016	82.64
2015	80.11

Developing Customer Participation Products

KT operates the 'KT Product Verification Team', in which customers and field employees who carry out works involve facing customers firsthand participate in product development and verification. Since the launching of the first team in 2011, general customers such as housewives, office workers, and university students and field employees in charge of works to respond to customers such as customer counseling, agencies, opening, and A/S have been participating in the process of product development for nine years until 2019. In particular, from 2018, as activities to strengthen the quality competitiveness of existing products, the quality of customer experience at each stage of customer journey is diagnosed to promote improvement of overall on/offline communications with customers such as agencies, homepages, apps and SMS. In 2019, a total of 493 persons consisting of 297 in the customer verification teams and 196 in the field verification teams, are participating in the product verification team and activities for development and improvement of the products of KT, a company that communicates with customers, will be continued.

KT Product Verification Team Activity

Idea Discovery	New Product Verification	Existing Product Customer Experience Quality Diagnosis
Survey of Target Customers' Needs	Customer/field Quality Verification	Detailed Diagnosis by Customer Journey
One-person household lifestyle, kids' product idea FGD etc.	GiGA Genie, Lotte Super, GiGA Genie2, Kids remote controller, etc.	GiGA WiFi Wave 2, media pack, kidsland, etc.

Customer-Centered Rate and Service Innovation

In May 2018, KT launched three types of LTE 'data ON' service plans (Basic / Special / Premium) that allow customers to select a service plan based on their data usage patterns. The 'Data ON' service plan basically provides voice and SMS and provides the benefit of unlimited data with differential speeds in the entire service plan sections so that customers can selected their service plans based on their data use patters such as music and videos. KT also provided the 'Roaming ON' benefits to all mobile customers so that they can enjoy voice calls overseas with no burden, and lowered the usage fee to KRW 1.98 per second, which is the same as the usage fee in South Korea so that the burden of customers who use voice roaming can be reduced dramatically. In addition, in April 2019, KT launched a total of four types of 5G service plans consisting of three types of the 'Super Plan' service plan and a '5G slim service plan in line with the time of commercialization of the world's first 5G service. In particular, in the case of the three Super Plans, not only completely unlimited data with no speed limit but also the benefit of unlimited overseas roaming data are provided so that users can use data freely without any discrimination between home and abroad.

KT has unceasingly made efforts to break through existing practices and limitations with the core value of 'customer first' and such efforts for customer satisfaction effort are recognized for credibility as KT is consistently ranked first in reliable surveys both inside and outside of South Korea. KT achieved number one in the wire telephone sector of national customer satisfaction index (NCSI) for the 20 consecutive years, and in the 2019 Stevie Awards, KT was awarded in four fields in four areas such as 'IVR / Web Services Solutions' in the 'sales and customer service programs.' KT integrates the results of major satisfaction surveys on external customers to manages its own 'KT Integrated Customer Satisfaction', and the satisfaction score is rising from 83.32 in 2017 to 83.81 in 2018.

(As of 2018)

National Customer Satisfaction Index (NCSI)
Ranked first in the wire telephone sector for 20 consecutive years, ranked first in the Internet phone sector for nine consecutive years, ranked first in the IPTV sector for two consecutive years, and ranked first in the superhigh speed Internet sector.

Korea Quality Satisfaction Index (KS-QEI)
Ranked first in the mobile phone sector for three consecutive years, ranked first in the superhigh speed Internet/ IPTV sector for two consecutive years

Korea Service Quality Index (KS-SQI)
Ranked first in the superhigh-speed Internet for two consecutive years, ranked first in the IPTV sector for 10 consecutive years

Korea Industrial Customer Satisfaction Index (KCSI)
Ranked first in the superhigh-speed Internet / IPTV sector for three consecutive years, ranked first in the Internet phone sector for nine consecutive years, and ranked first in the home phone sector for 19 consecutive years

Call Center Quality Index (KS-CQI)
Ranked first in the in the wire customer center satisfaction sector for five consecutive years, and ranked first in the in the wireless customer center satisfaction sector for four consecutive years

Korea Industrial Service Quality Index (KSQI)
Achieved the best customer center certification for wired / wireless customer centers, ranked first in the customer contact point sector for three consecutive years

Satisfaction with sales service (KSSI)
Ranked first in the communication service specialized store sector for four consecutive years

Stevie Awards
Awarded in the Sales & Customer Service IVR / Web Services, etc. sector for three consecutive years

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Customer Information Protection

Management Strategy

Since security threats related to personal information are increasing day by day with the development of information and communications, KT considers protecting customer information as a top priority. In order to preemptively and structurally respond to increasingly intelligent security threats, KT is making its best effort to strengthen its customer information protection management system and practice culture throughout the life cycle of customer information and to guarantee customer rights as information subjects.
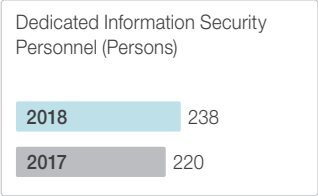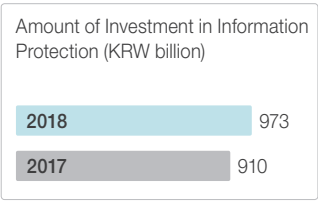
Strengthen Customer Information Protection Infrastructure

Information Security Readiness Assessment by Ministry of Science and Technology Ministry of Information and Communication

AAA (P) Grade

Investments in Customer Information Protection Infrastructures

Amount of Investment in Information Protection (KRW billion)

2018	973
2017	910

Dedicated Information Security Personnel (Persons)

2018	238
2017	220

Customer Information Protection Management System

After acquiring the Information Security Management System (ISMS), the nationally accredited information security management system in 2013 for the first time, KT has been recertified every year. In the "Information Security Readiness Assessment" evaluated by the Ministry of Science and Technology, KT received AAA+, the highest grade for three consecutive years thereby being externally recognized for its thorough customer information protection system. KT established the Information Security Team in 2014 and reinforced the expertise by separating the Chief Information Security Officer (CISO) from the Chief Information Officer (CIO) for the first time in the communications industry. KT is the most active investor in the information security sector among Korean telecom companies. In 2018, its investments amounted KRW 97.3 billion and employees dedicated to information protection were 238 in number, accounting for 1% of the total employees.

Privacy Impact Assessment

Pre-analysis	Analysis of Information Management Status	Summary of Impact Assessment Results	Implementation Check
· Review the need for impact assessment · Establish an impact assessment plan	· Personal information flow analysis · Analysis of factors for personal information infringement · Risk assessment and improvement plan derivation	· Establish improvement plan · Write an impact assessment report	· Check implemented matters

Strengthen Customer Information Protection Measures

KT analyzes the entire life cycle from the personal information collection stage to the destruction stage and applies appropriate optimum technological and managerial protection measures by stage to prevent leakage of personal information in advance. To this end, KT conducts personal information impact assessment to identify and correct infringement factors in advance when information systems that utilize personal information are changed or newly introduced, and conducts checks the entire distribution networks and customer information processing systems every year regarding customer information protection measures. In addition, KT is strengthening technical and administrative protective measures to preemptively respond to evolving security threats such as APT (Advanced Persistent Threat) attacks and deletes the personal information of customers who do not use services for long periods of time exceeding one your to prevent the risk of leakage. In particular, KT has established a comprehensive response system covering the terminal, network, and even servers through the first IT / Network Integrated Cyber Security Center in South Korea and is responding to diverse security threats 24 hours a day, 365 days a year.

Area of Information Protection Measures	Information Protection Measure Activity	Unit	2016	2017	2018	Remark
Personal Information Protection Education	Number of employees who completed mandatory personal information protection education (first half)	Person	23,295	22,981	23,160	Conduct one session of compulsory education for all employees every half year (excluding those on leave or dispatch, those to be transferred, and drivers for executives)
	Number of employees who completed mandatory personal information protection education (second half)	Person	22,825	23,170	23,180	
	Ratio of employees who completed mandatory personal information protection education	%	100	100	100	
Check Personal Information Protective Measures	Number of service checks	Case	186	316	274	Perform security check of customer information processing systems at least once a year
	Ratio of services checked to the entire services	%	100	100	100	
	Number of matters that require security improvements found	Case	230	280	133	
	Ratios of measures taken to mitigate matters that require security improvements	%	100	100	100	
	Number of short-term mitigation measures taken	Case	199	242	122	
	Number of long-term mitigation measures taken	Case	31	38	11	
Distribution Network Customer Information Protection	Number of completely checked agencies	Place	3,904	3,037	3,607	Perform security checks of all distribution network channels at least once per quarter (agency: wired/wireless/corporate customer agency, other customer information handling stores: suppliers in charge of opening, A/S, customer center)
	Ratio of completely checked agencies	%	100	100	100	
	Number of completely checked other stores that handle customer information	Place	667	477	520	
	Ratio of completely checked other stores that handle other customer information	%	100	100	100	

Customer Information Protection Culture and Service
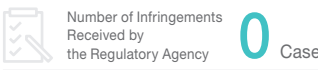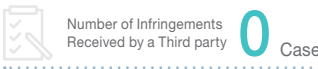
Personal Information Policy Poster

Customer Information Protection Culture

All employees of KT, group companies, and suppliers voluntarily participate in information protection activities to predict and prevent in advance, the security threats that are becoming increasingly sophisticated and intelligent. All employees take the oath for personal information protection every year and diverse personal information protection education course are implemented. In addition, information security posters, PC wallpapers, etc. are used to share security action practice methods, and internal security reporting centers and clean offices are operated.

Customer Information Protection Service

KT is committed to protecting customers from smishing damage through the provision of a variety of information protection services and to preventing the leakage of information that may be caused by the loss of smartphones. KT operates Olleh smishing blocking app that induces the deletion of malware apps and apps that could potentially cause malicious code actions, an information protection alert that notifies a variety of cyber risk information, and a personal information use detail inquiry service and separately operates a channel dedicated to information protection to quickly respond to inquiries related to personal information.

Major Customer Information Protection Service

Who-who Spam Notification Service	KT provides a free additional service that searches for more than 22 million data and display shared information such as spam / security on the receiving screen when a call is received.	https://product.kt.com/wDic/index.do?CateCode=6003
Information Protection Notifier	Prevents damage in advance by sending various cyber risk information such as information security issues and accidents to users. Inquiry of the Details of Use of Personal Information.	https://product.kt.com/wDic/productDetail.do?ItemCode=485
Inquiry of the Details of Use of Personal Information	It is possible to inquire the use of personal information made without the consent of the user or the use of the personal information without the consent of the user, so that the use of personal information can be checked, and the abuse can be prevented.	https://inside.kt.com/html/privacy/privacy19.html

Use of Customer Information

Pursuant to customer information related laws and regulations, KT notifies all subscribers of personal information items, purpose of collection, and period of retention. The collected personal information is not used for any purpose other than the relevant purpose and is provided to third party organizations only with the prior consent of the customer. When government agencies request data pursuant to the Telecommunications Business Act (Article 93, Clause 6) and the Protection of Communications Secrets Act (Articles 2 and 13), KT cooperates for the provision of related materials in accordance with the legal standards for and methods of provision, and reports statistical data about the details of provision to the Ministry of Science and ICT.

Ratio of Checks Whether Information is Collected for Secondary Purposes

100 %

Customer Infringement Status in 2018

Number of Infringements Received by a Third party **0** Case

Number of Infringements Received by the Regulatory Agency **0** Case

Government's Request for Customer Information

Category	Description	Unit	Telecommunication data**	Data confirming the fact of telecommunication***
Government Request	Number of cases of government agencies' requests for customer information treated*	Case	299,966	91,099
Checking Provided	Number of cases where whether customer information was provided to government agencies can be checked	Case	299,966	91,099
	Ratio of cases where whether customer information was provided to government agencies can be checked	%	100	100

* The number of documents requested by government agencies, which were provided as of 2018
** Telecommunication data: under the Telecommunications Business Act, information investigation agencies may request subject to permission by a prosecutor, grade 4 or higher civil servant, or police superintendent, etc. (subscriber information such as phone number, ID)
*** Data confirming the fact of telecommunication: under the Telecommunications Business Act, the investigating agency may request subject to permission by the court (fact of communication, log record, IP address, etc.)

Information Collection for Secondary Purpose

Category	Description	Unit	2016	2017	2018
Current Status of Customers	Ratio of customers who selected the 'opt-in'* option	%	100	100	100
	Ratio of customers whose personal information was used for secondary purposes	%	0	0	0
Current Status of Checks	Number of organizations that check whether information is collected for secondary purposes	Number	4,571	3,514	4,127
	Ratio of checks whether information is collected for secondary purposes	%	100	100	100

* A method not to permit personal information processing without prior consent. All personal information collected for KT services is processed in 'opt-in' method

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Providing Reliable Communication Service

Management Strategy

Recently, the importance of providing reliable communication service is increasing due to the rapid climate change around the Korean Peninsula and the occurrence of earthquakes. As a telecommunications carrier with a national network, KT operates a state-of-the-art network surveillance system to provide reliable communications services under any circumstance and is committed to strengthening network stability.

Strengthening Network Security

State-Of-The-Art Network Monitoring System

KT, which operates South Korean national communications network, is responsible for providing reliable communication services through prompt responses and recovery in the event of occurrence of natural disasters such as typhoons, heavy rains, earthquakes, and other social disasters. To this end, KT operates an integrated network surveillance system to ensure the stability of wired and wireless networks and conducts comprehensive control at the network control center. In addition, KT operates the network surveillance system around the regional control centers for 24 hours a day, 365 days a year, while the nationwide wired and wireless operation centers are performing stable operation and maintenance of communication facilities. In 2018, a second control center was established in Daejeon, strengthening the control function in Chungcheong and Daegu areas. This enables KT to integrate distributed regional control functions of Chungnam, Honam, Daegu, and Pusan areas to strengthen the executive ability of the network surveillance system. In 2019, KT plans to standardize the cable tunnel control system and build a control system to minimize faults that may occur in cable tunnels.

Artificial Intelligence-Based Failure Prediction

KT's efforts to provide reliable communication services to its customers repeat innovation. By establishing a failure prediction system based on artificial intelligence technology in 2018, KT achieved the result of shortening recognition time in the event of a failure. In 2019, KT plans to extend the A.I failure prediction system to the fields of IP networks and 5G networks as well as the field of call service.

AI-based Wired And Wireless Network Management Platform 'Neuroflow'

Strengthening Emergency Recovery Training

As extreme weather events and traffic surges has occurred frequently recently, the ability of carriers to provide reliable communication services under any circumstances is becoming more important. KT establishes emergency recovery measures by type of failure in advance in preparation for not only general communication failures but also cases where communications services are interrupted due to disasters and calamities such as typhoons and earthquakes and periodically conducts emergency recovery training. In particular, KT is making effort to minimize damage caused by communication problems by constructing and operating a backup system capable of automatic bypass communication. KT is carrying out various activities to prevent disruption while improving service quality.

Failure Prevention Activities	Service Quality Improvement Activities
· Pre-checks of communication networks and action in preparation for natural disaster such as typhoon · Prompt recognition of failure and actions through improvement of control systems · Prevention of recurrences through education on cause of failure / preventive measures (once a month) · Automation of inspection of IP equipment (daily automatic check)	· Improve the quality felt by wireless subscribers (apartment, office, subway, etc.) · Replacement of low-speed lines and obsolescence transmission equipment · Provide quality Before Service to wireless customers · GiGA Internet Quality Control

Network Failure Indicator Management

KT is striving to improve network stability by preemptively managing network failure indicators based on international standards. In 2018, the average frequency of network failures in KT was 0.015 cases which showed much higher stability compared to the average frequency of network failure in general telecommunications industry systems at 1.10 cases. The average failure duration is 1.35 hours, which is lower than the average system failure duration of 1.5 hours.

Number of Cases of Network Failures
(Unit: Case)

Type			2016	2017	2018	Reporting standard*
Service	Traffic	wire	0	0	0	When the electronic exchanger's traffic in a city, districts exceeds 2.5 times
		wireless	0	0	0	When the electronic exchanger's traffic in a city, district exceeds 5 times compared to the normal one
	Subscribers	wire	0	0	0	When the service of more than 5,000 subscribers is interrupted
		wireless	0	0	0	More than 0.5% of customers discontinue their service
		leased line	0	0	0	When emergency rescue services (112,119) disrupted
Facility (equipment)	Major telecommunication facilities		0	0	0	When major facilities in crucial telecommunication plants (exchangers, HLR, etc) disorder
	Base station		0	0	0	Over 20 base stations' disorder at the same time due to the same cause
	Submarine Telecommunication cable		0	0	0	When domestic and international submarine cables are disrupted
	Telecommunication cable		0	0	1	Cutting lead-in cables (144C) in significant communications stations

* Reporting standard about communications disorder to the Ministry of Science and ICT

# Creating Brand Value

Management Strategy

Beyond the limitation as a telecommunication company, as the number one innovative technology company, KT has been introducing new and innovative marketing communication activities every year thereby drawing the attention and empathy of customers. KT is pursuing 'Integrated Marketing Communication', which comprehensively utilizes customer contact point channels to create meaningful messages for customers and to expand and reproduce them.

KT Brand Slogan

KT expresses the KT brand identity to pursue an 'Innovative Technology Company that acts for the people and customers' through the group / corporate brand slogan 'People. Technology' and consistently applies the identity to the management activities, corporate culture, product and service development, and customer communication. Through this integrated marketing strategy, KT is breaking from its image as a 'traditional communication company' so that customers perceive KT brand image as innovative technology company centering on future growth businesses such as '5G' and 'AI'.

Innovative Brand Campaign

'Hi Five KT 5G' Campaign Disaster Safety Net Advertising
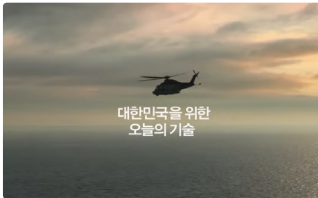
'Your Supernatural Power KT 5G' Campaign

'ON Restaurant'

5G Experience Promotion 'Catch Heroes'
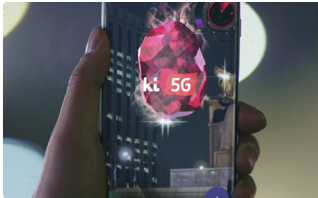
KT 5G Experience Hall at Kwanghwamun Square
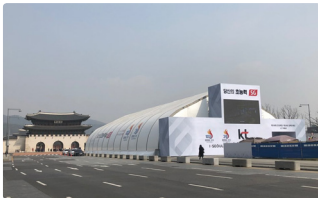
Leading the 5G Era with Realistic Campaigns

In 2018, while implementing a new 5G campaign, 'Hi Five KT 5G', KT expressed the confidence and authenticity of KT 5G technology that could be experienced right now not in a far future through the view of customers experiencing KT 5G throughout the country Republic of Korea following Pyeongchang. In addition, KT promoted omnidirectional integrated marketing that reinforced customer communication and experience, such as digital video production, MCN channel expansion, customer experience type promotion, and design goods / character communication enhancement. As a result, KT was selected as a company that comes across first when the word 5G is heard in 2019 following 2018 thereby maintaining overwhelming number one in 5G TOM to become a leader of 5G in South Korea.

In 2019, when 5G was commercialized, KT began the campaign 'Your Supernatural Power KT 5G' in line with the opening of the 5G era. As customers became to be able to firsthand see, feel, and experience 5G service thanks to the release of 5G smartphones, the wonderful benefits and changes in life through KT 5G services were expressed as 'your supernatural power that enables anything wanted'.

5G Service Customer Participation Campaign

KT carried out diverse customer experience programs so that customers could empathize with changes in lives and benefits through the innovative technologies and services of KT. In 2018, KT carried out differentiated experience type promotions so that customers can familiarly experience the technology and service of KT such as launching 'KT 5G Ramen' to make the 'world first 5G Olympics' into an issue and opening the 'ON restaurant' that provides foods of diverse countries without limit in order to promote the launching of the 'Data roaming ON' service plan to draw great positive responses and participation.

In addition, KT carried out seasonal experience programs for diverse customer groups such as 'Kids Land Character Athletic Meeting', 'Y Street Festival', 'Ground Forces Festival', 'Jara Island Festival', and 'Russia World Cup Street Cheering Competition' to enhance the recognition of KT brand and lead the popularization of innovative technologies along with service PR. In 2019, KT is continuing diverse customer participation events, such as opening a super large 5G experience hall at Gwanghwamun Square where diverse KT 5G technologies can be experienced and implementing participating AR app 'Catch Heroes' for experience of KT's nationwide 5G coverage.

Brand Performance Creation

The KT brand is recognized internationally as it has been receiving favorable evaluations in representative design awards as well as various brand awards and advertising festivals at home and abroad.

Major Brand Awards Records

Advertisement	· The 16th Seoul Video Advertising Festival Silver Award (KT 5G Disaster Safety Network part)	Design	· The seventh It-Award grand prize (Brand Identity sector) · Germany iF Design Award Winner prize (Brand Identity Division)
Digital	· 2018 &AWARD advertising festival Gold Prize (KT membership part)	BM Link	· 2018 South Korea Brand Hall of Fame (Giga Internet / GiGA Genie / Olleh tv.)

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Establishing Environmental Leadership

https://corp.kt.com/eng/html/sustain/environmental/environmental.html

KT's View

The environmental issues faced by the world today such as climate change, energy shortages, and resource exhaustion are emerging as new challenges and business opportunities for companies. KT intends to become a Convergence Builder that will suppress global climate change through eco-friendly ICT convergence services while enhancing the environmental efficiency of all processes of business activities by concentrating ICT capabilities under the eco-friendly management strategy termed "Carbon Impact 2030".

Environmental Management Vision and Strategic Goal

Environment Management Vision

CARBON IMPACT 2030

"Carbon-free Company"

KT pursues to minimize environmental impacts from its operation, while maximizing environmental benefits from its services. Through development and provision of an innovative environmentfriendly ICT service, KT will accomplish Carbon-free Company by 2030

Environment Management Strategy

Factor

Risk Factor	Opportunity Factor
Minimizing environmental impacts form KT's operation	Maximizing environmental benefit from KT's service

Driver

Strategy Driver	Objective Driver
Improving environmental efficiency	Containing climate change

Five Environmental Agendas

Climate Change Response	Energy Efficiency	Resource Efficiency	Environment-friendly SCM	Environmental ICT Services
· Carbon neutral management · Carbon footprint / offsets management · Education for environment performance and monitoring · Response to environmental regulation and evaluation	· Energy efficiency management · Discover the item for energy reduction · Efficiencymanagement for data centers · Expanding renewable energy	· Reinforcement of waste management · Discovery and adoption of waste reducing items · Reduction of water usage · Discovery and adoption of water reducing items	· Operation of an environmental management system · reinforcement of an environmental performance management · Evaluation, audits and follow- up measures · Execution of an environmental education · Expansion of procurement for environment-friendly products	· Smart energy · Smart business · Smart transport · Smart industry · Smart agriculture

2018 Performance Evaluation

2 Years	**402** %	**11.0** %
Incorporated into CDP 'Hall of Fame' in 2018 for 2 Consecutive Years	Photovoltaic Power Generation in 2018 Compared to the Previous Year	Waste Production in 2018 Compared to the Previous Year

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Strengthening Environmental Management System

Environmental Management System

KT Environmental Management Policy

https://corp.kt.com/data/eng/sustain/
KT_Environmental_Management_
Policy.pdf

Management Strategy

KT strives to maximize environmental benefits through KT's eco-friendly services while minimizing the environmental impact of KT operations with the goal of 'CARBON IMPACT 2030' environmental management vision. Through innovative technologies, KT seeks to create a sustainable human base by realizing coexistence of nature and human, environmental protection and economic development.

Environmental Management Policy

KT established and announced the KT Environmental Management Policy in 2017 to fulfill its environmental responsibilities and foster eco-friendly ICT as a new growth engine of the company. Through this policy, KT is striving to establish five environmental management agendas and manage them effectively to minimize the negative environmental impacts that may occur throughout the company's operations and value chain and to maximize the positive environmental impacts that can be made through KT business.

Environmental Management Organization

Since the establishment of the 'Sustainability Management Committee' in the board in April 2016, KT has been systematically promoting strategic and substantial environmental management and has been operating the Environmental Management Committee under the 'Sustainability Management Committee in an effort to improve company-wide executive ability. In addition, to effectively implement the Carbon Impact 2030 strategy, in April 2017, the Environmental Management Committee was reorganized into four subcommittees: climate change response, energy and resource efficiency, eco-friendly SCM, and energy ICT services. The Environmental Management Committee meeting is held regularly throughout the year and subcommittee meetings are held frequently to discuss eco-friendly management related important issues from a company-wide perspective and to establish implementation strategies.

Environmental Management Organization

Board of Directors	Sustainability Management Committee	
Steering Organization	Sustainability Management Unit	Consultation **Sustainability Management Advisory Committee**
Executive Body	Environmental Management Committee	

Response to Climate Change	Energy/resource	SCM	Energy ICT
· Response to environmental regulations · Response to sustainability management index	· Company-wide energy saving · Waste management and reduction · Company building water use reduction	· Support for cooperative company environmental management · Expand eco-friendly purchase	· Energy efficiency project · New and renewable energy project · Other energy projects

Incorporated into CDP 'Hall of Fame' Transferred for Two Consecutive Years in 2018

Leading Environmental Management

KT has been incorporated into the 'Carbon Management Honors Club' for six consecutive years in the Carbon Disclosure Project (CDP), which assesses the environmental management level of companies in 2018, and was selective for the 'Hall of Fame' for two consecutive years for the first time in South Korea. The Hall of Fame is the highest honor that is awarded only those companies that have been selected into top five companies for five consecutive years. CDP is a global indicator for assessing the level of climate change response of major listed companies around the world. In the 2018 evaluation, KT received the highest grade, Leadership A because it acquired high scores evenly in all areas such as climate change response strategies, greenhouse gas reduction efforts, greenhouse gas management, and eco-friendly new business promotion.

KT Launched Big Data-Based Fine Dust App for the First Time in Korea

KT operates an IoT-based real-time air quality measurement and micro dust big data platform so that everybody can identify accurate dust information in real time and prevent damage. In particular, in February 2019, KT launched 'Air Map Korea', a customized fine dust information application using Big Data Analysis and Internet of Things solution for the first time in South Korea. 'Air Map Korea' provides information updated every 10 minutes based on the fine dust big data built by KT through over 2,000 self-monitoring networks built over the past two years, and by the second half of this year, a total of 7,500 mobile observation sensors will be added to deliver more accurate information with a total of 10,000 networks secured as such.

KT Air Map Korea

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Environmental Impact and Efficiency

Management Strategy

Based on active climate change response strategies, KT is strengthening its energy efficiency capabilities through ICT technological innovation and promoting diverse energy saving projects, thereby being reborn as an ICT company that leads future ages. In addition, KT have established a management and measurement system that can improve resource efficiency for resource conservation and cost reduction.

Response to Climate Change

Long-term GHG Reduction Target

Reduction by 35% compared to the 2007 GHG emissions by 2030

35 %

Establishment of KT GHG Monitoring System

Enhancing Energy Efficiency

Carbon Management Target and Strategies

In order to achieve the 'Carbon Impact 2030' strategy and contribute to the realization of the national greenhouse gas reduction goal, KT is promoting a carbon management strategy with a view to reducing carbon emissions by 35% compared to the 2007 KT greenhouse gas emissions by 2030. This is to initiatively cooperate for with the 37% reduction compared to BAU (Business As Usual) by 2030, which is the national greenhouse gas reduction target set at the Paris Climate Change Conference (COP21) in December 2015, and contribute to the suppression of earth temperature rise to 2°C. In order to advance the achievement of mid- to long-term greenhouse gas reduction targets, KT discovered yearly tasks by organization centering on the Environmental Management Committee, established reduction targets, and established roles and responsibilities (R & R) of departments for energy savings to implement reducing activities.

Leading Carbon Management

In order to systematically manage company-wide greenhouse gas emissions, KT built a greenhouse gas inventory system for the first time in the domestic telecom industry in 2010. From 2013, KT dramatically expanded its management range to other indirect greenhouse gas emissions (Scope III) thereby becoming a global number one eco-friendly company. In particular, KT secures the reliability of the data by having the emission calculation methodology and emissions for the entire Scope 1, 2 and 3 verified by the verification bodies certified by the government every year. In 2018, KT built a real-time greenhouse gas emission monitoring system its office buildings across the country to identify energy waste elements and discover energy saving items as well as monitoring current status of achievement of GHG reduction targets utilizing the forgoing.

Enhancing Energy Efficiency

With the rapid increase in traffic due to the increases in various smart devices and the IoT devices that will explosively increase in the upcoming 5G era, the energy consumed by telecommunication equipment is also expected to increase. KT strives to enhance energy efficiency by applying various eco-friendly cutting-edge technologies such as enhancing network energy efficiency, introducing business electric vehicles, and green IDC construction. In addition, KT is implementing energy efficiency measures such as optimizing network operation, introducing outdoor air, and replacing high-efficiency equipment to reduce network energy.

Energy Usage

Category	Unit	2015	2016	2017	2018
Total energy usage	MWh	2,472,342	2,441,382	2,498,960	2,477,078
Degree of energy intensity in comparison with sales amount	MWh/KRW 100 million	11.096	10.734	10.685	10.559
Total renewable energy purchase and production	MWh	624	580	2,060	8,283
Total energy cost	KRW 100 million	3,123.55	3,081.90	3,071.39	3,048.37

Expansion of New and Renewable Energy

In addition, after constructing a solar power plant using the Gangneung receiving station site (19,720m2) in 2011 for the first time in the domestic telecommunication industry, KT has been continuously investing in new and renewable energy facilities. In 2018, KT expanded the solar power generation facilities massively to produce 8,283 MWh of electricity, which is about four times that of 2017.

KT Solar Power Generation Performance

Power generation amount	(Unit: MWh)		Power generation scale	(Unit: kW)
2018	8,283.0		2018	7,350.6
2017	2,059.8		2017	6,043.8
2016	597.1		2016	1,076.0

KT Solar Power Plant

Greenhouse Gas Reduction

Direct and Indirect Greenhouse Gas Emissions (Scope 1 & 2)

KT estimates greenhouse gas emissions every year and reports to the government to faithfully fulfill its obligation to manage greenhouse gas emissions (Scope 1 & 2) under the Framework Act on Low Carbon Green Growth. The scope of the report includes all the facilities in KT's management control, including buildings scattered across the country, and all communication facilities such as forward-deployed business places, base stations, and repeaters. Scope 1 emissions are generated by the heating energy of KT office building, business vehicle operation, etc. and scope 2 emissions are caused by the company-wide use of electricity for wired / wireless network equipment, IDC, and so on. KT greenhouse gas emissions (Scope 1 & 2) were 1,106,330 tCO$_2$eq, in 2018 and are decreasing every year.

Direct / Indirect Greenhouse Gas Emissions (Scope 1 & 2)

Category	Unit	2015	2016	2017	2018
Direct greenhouse gas emissions (Scope I)	tCO$_2$eq	41,355	41,368	41,373	38,482
Indirect greenhouse gas emissions (Scope II)	tCO$_2$eq	1,054,698	1,043,152	1,069,714	1,067,851
Total	tCO$_2$eq	1,096,053	1,084,520	1,111,087	1,106,333
Greenhouse gas intensity in comparison with sales	tCO$_2$eq/KRW 100 million	4.919	4.768	4.751	4.716

Other Indirect Greenhouse Gas Emissions (Scope 3)

Other Indirect Greenhouse Gases (Scope 3) refers to indirectly emitted greenhouse gases in relation to management activities. KT divides these into three major fields: supply chain stage emissions, use stage emissions, and other Scope 3 emissions, depending on the types of sources, for management. Supply chain stage emissions refer to are the greenhouse gases generated during the production of the products to be delivered to KT by suppliers and the emissions from the use stage refer to the greenhouse gas emissions occurred in the process of use of KT B2C products and services for general consumers. In addition, other Scope 3 emissions are the greenhouse gas emissions occurring due to the water used by KT employees in-house, waste disposal, commuting, and business trips.

Other Indirect Greenhouse Gas Emissions (Scope 3) (Unit: tCO$_2$eq)

Field		2015	2016	2017	2018
Supply chain stage		32,499	19,803	14,679	15,795
Use stage		482,073	291,784	327,961	360,089
Other scope 3	Water use	918	785	698	642
	Waste disposal	2,831	3,900	3,985	3,862
	Employee business trip	5,000	4,070	5,569	6,165
	Employee commuting	23,692	23,798	21,859	21,300
Total	Subtotal	344,140	374,752	407,853

Social Greenhouse Gas Emissions

KT strives to go one step further from the reduction of internal greenhouse gas emissions to contribute to the reduction of national greenhouse gas emissions through eco-friendly services through innovative ICT technology. The amount of social greenhouse gas reduction occurred in a year of 2018 through KT's eco-friendly services such as energy efficiency projects is 222,190 tCO$_2$eq.

Strengthening Resource Efficiency

Reduction in Waste Disposals in 2018 Compared to the Previous Year

11.0 %

Reduction in Water Consumption in 2018 Compared to the Previous Year

8.0 %

KT pursues both environmental and economic benefits through the maximization of resource use and recycling. As a result, in 2018, waste emissions decreased by 11.0% compared to 2017. Furthermore, KT is making efforts to reduce water usage through the use of automatic watering bidets in office buildings, water-saving devices, and recycling of effluents. In 2018, KT's water use amounted to 1,934,087 tons, with a decrease by 8% compared to 2017.

Waste Discharge and Water Consumption

Category	Unit	2015	2016	2017	2018
Total waste generated	ton	38,476	26,688	25,701	23,186
Living waste	ton	7,667	7,466	6,548	6,280
Communication waste	ton	12,335	14,303	13,647	12,025
Construction waste	ton	18,475	4,919	5,506	4,881
Total waste recycled	ton	33,594	21,926	21,122	19,109
Total waste disposals	ton	4,883	4,762	4,578	4,077
Waste recycling rate	%	87.3%	82.2%	82.2%	82.4%
Total water consumption	1,000 ton	2,766	2,364	2,103	1,934

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Cultivating Innovative Talents

https://corp.kt.com/eng/html/sustain/telent/telent.html

KT's View

Employees are our eternal companions who will realize the company's vision and goals together. Through systematic human resource development, KT helps employees to grow into global talents while operating diverse welfare systems do that employees can maintain balance between work and life. Through the foregoing, KT strives to create Great Workplaces that enhance its corporate value and contribute to the improvement of the 'quality of life' of mankind.

Talent Cultivation Vision and Strategic Goal

Ideal Employee of KT

KT People who stick to basics and rules and constantly communicate and challenge with grit to realize customer value!

People who continuously challenge the status quo	People who communicate without walls	People who respect customers	People who stick to basics and rules
· Don't yield to hardship and misfortune but continue to challenge the goal and make it to the top level. · Lead change and innovation and implement differentiated services.	· Actively communicate with colleagues and continuously try to grow and develop. · Mutually cooperate and create synergy for the success of KT.	· Think customer interest and satisfaction first in every job. · Respect customers and keep a promise to them.	· Take pride and think that you are the owner of the company in doing your job. · Act in accordance with ethical judgment and take responsibility for results.

Human Resource Development Activities

Recruitment of Excellent Talents	Reinforcement of Innovation Capability	Fair Evaluation and Compensation	Pursuing Happiness for Employees
· Implementing fair recruitments · Securing human diversity	· Strengthening innovative talent capacity · Maximize talent capacity through evaluation and compensation	· Strengthening fairness of evaluation and compensation system · Securing transparent promotion system	· Expanding benefits system · Providing health support · Reducing childcare burden · Building trust in labor relation

2018 Performance Evaluation

39.5 %	83.4 Hours	85.0 Points
Ratio of Female Employees in New Employments	Average Training Time Per Employee	Employee Satisfaction Survey Results

Securing Excellent Talents

Management Strategy

KT established a concept of talents, 'KT employee who is faithful to the basic and principles, constantly communicates and challenges to realize customer value', and is actively recruiting talents appropriate for the concept. In addition, KT provides education in accordance with the talent development program, to building a competence-oriented organizational culture in which employees can maximally exert their capabilities.

Expansion of Recruitment of Excellent Talents

Ideal Employee of KT

KT has a firm belief that fostering human resources is directly linked to the competitiveness of the company, and actively searches for and recruits excellent talents who are appropriate for the concept of talents through fair and transparent talent securing procedures. Based on its fair personnel system, KT assigns the employed talents to duties and closely evaluates their performance. In addition, KT provides education in accordance with its talent development program to build an organizational culture that enables employees to exert their full potential by themselves.

Talent Recruiting Program

In order to discover capable talents who will lead the fourth industrial revolution era, KT has established fair and transparent procedures, and selects talents centering on job competency. In 2018, KT newly employed 570 people, which is 14% more compared to 2017, in line with government's youth job creation policies. In addition, KT conducts 'blind interviews' in order to increase the fairness and transparency of recruitment. During the interviews, all personal information items are blind processed to select talents centering on competency.

In addition, KT continues to implement 'KT Star Audition', a differentiated open recruitment system. The KT Star Audition, which was introduced for the first time in 2014, is an open recruitment screening of KT in which all specifications are excluded and candidates can freely express job-related expertise and experience for 5 minutes. Applicants selected in the relevant screening are given the benefit of exemption from document screening when they apply for regular open recruitment. After being exempted from document screening, they are employed after undergoing personality test, aptitude test, and interview screening identically to other applicants for open recruitments of new employes. They are showing excellent performance in the process of carrying out actual works after entering the company.

Number of Persons Newly Employed by KT in 2018

570 Persons

KT Star Audition Poster

Ratio of Female Managers in 2018

16.22 %

Competency-centered Talent	Local Talents	Global Talent	Early Recruitment of Talent
Through the KT Star Audition, a blind recruitment method, experiences and aspirations associated with the job are fairly evaluated excluding specifications.	KT introduced a regional quota system to find excellent talents in the region and employ more than 20% of new employees from local talents.	KT continuously employ excellent talents through global recruiting every year.	KT introduced employment conversion type interns to recruit talented persons who have proven their working abilities first.

Current Status of Employees   (As of December 31, 2018, Unit: Persons)

Category		Total	Male	Female	Female Ratio
Total Number of Persons		23,764	19,634	4,130	17.38%
By Manager	Low level manager	13,041	10,418	2,623	20.11%
	Middle level manager	9,042	8,058	984	10.88%
	High level manager	334	306	28	8.38%
	Sub total	**22,417**	**18,782**	**3,635**	**16.22%**
By Department	Business department	4,265	3,337	928	21.76%
	Field work department	18,037	15,308	2,729	15.13%
	Support department	1,462	989	473	32.35%

Category		Total	Male	Female	Minority Ratio
Diversity	The handicapped	500	484	16	2.10%
	Veterans welfare beneficiary	1,158	1,052	106	4.87%
	Elderly (60 years or older)	65	56	9	0.27%
	Foreign employee	14	9	5	0.06%
	Sub total	**1,737**	**1,601**	**136**	**7.31%**

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Talent Development and Performance Compensation

Management Strategy

In order to lead the 5G era to discover new growth opportunities and lead the opportunities, enhancing the competence and competitiveness of employees is regarded to be more important than ever before.

KT provides diverse and systematic training programs to help its employees grow as experts who regard customers first.

Employee Capacity Enhancement System

With a view to cultivating number one talents equipped with both challenge spirit and expertise, KT is striving to cultivate 'number one KT persons' armed with self-esteem and confidence and 'experts' who will lead the future growth business.

In 2018, to cultivate experts who prepare for the 5G era, KT enhanced B2B/platform business operator capabilities and strengthened the smart learning platform for the field of future new technologies. In addition, KT upgraded its number one successful DNA with a 'strong leader who overcame crises' and 'challenging talent' cultivation programs. The average training time per employee is 83.4 hours, which is increasing every year. The number of times of off-the-job training is 1.7 times per year, and the number of sessions of on-line training is 11 times per year.

Competency Innovation for Conversion into a B2B / Platform Operator	Future New Technology Field Smart Learning Platform (KT-MOOC, etc.)	Cultivating Strong Leaders to Overcome the Crisis	Cultivating Challenging Talent
Customized training 118 courses, 4,301 persons	KEP 10 courses, 2,861 persons	KVP 33 courses, 2,321 persons	KVP 15 courses, 4,390 persons

* KEP: KT Expert Program, KVP: KT Value-shared Program

Core Value Education

KT has internalized the four core values of KT to implement education to strengthen pride and a sense of unity as KT persons. KT is implementing education to strengthen group sense of identity and promote KT value sharing for new and promoted employees, and the targets of education were expanded to include group companies so that 2,300 promoted employees from 29 group companies participated in the education in 2018. The education for promoted employees focuses on having the students recognize the 133-year history of the group, learn about future businesses and strengthening the sense of royalty to and sense of unity with KT, a national company.

Leadership Cultivating Training

In order to systematically cultivate the next generation of management leaders, KT is fostering leaders who would lead the transformation activities for the future of KT by operating leadership programs by hierarchy such as 'Group Management Leader Cultivating Track' and 'Group Executive Workshop'. Furthermore, in order to respond with insight to the rapidly changing global market centering around 5G communication, KT operates the 'Global Chief Executive Program' for senior executives of the group and provides position holder training by leader hierarchy to constantly provide opportunities to improve leadership and expertise.

Specialist Cultivating Training

In order to nurture competency-based job specialists, we conduct job competency diagnoses and operate customized training systems that recommend appropriate courses based on the results of the diagnosis. In 2018, 2,900 employees from 79 training courses participated in training, not only in the fields of future growth but also in the areas of strategy, marketing, and global demand. In addition, we reorganized the common competency training to support 9 to 6 smart work performance. We continued to innovate education and operation by making online contents for offline education in order to improve the participation in education.

A.I Academy

KT Opened the '4th Industry Academy' for Free of Charge

KT opened the '4th Industry Academy', a customized free education system, to foster excellent experts in the field of 4th Industrial Revolution. The 'Fourth Industry Academy' will be operation for a total of 10 weeks from the end of June 2019. The fields of recruitment are four areas: AI software development, 5G communication infrastructure technology, information and communication technology convergence consulting, and smart energy.

The 'Fourth Industry Academy' is scheduled to select 150 students two times, in the first and second half of the year, and 4-year college graduates and prospective graduates can apply. The academy is an expansion of the 'AI Academy', which was operated in the field of artificial intelligence, and greatly contributes to the cultivation of practical talents in the field of innovative technology as indicated by the fact that 78% of the 27 students who were already selected and trained have succeeded in finding a job or founding a business.

Major Empowerment Programs

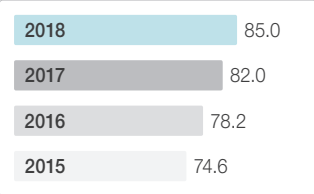Number of Persons Educated on the Fields That Will Grow in Future in 2018

1,171 Persons

'KT Number One Workshop' Won Korea Knowledge Grand Prize

Respect for Talent and Compensation for Performance

Employee Satisfaction Survey

Employee Satisfaction (Unit: Point)

2018	85.0
2017	82.0
2016	78.2
2015	74.6

Future Growth Leader Training

After establishing the AI education center in 2017, KT has been focusing efforts on cultivating experts who working hard to nurture specialists who would lead the fourth industrial revolution by providing practical training necessary for AI algorithm development capability. In 2018, KT trained 1,171 employees to foster KT employees in future growth fields such as AI, block chains, and Big Data, and an A.I academy was operated for outside employment candidates to train 27 experts for 6 months.

In addition, in order to raise the interest and capacity of all employees in the future new growth businesses, KT held the 'number one learning organization knowledge concert' by inviting internal and external experts on the topics of future businesses such as IoT, Big Data and AI. KT will continue to cultivate human resources in the future growth field and expand the 4th Industry Academy education for outside employment candidates.

Development of Female Leader Competency

KT's female manager ratio is 16.22% and female top manager ratio is 8.38%. Although the ratio in numbers per se is not high, since the proportion of women among all employees is 17.38%, the ratio of managers and executives to women is not low considering the total number of employees because of the nature of the business. KT is striving to increase the proportion of female employees in the long term and operates various programs such as women's mentoring to foster more women as leaders. In addition, KT supports dispatch training for female team leader level employees. In 2018, among the 182 candidates participated in the 'Management Leader Training Course', 61 (34%) were female leader candidates.

Communication, Collaboration, and Empowerment

The 'Number One Workshop', which was launched in 2014, is a communication, collaboration, and empowerment tool and management innovation platform. It has passed the introductory stage and has been fully established as a way to work in KT group. This is an innovative platform unique to KT in which the solution of problems in the field is regarded as a starting point for all changes, improvement plans are proposed through horizontal discussions for one night two days by anybody regardless of positions or duties, decisions are immediately made based on the improvement plans. It won a 'Presidential Prize' in the 'Korea Knowledge Grand-prize' so that it is recognized externally. The 'Number One Workshop', the best communication / collaboration tool and management innovation platform in South Korea recognized by anybody beyond KT, is accelerating innovation as a total of 18,893 persons participated in 1,098 agendas only in 2018.

Employee Diversity and Respect for Opportunities

In order to raise the ratio of female workers for diversity, KT blinds genders, which are not related to job competence, in the recruitment process, and when recruiting new employees who graduated from university, KT employed females for 35% in 2017and 38% in 2018.

In addition, KT signed an agreement with the Korea Employment Agency for the Disabled in 2018 to establish a 'subsidiary type standard workplace for the disabled' in order to provide good quality stable jobs to the disabled and established a subsidiary type standard workplace in 2019. Hereafter, KT will discover differentiated services unique to KT utilizing 5G and AI to continuously make efforts to revitalize the employment of the disabled.

Fair Performance Evaluation and Compensation

KT preferentially treats those with excellent performance through fair performance evaluation. KT introduces MbO (Management by Objectives), which is an individual goal management system, for all employees and conducts multi-faceted evaluations. As a result of these efforts, the turnover rate of KT in 2018 is 1%, which is much lower when compared to 2.9%, the average turnover rate of large enterprises surveyed by the Ministry of Labor in 2018.

Fair promotion examinations are conducted centering on performance and competency in the results of evaluation. The promotion system is divided into two categories: 'general promotion' based on the mileage applied equally to all employees and 'promotion by selection', which selects those who created excellent performance.

KT conducts regular employee satisfaction surveys for all employees every year to measure the detailed levels of satisfaction by position, gender, age, and organization and makes efforts to understand employees through analysis of yearly trends and improve employee satisfaction through internal improvement. The results in 2018 is 85.0 points, with an increase by 3.0% compared to the previous year.

Category	Gender		By Organization			By Position			
	Male	Female	Business department	Support department	Field work department	Staff member / assistant manager	Section manager / Deputy manager	Department manager	Assistant executive director or above
Satisfaction	85.7	81.2	80.6	82.7	86.1	81.2	85.7	87.3	93.7

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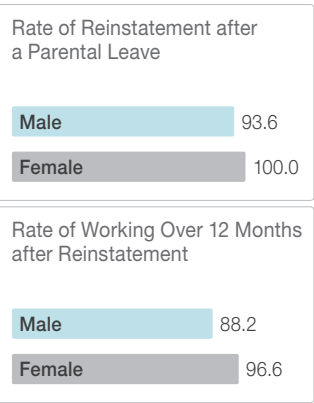**KT** Integrated Report 2019

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Pursuing Work-life Balance

Management Strategy

KT believes that employees enjoy a happy life and corporate productivity improves when their work and lives are in ideal harmony with each other. KT is committed to creating an environment in which employees can have a sense of ownership, immerse themselves in their work based on creativity and enthusiasm, while striving to provide a working environment where they can pursue happiness and fun in life and family.

Innovative Working Environment

9ood Jo6 (Good Job) Campaign

"9oodjo6", which means the new work culture unique to KT, contains the meaning of productivity increase and realization of Work & Life Balance through efficient and intensive working methods. In order to establish an efficient working culture, shutdown system is being implemented to block access to in-house working sites after working hours from 2018. In addition, KT is expanding flexible work arrangements to increase the flexibility of commuting time so that working mothers and special-purpose workers can go to work at their preferred times. In addition, KT is introducing a discretionary work system and Core-Time work system in which employees allocate working time by themselves.

Flexible Work Program

KT operates a variety of flexible work programs to promote efficient work. Since the introduction of telecommuting in 2010, KT has been operating a variety of flexible work programs, including selective work, Core-Time work, and discretionary work programs. KT also implements family love flexible work programs for pregnant women, infant caring women, disabled employees, and employees who need to care for dependent family members.

Monthly Average Number of Flexible Working Staff in 2018

1,777 Persons

Current Status of Use of Flexible Work Programs   (As of 2018)

Type	Apply to	Major Content	Monthly Average Number of Users
Telecommuting	Staff department	· Working hours: 9:00 to 18:00 * Working place: Home	12
Selective Working System	All employees	· Minimum 4 hours a day (11 o'clock to 15 o'clock required) Autonomous work for 40 hours per week (excluding weekends)	712
Core-Time Working SYSTEM	All employees	· 8 hours a day, commuting time ± 2 hours (staggered hours)	1,017
Discretionary Working System	R&D, IT design analysis job	· No working hours restriction, 40 hours a week (except Sundays)	24
Family Love Flexible Working System	Pregnant women, infant caring women, disabled employees, and employees who need to care for dependent family members	· Minimum 4 hours a day (11 o'clock to 15 o'clock required), Autonomous work for 40 hours per week (excluding weekends) · Use less than 3 times a week in the event of telecommuting	12
		Total	1,777

Customized Employee Caring

Female Lifecycle Caring Program

KT operates a variety of female lifecycle-tailored caring programs to ensure that employees maintain stable corporate life during pregnancy, childbirth and childcare. The rate of women 's reinstatement after childcare leave is 100%, and the rate of work for more than 12 months after reinstatement is 96.6%, which is an indicator of stable job retention.

Rate of Reinstatement after a Parental Leave

Male	93.6
Female	100.0

Rate of Working Over 12 Months after Reinstatement

Male	88.2
Female	96.6

Pregnancy	· Medical expenses support, prenatal diagnosis leave · Flexible work system: adjust commuting time for working at least 4 hours a day, 40 hours a week, · Shortened work during the pregnancy period: Available within 12 weeks of pregnancy or after 36 weeks (working 5 hours a day)	
Childbirth	· Provide leaves before and after delivery and childbirth support fund · Paid emergency leave in the event of delivery by spouse (10 days) available	
Intensive Infant Care Period	· Automatic childcare leave system: When applying for leave before and after delivery, childcare leave can be applied in combination. · Childcare leave can be used for up to 2 years (legal childcare leave is 1 year) · Wage increase rates are applied during leave period and promotion disadvantage is prohibited	
Child Rearing Period	· Shortened working hours · Workplace childcare facilities can be used (8 childcare centers in 3 areas) · School expense support, etc.	

Current Status of Operation of Psychological Counseling Centers (As of 2018)

Personal Counseling	**1,022** Cases
Team Consultation	**1,226** Cases
Visiting Counseling	**393** Cases
Stress Test	**17,516** Persons

Corporate Culture of Communication and Win-win

Satisfaction with Grievance Settlement (Unit: Points / of 5 points)

2018	4.45
2017	4.31
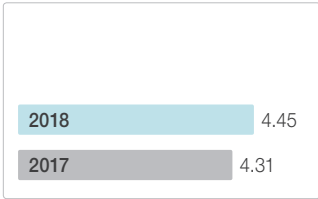
Rate of Joining in Labor Union in 2018

77.83 %

Health Care Program

KT separately manages office lighting, temperature, humidity, and indoor air quality to create comfortable and safe working environments. KT also provides physical training and health management programs for its employees. In addition, through the operation of psychological counseling centers for mental health management, 1,022 personal counseling, 1,226 team counseling, and 393 visiting counseling were provided in a year of 2018, and 17,516 employees received stress tests.

Vacation and Leave Programs

KT has introduced a semi-annual leave system that allows employees to use the annual leave divided into up to 10 times a year so that they can be faithful to their family life and seeks to establish an efficient working culture through the 9ood jo6 campaign. In addition, for family care, KT extended the legal caring leave that can be used for up to 90 days to up to 120 days and allows employees to extend the leave up to one year in conjunction with emergency leave.

Maternity Leave Exceeding the Legal Standard   (As of 2018)

Category	Type of Leave	Maternity Leave System	Number of Persons
Male	Spouse maternity leave	10 days may be used (legal leave; 3 days)	278
Female	Leave before and after delivery	70 days of paid leave can be used (legal maternal leave; 60 days)	88

Corporate Culture of Communication

KT operates a variety of grievance settlement channels that can prevent and settle employee complaints. As of 2018, KT has installed and is operating 'Grievance Settlement Committees', consisting of labor and management representatives, at 252 field organizations, and the 'Labor and Management Win-win Center' opened in March 2015 is a company-wide grievance settlement control tower that settle about 12,000 grievances since the opening and support the grievances of employees and retired persons at one-stop from receipt to settlement.
The Labor and Management Win-win Center provides diverse channels such as telephone (080-2580-119), SMS (1588-4936), e-mail (kt119@kt.com), and online bulletin board (KT119 Labor and Welfare Center bulletin board in Kate) so that grievances can be submitted conveniently anytime anywhere, and strives for fundamental settlement of employee difficulties such as summarizing major matters received and promoting them throughout the company by issuing a newsletter every week (45 times in total in 2018).

Refresh Leave Program

KT provides unprecedented opportunities for refreshment leave to long-servicing employees to provide employees with opportunities to develop and recharge themselves. That is, KT provides long-term paid leave for six months to employees with high job performance who served for at least 10 years to give opportunity to act freely, such as self-development, travel, and language study.

In particular, this period is regarded as an extension of work and not only this period is included in the service period, but also all welfare benefits as employees are maintained. KT applies the wage increase rate during the leave period so that disadvantages do not occur to the employees who use the leave program while ensuring that no disadvantage occurs in the event of promotion.

Retirement Preparation Program

KT operates the KT Life Plan, a job-change support program, so that employees can prepare for their second life and old age. KT provides specialized training programs for employees who are about to retire, such as job-change inclination self-diagnosis course, professional start-up / employment /return to farming training, and 1:1 consulting. Since the introduction of a business start-up support leave system for the first time in Korea in 2009, KT has been supporting employees who challenge business start-ups while they work at KT every year.

Win-win Labor-management Relations

Pursuant to Article 5 of the Trade Union and Labor Relations Adjustment Act and Article 3 of the collective agreement, KT guarantees that employees can freely join the trade union formation of trade unions and other representative organizations. Pursuant to the collective agreement, KT adopted the Union Shop system in which all employees become union members as soon as they enter the company so that 100% of employees are protected by collective bargaining. Employees can freely withdraw from the union. As of December 2018, the union membership rate of employees is 77.8%.

In 2018, KT discussed and resolved measures to boost employees' morale and improve welfare through a total of 60 labor-management meetings, including Labor-Management Conferences and the Labor-Management Win-win conferences.

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Advancing Strategic Social Contribution

https://corp.kt.com/eng/html/sustain/share/share.html

KT's View

KT strives to solve social problems with warm and innovative technology for people.
We are carrying out corporate-wide social contribution activities that contribute to people, society and culture
by utilizing ICT, a core competence of telecom companies.
We are also actively participating in the realization of the goal of UN sustainable development,
and strive for the development of humanity and the inclusive growth of society.

Social Contribution Vision and Strategic Goal

KT's Mission

GiGAtopia

The best national company that provides the fastest and most innovative ICT based telecommunications and convergence services for the convenience of customers

KT Social Contribution Goal

"Realizing a better future through key capability of KT"

KT Social Contribution Strategy

Better People

IT Supporters	Dream School / Global Mentoring	Scholarship Programs
· IT education for digital divide	· Bidirectional education platform as ICT based · Support mentoring through cultural and language exchange between children and overseas students	· Cultivate ICT specialists · **Employee Volunteer Group** · Participate volunteer activities of employees of KT Group

Better Society

GiGA Story	Dongja Hope Sharing Center	KT Dream Center
· Improving living conditions of remote areas by customized ICT solution with GiGA Infrastructure	· Support for residents in a flophouse area (jjokbang)	· Support education for the underprivileged children through 21 KT office buildings · **Digital Inclusion**

Better Life

KT Chamber Hall	KT Sound Finding
· Widespread for classical music through opening regular performance at KT Chamber Hall Profits for donating to 'KT Sound Finding'	· Most extended social contribution activities for support hearing-impaired children

2018 Performance Evaluation

3,328,309 Persons
Number of IT Supporters' Beneficiaries (cumulative)

1,967 KRW billion
Telecommunication Fee Reduction Amount in 2018

129,002 Persons
Number of Beneficiaries of KT Volunteers of Love in 2018 (cumulative)

Social Contribution System

Management Strategy

KT's social contribution is focused on building a sustainable society through activities to relieve gaps utilizing core competencies such as 5G infrastructure and ICT technology. Reflecting the characteristics of the telecommunication industry, KT conducts activities to relieve gaps in three aspects of people, society, and culture. Through the foregoing, KT intends to expand the KT management philosophy to the area of social contributions.

Social Contribution Organization

After establishing the Sustainability Management Committee, which is a committee in the board, in April 2016, KT has been promoting more efficient and substantial social contribution activities throughout the company. Important decisions on social contribution are made by the 'Sustainability Management Committee' within the board of directors. Through the Group Social Contribution Committee under this committee, KT Group level integrated social contribution activities are carried out. In addition, KT operates separate working organizations for public service projects, employee volunteers, social contribution funds, and the discovery of group joint projects.

Social Contribution Organization

Board of Directors	Sustainability Management Committee			Consultation **Sustainability Management Advisory Committee**
Steering Organization	Sustainability Management Unit			
Executive Body	Group Social Contribution Committee			

Direct KT group public services	Operate KT group employee volunteers	Operate KT group social contribution funds	Discover KT group joint projects

Implementation of the UN SDGs

KT strives to realize the UN Sustainable Development Goals, which are global goals to solve the universal problems of humanity and the environmental, economic and social problems of the planet. UN SDGs are fundamentally linked to overall sustainability management activities of KT Group companies as well as KT. A variety of social contribution programs that utilize the characteristics of each group company's business are matched to the goals of the UN SDGs and are generating synergies through joint volunteer activities among group companies.

KT Group Social Contribution Programs by the UN SDGs

KT Group Social Contribution × UN SDGs
KT is committed to implementing the UN SDGs.

05 Strengthening gender equality and women's capabilities
KT CS Support for unmarried mothers

17 Partnership for Implementation
KT mhows giftishow Public Service Campaign, PlayD Partnership with NGOs, KT service Social Contribution Partnership with Northern Communities

09 Infrastructure and industrialization
KT skylife UHD antenna of love, KT linkus living convenience public phone

10 Inequality elimination
KT IS service to become a talk companion for elderly who lives alone, KT powertel Support with radio terminals for national safety, KT sports 3 color sharing, KTH support for the diabled-cultural youth baseball club

01 Poverty eradication
KT Group Employee Volunteers

08 Economic growth and jobs
KT DS Indonesia Homeless Youth Support for Self-Support

11 Sustainable cities
KT estate repairing the house of love

12 Responsible consumption and production
KT commerce Flea market support

04 Guarantee the quality of education
KT Group Dream School, KT IT Supporters, KT Scholarship Program, KT Dream Center, KT sat space science experience, KT ds IT future talent cultivation training, nasmedia Youth Global Citizenship Education

16 Peaceful society and system
KT telecop Dokdo protector support service plan

13 Response to climate change
KT m&s Climate Change Campaign

02 Relieve hunger
BC card Love Food Truck, nasmedia Harmony Coffee Truck

07 Guarantee sustainable Energy
KT Group Giga Love Room

15 Conservation of land ecosystem
KT engcore Urban green space preservation, BC card paperless forest formation

03 Health promotion
KT Sound Finding, KT Infectious Disease Spread Prevention Projects

14 Marine resource conservation
KT submarine Marine environment cleanup activity

06 Water resources and hygiene
KT Group Dongja Hope Sharing Center

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Better People

Management Strategy

KT provides innovative communication and convergence services based on ICT to realize the corporate mission and management philosophy of being the best national company that can benefit the public.

KT will continuously expand IT supporters, dream school, global mentoring, employee volunteer service platform, scholarship project, and joint labor-management sharing activities.

IT Supporters

What Is IT Supporters?

IT Supporters is the first Probono activity in South Korea that was launched in 2007 and celebrates its 12th anniversary this year. Probono refers to the activities of experts in each field to utilize their expertise to help the underprivileged and social underprivileged. Through IT supporters, previous and current KT employees with IT expertise conduct nationwide IT education for Information Havenots.

KT Group IT Supporters, which eleven KT Group companies have participated in, provide future IT education such as 'software career experience class'. In November 2018, the program has proven its superiority because it was selected as an institution excellent in education contribution by the Ministry of Education. In addition, KT is expanding the opportunity to fi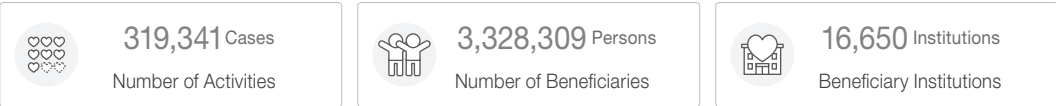rsthand experience IoT devices to children in island and mountainous areas, reflecting the social needs of software education. In addition, while supporting information gap removing activities and self-reliance for the information underprivileged, KT is leading the improvement of domestic social problems through collaboration with government and local governments.

IT Supporters' Activity (2007~2018, accumulated)

319,341 Cases	3,328,309 Persons	16,650 Institutions
Number of Activities	Number of Beneficiaries	Beneficiary Institutions

Main Activities of KT Group IT Supporters

1. Prevention of Dementia and Improvement of Dementia Awareness

Provided 87 times at Dementia Relief Center and Korea Veterans Welfare & Healthcare Corporation (10,212 people)

2. Software Career Experience Classroom

In connection with middle school software education that will become mandatory, software education was provided at 25 elementary/middle schools

3. GiGA NorlTer (IoT experience classroom)

Provided 342 sessions of IoT experience classes (4,054 students) including AR / VR / SW for 50 schools in island and mountainous areas where regular education can be hardly provided.

4. Elimination of Digital Divide in Four Major Underprivileged Groups

Elimination of digital divide and improvement of the quality of life through education on methods to use computer and smartphone for 72,792 people in the four underprivileged groups including the elderly, the disabled, low-income class, and rural residents

5. Cultivating Self-sufficiency Ability for Vulnerable Groups

Together with retiree IT support for retirees (62 people), KT Group IT Supporters provided IT education to support social advance for 4,064 persons including multicultural migrant women, and career interrupted women

KT Dream School

Dream School Website

www.ktdreamschool.org

KT Dream School is a two-way ICT mentoring platform built in 2013 using KT's video conferencing system, which is taking the lead in resolving the education gap for vulnerable classes, children and youth. In particular, the program provides opportunities for retirees and career interrupted women to act as "dream teasers," that is, mentors to provide opportunities for social participation to them and contribute to job creation. In the future, KT plans to expand personality education for the underprivileged children and expand the social participation of retirees and career interrupted women with diverse talents. The number of retirees and career interrupted women who participated until 2018 was 518 and the number of beneficiaries as 194,418.

KT Global Mentoring

KT Global Mentoring Imja Island Affiliation Camp

KT Global mentoring is a mentoring program that utilizes 'KT Dream School', an online platform. It provides foreign language education and global cultural education by linking children from the island and mountainous regions to foreign students. In 2018, 70 children from the five less favored island and mountainous regions comprising Imjado, Baekryeongdo, Cheonghak-dong, Kyodongdo and Pyeongchang-gun were matched one-on-one with 70 foreign students so that foreign language classes and cultural exchange programs were implemented. By 2018, a total of 278 foreign students have participated, and the cumulative number of training sessions is 11,959.

Global Mentoring: Foreign Students / **Dream Teacher:** Retirees and Career Interrupted Women

278 Persons	11,959 Times	194,418 Persons	33,904 Times
Number of Beneficiaries (cumulative)	Number of Sessions of Education (cumulative)	Beneficiaries (cumulative)	Number of Training Sessions (cumulative)
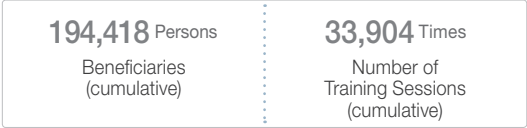
Scholarship Program

Scholarship Completion Ceremony

KT has started scholarship programs in 1988 and has been promoting scholarship programs to cultivate ICT experts and enhance the awareness of social diversity such as 'Future Creative Talent Scholarship', 'Labor-Management YOUTH Scholarship', and 'Social Innovative Talent Scholarship'. KT's scholarship projects multilaterally support the dreams of young people such as providing mentoring utilizing the Dream School, an online education platform beyond simply delivering scholarships.

Major Achievements of the Scholarship Programs in 2018

Category	Future Creative Talent Scholarship	Social Innovative Talent Scholarship	Labor-Management Youth Scholarship
Target Schools (schools)	162	17	150
Beneficiaries (persons)	631	72	207
Benefit Amount (KRW 100 million)	659.1	148.1	298.4

Volunteers of Love

Performance of Volunteers of Love in 2018

Social Welfare	513 cases
Community	75 cases
Cultural Education	51 cases
Environmental Improvement	43 cases
Disaster / other	20 cases
Total	**702 cases**

KT Volunteer of Love is a representative KT employee participating social contribution activity that began in 2001 and in which employees voluntarily plan their programs to conduct diverse volunteer activities such as support for local children's centers, providing essential articles to vulnerable groups in community, free feeding service for the elderly living alone, helping farmers and fishermen with their work, improving facilities of welfare centers, relief activities in disaster areas, and experience-based education using KT facilities.

In particular, the Volunteers of Love conduct volunteer activities centering on local community environment improvement activities to support the vulnerable groups at normal times. In the event of the occurrence of a national emergency disaster/calamity, the Volunteers of Love as an organization of KT, a national enterprise is quickly dispatched to the disaster site in association with the Disaster Relief Association, which is an official relief institution of the government and Korean Red Cross to conduct activities to restore victims and provide relief in close contact with the site.

Current Status of Participation in Volunteers of Love in 2018

26,250 Hours	5,885 Persons	129,002 Persons
Times of Activities	Number of Volunteers	Number of Beneficiaries
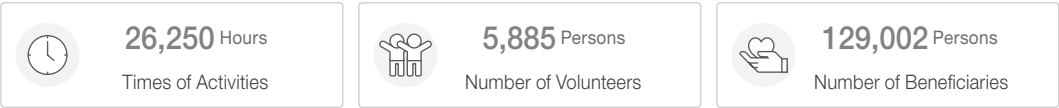
Labor-Management Sharing Activities

UCC Vietnamese Multicultural Family Visited Langhu Nghi Orphanage

Nosarang Social Contributions

Intercorporate Labor-Management Sharing Consultative Body UCC

For larger sharing, KT leads the activities of UCC, which is a joint labor-management sharing consultative body in which the labor-management of 20 companies participate together to take the lead in spreading win-win labor-management culture and sharing. In 2018, the labor and management of member companies participated in the national agenda together through cheering at the Pyeongchang General Meeting and Paralympic Opening Ceremonies, and UCC was selected as the "Leading Social Contribution Model" by the UN Economic and Social Council and adopted as official opinions. UCC has been organizing volunteer activities in Vietnam for 7 consecutive years and presented family meetings and memories to over 450 Vietnamese multicultural families. In particular, UCC have also set up places for celebration, such as opening Korean traditional wedding ceremonies and opening concerts to console overseas Koreans by supporting the visit to Vietnam as married woman's parents' home of a total of 27 persons of five families.

Nosarang

Nosarang is a "Sharing Movement that systemized the win-win cooperation activities unique to the KT Group employees and management" in order to fulfill social responsibility together based on the labor-management culture of win-win and cooperation. To spread employees' sharing activities, 159 practice commissions were established and have been operated throughout the country. The Nosarang practice commissions are operated by labor and management of each institution together so that employees can autonomously participate in social contribution service for more than 8 hours a year. KT operates the 'sharing mileage' system that gives the benefit of one mileage per hour of volunteer activities to participating employees thereby further activating social contribution activities in close contact with local communities.

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Better Society

Management Strategy

With the spread of information and communication devices such as smart phones and the Internet, the global village is becoming closer than ever before, but the information, culture, education, and income gaps between regions are spreading further. KT is expanding activities to resolve regional disparities, centering on the GiGA Story, the Dongja Hope Sharing Center, and the GGumpum Center so that the imbalance coming from interregional disparity can be resolved and everyone can enjoy the benefits of information and communication technology.

GiGA Story

GiGA Story

GiGA Story is a representative social contribution project promoted by KT's unique creativity and innovative ideas. It is a next-generation shared value creating project that resolves the information gap of residents in the island and mountainous regions improves the living environment utilizing the KT communication infrastructures watched by the whole world. In South Korea, beginning with Imja Island, Shinan-gun in October 2014, this project has been promoted in Daegseong-dong in the demilitarized zone in Paju-si, Baekryeong Island in Ongjin-gun, Cheonghak-dong in Hadong-gun, Gyodong Island in Ganghwa-gun and Euiyaji village in Pyeongchang. In 2019, KT plans to review and improve superannuated solutions by giga story, and apply diverse new solutions using 5G technology reflecting the actual needs of residents.

Giga Story Promotion Performance

1. Imja Giga Island (October 2014)
Promotion of community activation in the fields of education, culture, and medical care through ICT

2. DMZ Daesung-dong Giga School (November 2014)
Establishment of cutting-edge smart learning environments at schools in the DMZ controlled by the UN. (5G Village opened in June 2019)

3. Baekryung Giga Island (March 2015)
Improvement of vulnerable living environment such as security and economy of Baekryeong Island, the border of the northern part of the west sea

4. Cheonghak-dong Giga Creation Village (July 2015)
Traditional cultural exchange through on-line between traditional villages and cities

5. Gyodong Giga Island (March 2017)
Activate economy in regions bordering the cease-fire line with ICT tourism platforms

6. Pyeongchang 5G Village (February 2018)
Application of the world's first 5G service to Euiyaji Village in Pyeongchang, the venue of the Winter Olympics

GiGA Story

2 DMZ Daesung-dong Giga School
3 Baekryung Giga Island
6 Pyeongchang 5G Village
5 Gyodong Giga Island
4 Cheonghak-dong Giga Creation Village
1 Imja Giga Island

Global GiGA Story

The GiGA Story experience and capacity gained by KT in South Korea are blooming abroad. In April 2017, based on the island of Moheshhali in Bangladesh, KT began 'Bangladesh GiGA Island' project in cooperation with Bangladesh ICT Department, International Organization for Migration (IOM), Korea International Cooperation Agency (KOICA) and local nonprofit and non-government organizations. KT introduced Giga Network and ICT solutions to improve the standard of living of the islanders with communication, education, medical service and economy, and has contributed to solving social problems based on ICT in line with Bangladesh government's national development policy 'Digital Bangladesh 2021'.

In 2018, in close cooperation with the IOM, an international organization under the United Nations and Bangladesh government, KT conducted diverse activities to improve the quality of life of island residents using its Internet and ICT technologies thereby becoming an international reference of improvement of the quality of life through the use of digital capabilities .

KT Ggumpum Center

2018 Ggumpum Presentation

KT operates KT Ggumpum Centers in conjunction with the Regional Children's Centers by major region to ensure that children in vulnerable classes can properly grow into the future leaders. KT Ggumpum Centers, which began in 2010 and celebrate their 10th anniversary this year, utilize idle spaces in 21 branch offices nationwide to prepare IT equipment such as IPTV, beam projector, smart pad, electronic books and provide a variety of education for children, including personality, arts and physical education, English, and ICT use.

KT is cooperating with various organizations in order to ensure that children in the local children's centers receive quality education at the KT Ggumpum Centers and holds 'Ggumpum Presentations' for sharing the results of talent development results such as musical instruments/ musicals/ speeches by center every year. In addition, in order to motivate children, KT selects Ggumpum scholarship students every year to provide scholarships. In 2018, KT delivered scholarships amounting to a total of KRW 11.7 million to 39 children. In one year of 2018, a total of 57,204 children received educational benefits from 5,431 local childcare centers nationwide.

Dongja Hope Sharing Center

The 4th Anniversary of Dongja Hope Sharing Center Commemorating Event

Since 2013, KT has been conducting IT education and volunteer activities for 1,099 inhabitants of Dongjin-dong, Yong-san-gu, a typical dosshouse village in Seoul. In this process, KT recognized that the residents need a space where they can relieve the inconvenience of their basic living and take a rest at ease and opened the 'Dongja Hope Sharing Center', an ICT complex cultural space in June 2014.

The 'Dongja Hope Sharing Center' is equipped with convenience facilities for residents and cultural facilities such as IT cafes, and IPTV rooms and frequently conducts IT education, crafts, and arts and culture classes using these spaces. In particular, KT have selected people from the village as center management worker to create local jobs and operates 'Hope Sharing Cafe' and 'Doldulugol Laundry Center' to support the lives of the residents. Positive changes have spread throughout the region since the opening, and Dongja-dong, where police and 119 rescue teams have frequently been on the streets, is gaining vitality and stability.

Records of Dongja Hope Sharing Center Activities in 2018

Improvement of Residents' Living Standard	Educational Program Support	Culture, Welfare Life Support	Job Creation
Residents used shower rooms 16,393 times, laundry rooms 19,699 times	Go-janggi classroom, film humanities, calligraphy education, 1,164 persons participated	IT cafe, used by 8,227 persons	Four residents as barista and five residents at 'Doldulugol Laundry Center' were employed

Providing Universal Services and Fee Reduction

'Universal Services' mean basic telecommunication services that can be provided to users anytime, anywhere at reasonable fees. To fulfill the social responsibilities as a national corporation that operates social networks, KT provides basic communication services such as local telephone, public telephone, island communication, ship wireless, special number (emergency telephone) and maintains low fee levels so that all people can use the services. In addition, KT carefully reviews the services so that no one would be discriminated in terms of fees or service quality for the reason of geographical location, income or disability.

Wired Telephone Service

As of the end of December 2018, KT provided local telephone service to 11.56 million subscribers. KT is also operating about 51,000 public phones nationwide and is making effort to improve public convenience such as replacing the public telephone booths with safe booths. In addition, KT provides island communication service that connects the people of about 500 islands throughout the country by mediating communications between the land and islands, or between different islands by wireless communication.

Telephone Service for Emergency Communication

In order to maintain social order and protect the safety of human life, KT provides special emergency number telephone services such as crime reports (112) and fire / distress reports (119) from its wired and wireless subscribers. In addition, KT provides ship wireless telephone service to about 2,560 vessels and contributed to the safety of vessels by automatically notifying the related agencies in real time on receipt of marine distress signals.

Fee Reduction Service

In 2018, KT reduced telecommunication fees for services such as local calls, mobile phones, and high-speed Internet services for 2,420,000 disabled persons and low-income people by KRW 196.7 billion to contribute to the welfare of socially vulnerable groups. In addition, from July 13, 2018, KT has been reducing mobile phone communication fees for basic pension recipients among the elderly aged at least 65 years.

Amount of Telecommunication Fee Reduction in 2018

1,967 KRW billion

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Better Life

Management Strategy

KT is conducting a variety of social contribution activities to help Korean citizens and citizens of the world enjoy a better life through ICT.
Especially, we are working especially for the hearing-impaired people who can not hear 'sound' and those who can not enjoy the cultural benefit of 'music' based on the unique business of the telecommunication service provider.

KT Hearing Impairment Sound Finding

Cambodia Telemedicine

Since 2003, KT has been steadily implementing the 'Sound Finding' project, while helping the hearing impaired to communicate with the world. Beginning with therapeutic support such as cochlear implants and hearing aids for the hearing impaired in the low-income group, KT opened 'KT Ggumpum Classroom' together Yonsei Medical Center in 2012 to provide support for rehabilitation through language, play, art, music therapy, etc.

In 2018, KT supported four children with cochlear implant surgery together with Yonsei Medical Center and established a remote clinic to strive for continuous rehabilitation. In 2019, KT opened the second 'dream room' in the Frieongdong Hospital in Cambodia, and remote rehabilitation treatment of children who underwent cochlear implant surgery is underway.

Performance of Sound Finding Project in 2018

11,131 Cases	288 Cases	272 Cases
Rehabilitation Treatment Support	Hearing aid Support	Cochlear Implant Surgery
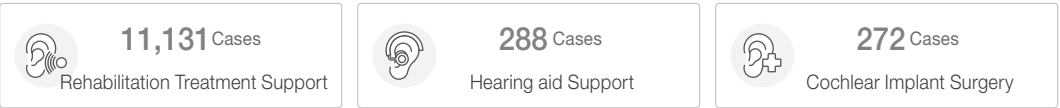
KT Chamber Hall

By this year, 10 years has passed since KT opened the 'KT Chamber Hall', a professional classical performing space in 2009, to practice sharing, touching, and communicating with beautiful sounds that move customers' minds beyond communication. In order to bring the impression of music close to life, high-level regular performances of the KT Chamber Orchestra are held on the first and third Saturday of every month and the performance proceeds are used to treat hearing loss of children with hearing impairment.

In 2018, 8,655 people attended 24 concerts to watched performances at KT Chamber Hall. Over the past decade, the chamber orchestra has presented a total of 235 performances and about 100,000 audience watched the performances. In particular, in September 2018, KT invited the family members of group employees of the Pusan headquarters to present visiting classical performances. More than 1,400 family members of employees enjoyed high-level classical performances together while feeling pride and loyalty to the company.

Support for the Rehabilitation of the Handicapped

UAE Smart Farm Launch Ceremony

KT contributes to the self-reliance of people with disabilities through diverse support projects. The handicapped person-customized smart farm built in Namyangju in 2016 is an environment where crops can be cultivated by even those who have difficulties in movements and is now becoming an opportunity for job and rehabilitation of seven handicapped persons. In November 2018, KT Smart Farm entered the UAE and continues to support the cultivation of crops by UAE handicapped people at remote locations by utilizing remote control technology through AR glasses and ICT sensors.

In addition, KT has been operating ' Disabled Persons' Job Creation License Class' at various regions throughout the country since 2013 to support the acquisition of ITQ license by 273 persons thus far. In 2018, KT organized 'ICT Business Start-up Camp' to produce 38 graduates and three business founders. In addition, KT operates KT IT Vocational Experiencing Centers at five developmental disability training centers nationwide threrby providing opportunities for students with developmental disabilities to experience the jobs.

Corporate Value Enhancing Activity

KT is continuing its social contribution activities to enhance its corporate value, centering on the Sustainability Management Unit. To this end, KT is gradually reducing the ratio of simple donations to charitable institutions while discovering and promoting direct community investment projects that can actually help the community utilizing KT's ICT capabilities as efforts to enhance corporate value and social value simultaneously.

(Unit: KRW)

Category	Cash Donation	Time	Item Support	Management Cost	Total
NGO, ICT industry fostering	6,847,334,520	0	0	0	6,847,334,520
Increase community value	889,755	4,527,309,742	8,848,679,988	2,054,485,323	15,431,364,808
Culture and sports support	0	0	4,617,577,189	0	4,617,577,189
Total	6,848,224,275	4,527,309,742	13,466,257,177	2,054,485,323	26,896,276,517

KT, Promotes Global Epidemic Prevention Platform

Major Milestones

June 2016
KT proposed the Epidemic Prevention Agenda at the UNGC Leaders Summit 2016

May 2017
Adoption in the B20 Health Initiative Policy Paper

May 2017
KT signed an MOU with SafariCom for the Epidemic Prevention Project in Kenya

March 2018
KT suggested the 'Global Epidemic Prevention Platform' at the WEF Davos Forum

September 2018
Published an epidemic prevention research report on the ITU Broadband Commission

November 2018
KT signed an MOU with Ghana Health Service

March 2019
KT signed an MOU with Laos Health Ministry and KOFIH

What Is an Epidemic Prevention Platform?

The 'Global Epidemic Prevention Platform (GEPP)' is a project proposed by KT at the UN Global Compact Conference in 2016. It is an innovative project to analyze international roaming information of mobile phone users around the world to accurately track the transmission path of infectious diseases and prevent the spread of infectious diseases that threaten the survival of people early. KT is receiving the support and attention of the international community by presenting the concrete method using ICT technology, and through this project, KT is providing innovative solutions for implementing Goal 3 Health Promotion of UN Sustainable Development Target.

Telecom company customer's location data for provided to the government for public interest utilizing the mobile data (roaming) of KT, a telecom company, so that the government can identify those people who visited countries contaminated by infectious diseases in real time through its monitoring system. In this case, customized SMSs are sent to the people who visited areas with a risk of infectious diseases regarding how to prevent and report infectious diseases.

Current Status of Application in South Korea

In November 2016, KT successfully launched a service to provide information on symptoms indicating the risk of infectious diseases to people who visited countries with a risk of infectious diseases with SMS using ICT technology together with the Korea Centers for Disease Control and Prevention. In 2018, when MERES recurred in Korea, with the government's real-time monitoring function and changes in people's behavior based on the enhancement of people's perceptivity, the situation was quickly terminated in 38 days without any further spread or death, except for one person definitely diagnosed with the disease. In this case, the Epidemic Prevention Platform jointly constructed by three telecom companies and the health authorities led by KT greatly contributed to the success of early response.

Current Status of Overseas Spread

KT's efforts to spread successful domestic construction cases abroad have borne the first fruit in Kenya, Africa. An MOU was signed between KT and Safaricom, the No. 1 telecommunications company in Kenya in May 2017 and the groundbreaking ceremony for the project was successfully held in December 2018 through cooperation with the Ministry of Health and the Ministry of Information and Communication of Kenya. This case is recognized as a successful example of successful Public Private Partnership (PPP). In addition, in November 2018, KT signed an MOU with the Ghana Health Service to promote cooperation in the construction of GEPP to strengthen the infectious disease monitoring system. KT continues effort to spread the initiative through cooperation with diverse international organizations centering on Africa and Asia.

KT Built Epidemic Prevention Platform in Kenya

Responses of International Society

After executing the partnership agreement with the World Economic Forum (WEF), KT attended Davos Forum, the annual meeting of the World Economic Forum (WEF) in January 2018, to introduce success cases of the Global Epidemic Prevention Platform (GEPP), and declared its vision for global spreading of GEPP, with which the world would share infectious disease information at the ERA (Epidemic Readiness Accelerator) session, launched at the Davos Forum. In addition, KT that participated in the Davos Forum for two consecutive years from 2018 participated in the 'Trustworthy Data' session as a panel to share the achievements of national launching of the GEPP, and discussed the measure for contribution of the KT technology based public field to take the lead in the declaration of the vision of GEPP.

KT Signed an MOU with Ghana Health Service

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Enhancing Value Chain Competitiveness

https://corp.kt.com/eng/html/sustain/share/share.html

KT's View

Suppliers are true partners to grow together with KT.
KT is constantly strengthening the shared growth system and communication with its suppliers to improve corporate competitiveness and spread win-win culture.
In addition, KT is improving the competitiveness of its supply chain by securing suppliers with excellent competence through fair and transparent Supplier selection processes.

Shared Growth Vision and Strategic Goal

Vision of Shared Growth

Establishing Ecosystem for Creative and Competitive Shared Growth

Innovative Cooperation	Fair Trade
· Sharing of shared growth vision and establishing environment · Connecting tier-1 and tier-2 suppliers	· Establishment of environment for fair trade · Strict restriction against unfair behavior

KT's Six Areas of Shared Growth

Financial Support
· Cash payments in full
· Network loan
· Financial support for retail stores
· Win-win Cooperation Supporting System (WinC)
· Financial support for contents suppliers
· Investment into projects of SMEs & ventures
· Investment into start-ups of creative economy

Support for Procurement and Market Development
· Demand Forecasting System (electronic equipment suppliers)
· Support for suppliers' overseas exhibition
· Joint advancement into international market
· Global Partner's Day
· Global Business Fair (electronic equipment suppliers & construction contractors)
· System to check supplied equipment
· Plural price for one product recognizing cost difference

Support for Management & Quality Consultation
· Vendor Coaching for suppliers (2nd-tier electronic equipment suppliers)
· Consultation for supplier SCM and supports (electronic equipment suppliers)
· Consultation for advancing development capability of suppliers (SW development area)
· Support for achieving certifications in quality and environment
· Industrial innovation campaign
· Management Doctor System

Support for Technology and Development
· Support for technology transfer
· Free patent transfer
· Non Disclosure Agreement (NDA)
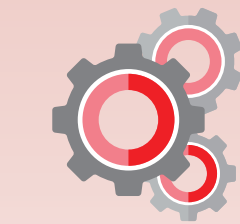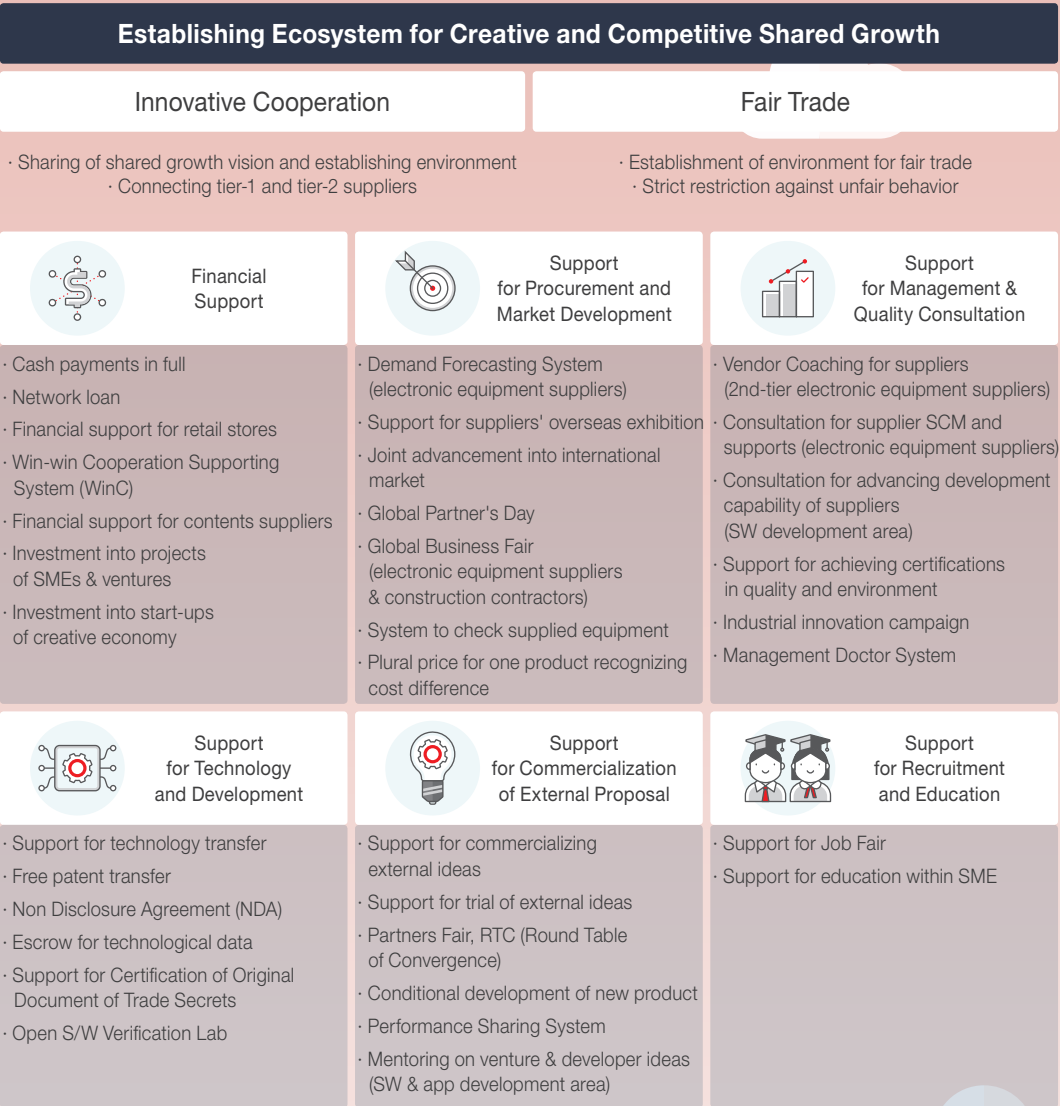· Escrow for technological data
· Support for Certification of Original Document of Trade Secrets
· Open S/W Verification Lab

Support for Commercialization of External Proposal
· Support for commercializing external ideas
· Support for trial of external ideas
· Partners Fair, RTC (Round Table of Convergence)
· Conditional development of new product
· Performance Sharing System
· Mentoring on venture & developer ideas (SW & app development area)

Support for Recruitment and Education
· Support for Job Fair
· Support for education within SME

2018 Performance Evaluation

2,754 KRW billion
Scale of Financial Support for Suppliers in 2018

182 KRW billion
Scale of KT Win-win Cooperation Fund in 2018

95.6 Points
2018 Supply Chain ESG Risk Evaluation Score

Expansion of the Promotion of Shared Growth

Management Strategy

As a responsible corporate citizen, KT seeks to lead a shared growth culture to strengthen the creative and competitive South Korean telecommunication industry ecosystem. Therefore, KT established an organization dedicated to shared growth in 2010 and implemented a variety of shared value creation programs to practice innovative cooperation with suppliers and fair trade.

Strengthening Shared Growth Activities

Current Status of Financial Support in 2018 (Unit: KRW 100 million)

29.5
931.8
2,754.1
1,792.5
0.3

- Direct Support (paid)
- Direct Support (free)
- Mixed Support
- Special Support

Management Support

KT is supporting small and medium suppliers with relatively poor financial base to secure liquidity and stabilize the management. In particular, to ensure smooth funding of small- and suppliers, KT has implemented 100% full cash settlement from 2006. In 2018, KT has operated KRW 18.2 billion of 'KT Win-Win Cooperation Fund' to support suppliers with operating funds. In addition, to ensure that suppliers can operate their businesses stably, KT has implemented stepwise purchasing strategies based on the product lifecycle from 2017 and executed three-year long-term contracts for 13 items in 2018. In 2019, KT and small and medium suppliers will work together to create a sustainable growth ecosystem by providing opportunities for suppliers to participate in new business areas including 5G and reinforcing win-win cooperation support programs that can be felt by suppliers.

Support for Commercialization

KT has partnered with major overseas start-up centers and venture capitals to support the global empowerment and investment attraction of small and medium suppliers. KT is promoting diverse activities such as participating in famous overseas exhibitions together with KT, global advancement through consortium with KT, utilizing KT's overseas infrastructure, and global PoC (Proof of Concept) projects of small and medium suppliers. As a result, suppliers' export contracts amounting to KRW 7 billion were made during a year of 2018.

Support for Participation in Promising ICT Exhibitions Abroad	KT-Small/medium Suppliers' Consortium Projects Were Implemented	Advancement into Overseas Bases through Global PoC	Venture Business Commercialization Support
KT supported the participation of small and medium-sized venture suppliers in overseas exhibitions. KT specialists supported overseas marketing activities of suppliers during the exhibition period and the suppliers successfully concluded export contracts worth KRW 7 billion in 2018.	KT supported small and medium suppliers' pioneering of overseas markets through joint wining of overseas projects with KT. A total of 18 small and mid-sized suppliers participated in 10 projects in 2018, achieving overseas export of over KRW 5 billion.	KT supported the advancement of small and mid-sized suppliers into the global market by utilizing the tangible and intangible overseas bases and marketing infrastructures possessed by KT. In 2018, KT supported projects of nine small and medium-sized venture suppliers with KRW 400 million.	Biz collaboration program for venture companies who have difficulties in entering the market. Support for initial commercialization budget of up to KRW 100 million and support for joint BM development through linkage with KT business division.

Amount of Suppliers' Joint R&D Fund to be Raised

10 KRW billion

Technical Development Support

In order to enable suppliers to develop competitive products based on patents, KT transferred 62 patents to small suppliers free of charge in 2018. In addition, KT plans to support suppliers 'future new technology development by raising a joint R&D fund amounting to KRW 10 billion for suppliers over the next five years and activate the performance sharing system to ease suppliers' financial burdens and strengthen compensation for purchased volumes.

2018 Partner's Day

Operating Supplier Communication Channels

KT improved its supply chain management system and processes so that it can re-establish communication channels and respond effectively to VoS (Voice of Supplier) to collect suppliers' opinions. KT concluded an agreement on the elimination of wage disparity between large companies SMEs with the Shared Growth Committee and representative suppliers on the Partner's Day in November 2018 and plans to provide KRW 120 billion in order to create good quality jobs for small and medium-sized suppliers.

Progress in 2018

Category	Contents
Supplier Invited Meeting	Held 8 times a year separately for C level / working level
Supplier Visiting Meetings	Held 24 times a year every Wednesday for 42 companies
SCM Consultative Body	Expanded to all items to operate as a representative channel that regularly coordinates demand and supply plans through collaboration of business department / purchasing department / suppliers
Other Channels	Partners' council, quality improvement meeting, local practical affairs exchange meeting, etc. are permanently operated

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Sustainable Supply Chain Management

Management Strategy

In order to strengthen supply chain capabilities and minimize operational risks, supply chain management that takes into account economic, environmental and social factors is essential. KT conducts sustainability management evaluations based on its supply chain sustainability management policy to minimize risks in the supply chain and promote long-term shared growth.

Sustainable Supply Chain Management System

KT Supplier Sustainability Guidelines

https://corp.kt.com/data/eng/sustain/
KT_Sustainability_Guideline_for_
Suppliers.pdf

Sustainable Supply Chain Management Policy

With a view to expanding responsible and sustainable management to the entire supply chain, KT established the 'Supplier Sustainability Guidelines' in December 2012 for the first time among domestic telecom companies and has been practicing systematic sustainable supply chain management based on the guidelines. KT made the second revision of the guidelines in May 2017 to reflect global trends of environments, human rights, etc. The 'Supplier Sustainability Guidelines' consist of four sections: Business Conduct Principles, Environmental Management, Corporate Social Responsibility and Role, and Product Sustainability and present the sustainability management standards expected by KT from suppliers across a total of 18 areas. In addition, KT established three supply chain sustainability goals to pursue shared growth for mutual benefits and strives to achieve the goals.

Supply Chain Management Goals and KPIs

Supply Chain Sustainability Strategy		KPI	Long-term Goal	Current Status of Promotion in 2018
Improve Supply Chain Sustainability	In order for KT to lead successful business, it is essential to improve the sustainability of the entire value chain. KT introduced 'suppliers' sustainability management evaluation' in 2013 and is regularly measuring and monitoring the level of sustainability of its supply chain.	Suppliers' sustainability management evaluation score	Achieve 100 points of cooperative company sustainability management score by 2022	The supply chain acquired a sustainability management evaluation score of 95.6 points in 2018
Minimize Supply Chain Sustainability Risk	Establishing a stable supply chain is a prerequisite for KT's ongoing business. Every year, KT strives to minimize risks by identifying risks from economic, environmental, and social aspects through 'suppliers' sustainability evaluation and implementing corrective actions.	Ratio of suppliers with which transactions have been terminated among those in which high risks were identified	Achieve 100% improvement after corrective actions of suppliers in which high risks were identified	The ratio of suppliers with which transactions have been terminated among those in which high risks were identified was 1.38% in 2018
Enhance Energy Efficiency and Cost Competitiveness of Supply Chain	Suppliers use large amounts of energy in product manufacturing and construction stages. This is not only a major issue for the cost competitiveness of suppliers, but also a critical issue directly connected to KT's purchasing costs. Therefore, KT makes efforts to improve energy efficiency in the supply chain.	Supply chain greenhouse gas emissions	Reduce 35% of supply chain greenhouse gas emissions by 2030 compared to 2016	Supply chain greenhouse gas emissions in 2018; 15,795 tCO$_2$eq (20.24% reduction from 19,803 tCO$_2$eq in 2016)

Supply Chain Expenditure Analysis

(As of December 31, 2018)

Category of Suppliers		Number of Suppliers (n)	Ratio of Suppliers (%)	Ratio of Purchase (%)
Tier-1 Suppliers	Entire registered suppliers	581	100.0%	100.0%
	Electronic component supplier	213	36.7%	82.1%
	Telecommunication construction contractors	262	45.1%	15.7%
	Software developing suppliers	50	8.6%	0.7%
	Service suppliers	29	5.0%	1.2%
	Shop suppliers	27	4.6%	0.3%
	Critical suppliers	44	7.6%	69.7%
Non-Tier-1 Suppliers	Critical suppliers	0	0.0%	0.0%

Sustainability Training for Suppliers

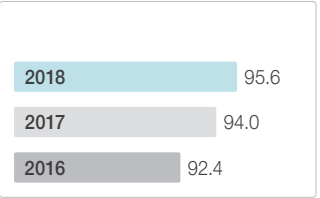

Sustainable Supply Chain Management Training

KT has operated sustainability training programs for practitioners of suppliers from 2014 to share understanding of sustainability and support suppliers to practice it in the front-line of management activities. Since 2018, KT and suppliers have signed a "Supplier sustainability guidelines practice agreement ' to secure suppliers' ability to execute sustainable management and KT intensively opened educational courses for improvement of suppliers' ability to execute sustainable management.

Supply Chain Risk Evaluation System

Pre-screening of Supply Chain Sustainability

KT is screening 100% of suppliers newly registered in 2018 based on the electronic contract system and requests compliance with the supply chain policy. In addition, KT reflects requirements regarding KT supply chain policies in the written agreement with suppliers so that they comply with the requirements. In particular, KT revised the 'Special Agreement for Practice of Ethics' in 2016 to include ethical management and observance of fair trade when making contracts with any suppliers so that suppliers can mandatorily comply with KT's ethical management policies and prepares a separate written oath. This special agreement stipulates that the parties who concluded the contract are prohibited from unethical activities such as accepting money for any reason during the process of performing the contract.

Supply Chain Risk Evaluation Score
(Unit: Point)

2018	95.6
2017	94.0
2016	92.4

Supply Chain Sustainability Risk Evaluation

KT selects suppliers based on evaluation standards by area such as materials, construction, software development, services, and stores, and shops evaluates the results of transactions annually to select excellent suppliers. For the selected suppliers, KT conducts management evaluations and Risk Management Index (RMI) monitoring twice a year, once in the first half and once in the second half of each year in linkage with credit rating agencies. From 2013, KT has introduced the 'Supplier sustainability management evaluation system' to periodically measure and manage the levels of negative economic, environmental, and social risks that may arise in the supply chain. The results of the evaluation are reflected in the annual evaluation of the suppliers, which will have a significant impact on the main selection processes, including re-selection of suppliers and selection of the best suppliers. Sustainability evaluation results for material co-operative companies and information and communication work co-operative companies in 2018 averaged 95.6 points, indicating that the suppliers' sustainability level has improved compared to 92.4 points in the previous year.

Current Status of Supply Chain Risk Evaluation

(As of December 31, 2018)

Category of Suppliers		Number of Suppliers(n)	Ratio of Suppliers (%)	2022 Goal
Tier-1 Suppliers	Total number of registered suppliers	581	100.0%	100.0%
	Number of evaluated suppliers	581	100.0%	100.0%
	Number of suppliers for which written examination has been conducted	581	100.0%	100.0%
	Number of suppliers for which visiting examination has been conducted	333	57.3%	80.0%
	Number of suppliers examined by 3rd Party	58	10.0%	20.0%
Non-Tier-1 Suppliers	Critical suppliers	0	0.0%	n/a

Corrective Action

Depending on the results of supply chain risk evaluation, KT establishes corrective action plans for suppliers that must be improved and requires improvement of ESG performance according to corrective action plans. Despite these efforts as such, a total of eight companies were sanctioned according to the results of diagnosis and evaluation of suppliers in 2018, and the action of permanent stop of transactions was taken against the relevant suppliers because they were judged to seriously violated the policy such as the occurrence of disputes.

Results of Supply Chain Risk Identification

(As of December 31, 2018, Unit: Suppliers)

Risk Classification		Risk Evaluation				Risk Action		
	Risk Type	Risk Level	Range of Evaluation	Evaluation Target Suppliers	Evaluated Suppliers	Suppliers in Which High Risks were Identified	Suppliers improved after Corrective Action	Suppliers with Which Transactions were Terminated
Economic Risk	Violation of the ethics and anti-corruption principles in the contracting process	High	All suppliers	581	581	4	4	0
	Collusion and unfair conduct	High	All suppliers	581	581	0	0	0
	Delay in payment for secondary suppliers	High	All suppliers	581	581	0	0	0
	Unsound financial structure such as low credit rating	High	All suppliers	581	581	7	1	6
Environmental Risk	Environmental accident occurred during construction	Medium-high	Telecommunication construction contractors	262	262	1	1	0
	High greenhouse gas emissions	Medium-high	Telecommunication construction contractors	262	262	0	0	0
	Environmental operating system not introduced	Medium-high	Telecommunication construction contractors	262	262	0	0	0
	Violation of environmental law or regulations	Medium-high	Telecommunication construction contractors	262	262	0	0	0
Social Risk	Disputes and litigation occurred	Medium-high	All suppliers	581	581	1	0	1
	Labor law violation	Medium-high	All suppliers	581	581	2	1	1
	Violation of safety law	Medium-high	All suppliers	581	581	0	0	0
	Safety accident occurred	Medium-high	All suppliers	581	581	2	2	0
Total			100%	581	581 (100%)	17 (2,.9%)	9 (1.5%)	8 (1.4%)