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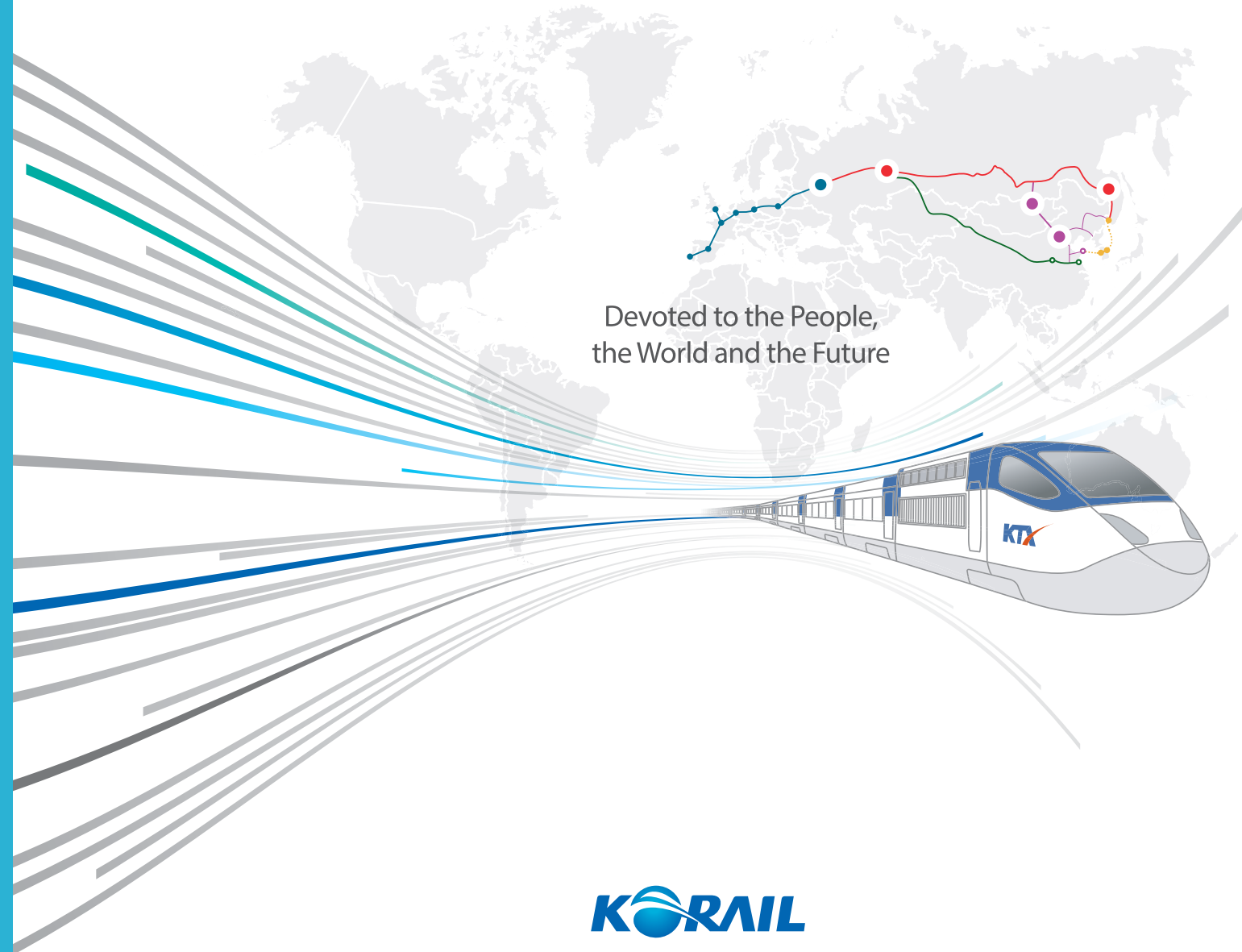


Publication Registration Number
Public Relation - 02-18225-01

Connecting the People, the World and the Future

# Railroad of the Republic of Korea

2017-18 KORAIL Sustainability Report



240 Jungang-ro, Dong-gu, Daejeon (34618)  
Korea Railroad Corporation [www.korail.com](http://www.korail.com) Cultural Promotion Division, Public Relations Office Tel: 042)615-31622

## About this Report

KORAIL is dedicated to realizing its mission to become the 'Railroad of the Republic of Korea that Connects the People, the World and the Future' and is generating various economic, environmental and social values working towards that mission. Since 2008, KORAIL has been transparently disclosing all of its activities and performance to its stakeholders through annual sustainability reports and this is the 10th sustainability report KORAIL has published.

### Standard

This report has been prepared in accordance with the Core Option of the GRI (Global Reporting Initiative) Standards and ISO26000 Guidance on Social Responsibility. It reports primarily on material issues drawn from a materiality assessment and KORAIL's approach to managing those issues.

### Period, Scope and Boundaries

This report includes the data on the sustainability activities and performance of KORAIL headquarters and regional headquarters from January 1, 2017 to December 31, 2017. We have included the qualitative performance data from the past 3 years (2015-2017) to allow the readers see the improvements and changes made over the years. We have also included the data from the first half of 2018 which have been considered timely and important. We have also identified and covered the impact of core issues drawn from a materiality assessment on our key stakeholders.

There were no significant changes related to the scope, structure, reference year and ownerships from the previous year but we've added footnotes on some changes related to calculating data and reporting. We've also added some of the performance data and information which have not changed since last year to help readers understand the content of this report better.

### Assurance

An independent third-party assurance review was carried out to ensure objectivity and reliability of this report. The third-party assurance provider has verified that this report complies with the GRI Standards (Core Option).

### Additional Information

Sustainability reports are published in Korean and English versions and can be downloaded as PDF files from our website. We you have inquiries about this report, please contact us through the office specified below.



Cultural Promotion Division,  
Public Relations Team, Korea Railroad  
Corporation

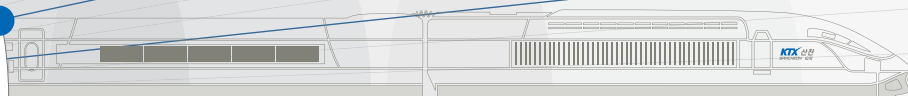
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## CONTENTS



● About this report

04 ● CEO Message

06 ● Let's KORAIL #1 · #2

10 ● Highlights 2017

12 ● **KORAIL OVERVIEW**  
KORAIL Profile · Business Portfolio · Vision & Strategy

22 ● **KORAIL CORE VALUES & ISSUES**  
Stakeholder Inclusiveness · Material Sustainability Issues ·  
Connecting People, Connecting Hearts · Connecting the World with Communication ·  
Connecting Future, Connecting Values

72 ● **KORAIL SUSTAINABILITY MANAGEMENT SYSTEM**  
Governance · Ethical Management · Human Rights Management · Risk Management

80 ● **APPENDIX**  
Sustainability Performance · UN SDGs Implementation · ISO 26000 Performance  
Assessment Report · GRI Content Index · Independent Third Party Assurance Statement ·  
Key Awards and Memberships · Sustainability Reporting Bodies





We will maintain the social value of public railway system, continuously innovate ourselves and connect the people, the world and the future with Korean railways.

Dear Stakeholders,

“KORAIL for the People and Future of Korea”

KORAIL has declared a new vision that holds its will to achieve sustainable management. For the sustainable development of Korean railway, KORAIL will work together with the nation and the people.

KORAIL is at the most critical moment in the 124-year Korean railway history after the Railway Bureau was established in 1894 and at the starting point of a new history. KORAIL successfully sponsored the 2018 Pyeongchang Winter Olympics transporting over a million passenger on KTX Gangneung Line with a zero accident rate. The historical Panmunjom Declaration for Peace, Prosperity and Unification of the Korean Peninsula was signed by the South and North Korea and the 2018 North Korea–United States summit was successfully held. This wind of peace that blew all over the Korean Peninsula will lead Korea to a new era of prosperity.

This year, Korea became a member of the Organization for Cooperation between Railways (OSJD) with the unanimous approval of all member countries and KORAIL is one step closer to building the "Iron Silk Road" that connects Busan, Pyeongyang, China, Russia, Paris and London. To make this possible, KORAIL will provide a blueprint cooperating closely with all the stakeholders. KORAIL will prepare for the future of Korea faithfully executing its duties as a public railway corporation that exists solely for the public interest.

First, KORAIL Will Connect People's Hearts, Providing People-Centered Safety in Rail Transport Services

The most important value in rail transport is safety. KORAIL will not settle for the highest level of safety it provides but aim to build the safest railway system in the world by continuously introducing new technologies and incorporating ICT. KORAIL will create an environment that allows the customers to use the railway system and the employees to work in the safest way possible.

Second, KORAIL Will Answer to the Voice of the People, Continuously Innovating Services and Always Maintaining Publicness

KORAIL will strive to provide more customer-friendly railway and train station services and environment. We will unite the divided railway industry and allows the people to access rail transport more conveniently and at a lower cost. We will build a railway system young people can use without worrying about the cost and one that grandparents can use to travel to go see their lovely grandchildren.

Third, We Will Create Jobs and Promote Fair Recruitment Practices.

KORAIL will offer equal opportunity to job seekers and ensure that employees are hired on the basis of their ability to perform a job, rather than discriminated against on the basis of factors such as age, appearance, education and gender. KORAIL will be hiring approximately 2,000 people in 2018 and will contribute to making a sound society by continuously generating more jobs.

Fourth, We Will Achieve Win-Win Growth with Our Communities.

Railways must protect people's lives and support a nation's balanced development. KORAIL will make sure knowledge, industries, culture and ideas are passed on region to region, city to city through its railway network. We will invigorate the regional economy and give life and hope to the entire nation. KORAIL will be a people's KORAIL and serve as the lever that bring balanced regional development and brighter future to Korea.

Countless numbers of people who love the railway system have enabled KORAIL to come this far. We hope you will continue to remain our companion on our grand journey ahead and we ask for your unwavering encouragement and support for the future of Korean railways and for Korea's tomorrow.

Thank you.

President and CEO of KORAIL Oh, Young-sik



# The 2018 Pyeongchang Winter Olympics and Paralympics ended in great success.



## KORAIL safely transported over 1 million passenger including the athletes during this remarkable event in Pyeongchang

After being selected as an official sponsor providing railway service for the 2018 Winter Olympic and Paralympic Games in Pyeongchang, KORAIL designated the 52 days from January 26 to March 18, 2018 as the special transporting period, increased the number of train runs and extended its train service, connecting all railway lines to Incheon International Airport specially for this period.

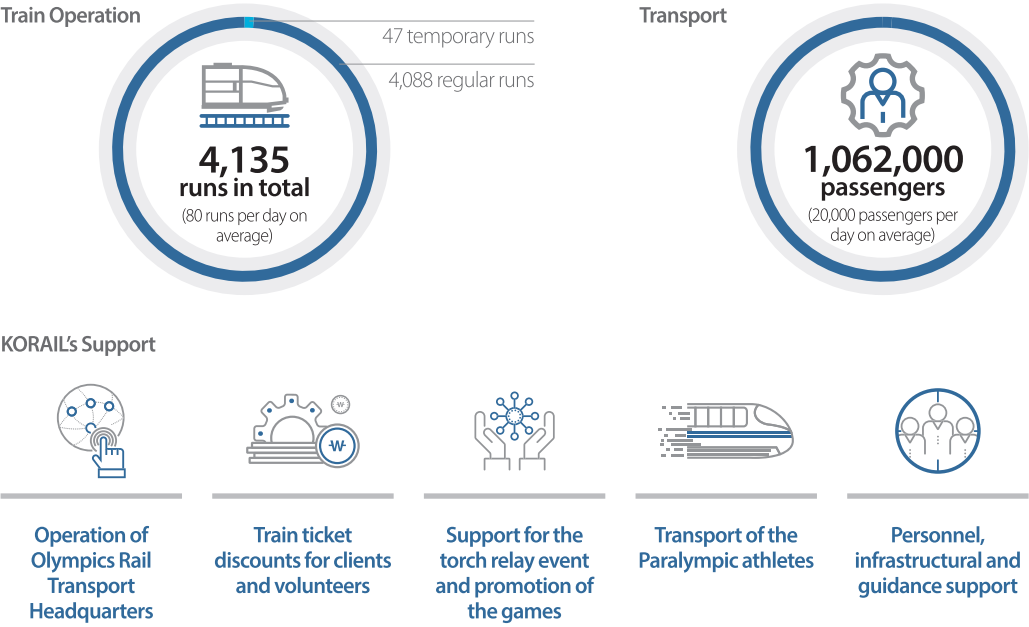
KTX Gangneung Line transported a total of 1,062 passengers over a total of 4,135 train runs (on average 80 runs per day) with a zero accident rate. Key personnel including International Olympic Committee (IOC) President Thomas Bach visited Pyeongchang using KTX Gangneung Line and spoke highly of Korea's express train infrastructure.

KORAIL assigned 60 staff members who can guide passengers in foreign languages to stations that foreigners are most likely to visit during the Olympics such as Incheon Airport, Pyeongchang Station, Jinbu Station and Gangneung Station. KORAIL also provided English announcement and operated foreign language customer service booths to accommodate foreign passengers.

Also, to better accommodate passengers with disabilities during the Paralympics period, KORAIL carried out maintenance of facilities for people with disabilities at 8 major stations on Gangneung Line and placed 30 additional wheelchairs and 23 wheelchair lifts. KORAIL also designated two electric wheelchair seats, 13 regular wheelchair seats and 60 seats for the passengers with disabilities for each car during this special transport period.

This was a great opportunity for KORAIL to show the world the top-notch level of Korea's express train operating capacity. KORAIL will continue to provide safe and convenient services to its customers and become a true public corporation that is loved by the citizens of Korea.

## Support for the 2018 Pyeongchang Winter Olympics and Paralympics





## Let's KORAIL #2

# Our Journey Connecting the South and North Korea and, the World Begins

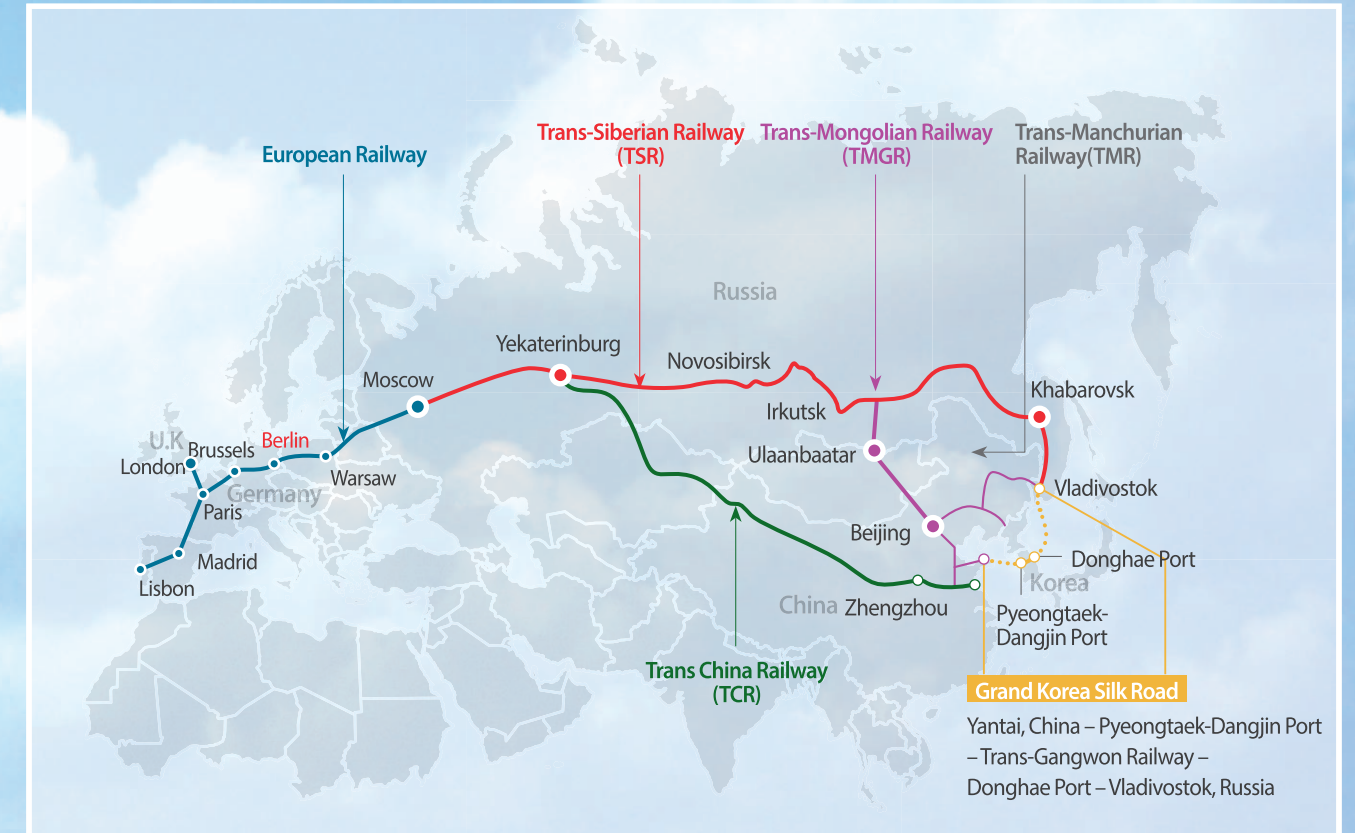
On June 7, 2018, Korea became a member of the Organization for Cooperation between Railways (OSJD). The OSJD was founded in June 1956 to facilitate cooperation in freight and passenger traffic in the Eurasian region. It currently has 28 member countries where Eurasian railways such as TSR (Trans-Siberian Railway), TCR (Trans-China Railway) and TMGR (Trans-Mongolian Railway) pass through such as Russia, Mongolia, China and North Korea. Becoming a member, Korea gains the same benefit of signing some key agreements such as the Agreement on International Goods Traffic by Rail (SMGS) and Agreement on International Passenger Traffic by Rail (SMPS) operated under the OSJD, which are crucial for using the Eurasian railway link. It will also serve as an international foundation for linking Korean railways to the Eurasian railway link.

To expand Korea's railway network and develop a new Silk Road, KORAIL has long been working on the Inter-Korean Railway Development Project with the government and the future of this project has become more promising with this new OSJD membership. After discussing the Gyeongui Line Restoration Project in June 2000, South and North Korea worked very hard

to reconnect the inter-Korean railway line but the two failed to come to an agreement for years. KORAIL's dream is to see the two countries leaving the past behind and the completion of the inter-Korean railway that will not only run across the entire Korean Peninsula but expand across Asia.

To make this possible, KORAIL carried out restructured the organization and established the Overseas and Inter-Korean Railway Project Group under the corporation and also strengthened its role by establishing the Inter-Korean Railway Project Division under the Group. KORAIL also participates in government's roadmap development process and is continuously strengthening its partnerships with relevant organizations like Korea Railroad Research Institute, Korea Rail Network Authority.

The railway journey that will take Korea out to a greater world has just begun. KORAIL will work with the government side by side to preparing for the day the world is connected through the Inter-Korean Railway and Iron Silk Road.







Seoul-Gangneung KTX

A high-speed KTX Line connecting Seoul and Gangneung in Gangwon Province has opened on December 22, 2017. It normally took more than 5 hours to travel between Seoul and Gangneung but this new line has shortened the travel time between Seoul Station and Gangneung Station to a 114 mins and Cheongnyangni Station and Gangneung Station to 86 mins. The Seoul-Gangneung KTX Line played an important role transporting national athletes during the 2018 Pyeongchang Winter Olympics period and put Seoul and Gangneung within a day-trip distance from each other.



Gwangmyeong Station City-Airport Terminal and KTX Airport Limousine Bus Begin Operating

In January 2018, Gwangmyeong Station City-Airport Terminal and KTX Airport Limousine Bus Service were finally opened. Gwangmyeong Station City-Airport Terminal is Gyeonggi-do's first city-airport terminal and the first city-airport terminal built outside Seoul. There are 15 check-in counters and an immigration at the terminal. Passengers can check-in and go through immigration here and depart using a direct passage at the airport. KORAIL also operates KTX Airport Limousine Bus which can take passengers from Gwangmyeong Station to Incheon International Airport (T1) in 50 minutes.

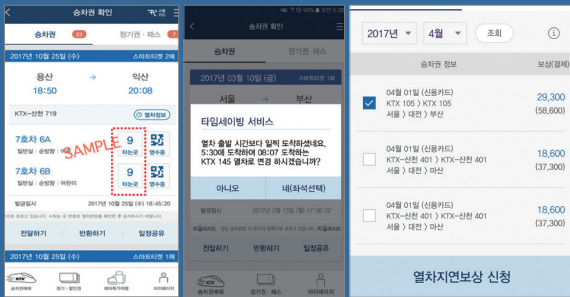
Subway Transfer Passage Opened at Seoul Station

A direct subway transfer passage connecting the Seoul Subway System and Seoul Station was newly established on the Platform 4 at Seoul Station. Passengers arriving at Seoul Station via KTX or other trains no longer have to go up and down the stairs and pass through the waiting area but can simply use this passage to transfer to Subway Lines No. 1 and 4 as well as the AREX Airport Railroad Express Line. KORAIL will continue to work to make transfers more convenient and fast by reducing the transfer distance and developing horizontal transfer passages.



KorailTalk+ with Enhanced Design and Features

KorailTalk+, an updated version of 2017's KorailTalk has been launched. KorailTalk+ offers a new customer-centered design and structure as well as new features like Smart Alarm and First Class upgrades with mileage. KORAIL will continue to introduce advanced technologies to the application and offer new services to satisfy customers' needs.

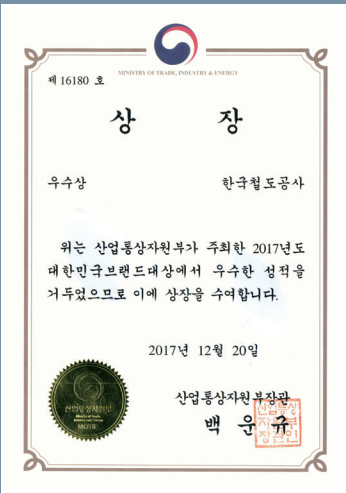


KTX Gwangmyeong Station's Shuttle Bus Service

We've started operating a direct shuttle bus service connecting Sadang Station and KTX Gwangmyeong Station. The shuttle bus can take passengers from Sadang Station to KTX Gwangmyeong Station via Gangnam Urban Expressway in around 20 minutes nonstop. Also, by adding shuttle bus lines connecting Bupyeong Station, Woningae Station and Songnae Station to KTX Gwangmyeong Station for KTX users in Incheon and Bucheon areas, we've significantly enhanced customer access to KTX Gwangmyeong Station.

KTX Receives the Korea Brand Hall of Fame Award in the Railway Category

KTX won the '2017 Korean Brand Hall of Fame Award' in the Railway Category. KTX has been recognized with this award for its top-notch safety and on-time performance and, for enhancing user convenience by making continuous service improvements such as making KTX stop at both Seoul Station and Yongsan Station and installing charging outlets on KTX trains. KORAIL will continue to enhance the brand value of KTX by providing safe and convenient services.





# KORAIL

## Overview

Let's  
KORAIL

KORAIL Profile

Business Portfolio

Vision & Strategy



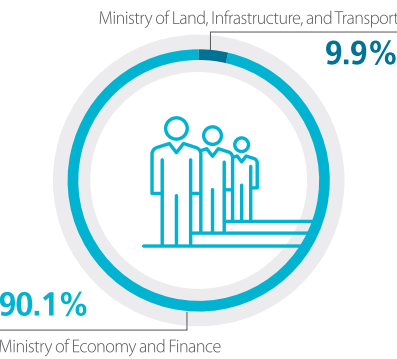
Overview

Since its launch of the Gyeongin Line (33.2km from Noryangjin to Jemulpo) back in 1899, KORAIL has developed its expertise and efficiency in railway operations over the past 118 years and strived to provide people with better lives and valuable future by delivering safe transportation services.

<b>Company Name</b>	Korea Railroad Corporation (KORAIL)	<b>Competent Authority</b>	Ministry of Land, Infrastructure, and Transport
<b>President &amp; CEO</b>	Oh, Young-sik	<b>Type</b>	Market-Based Public Corporation
<b>Date of Establishment</b>	June 28, 1894 (Korea Railroad Corporation established on January 1, 2005)	<b>Total Assets</b>	KRW 19,878.3 billion
<b>Headquarters</b>	240, Jungang-ro, Dong-gu, Daejeon, Republic of Korea	<b>Operating Profit/Net Profit</b>	KRW 469.9 billion/ KRW 855.5 billion
<b>Legal Basis</b>	Korea Railroad Corporation Act (Act No. 7052, December 31, 2003)	<b>Number of Executives and Employees</b>	26,403

\*Corporate Information: As of June 30, 2018 / Financial Information: As of December 31, 2017 (Based on K-IFRS)

Stockholders



History

- 1894** Railway Bureau established by a central government office during the Joseon Dynasty period
- 1899** Gyeongin Railway Line (33.2km between Noryangjin and Jemulpo) opened
- 1905** Gyeongbu Railway Line opened
- 1963** Korean National Railroad established
- 1974** Seoul Metropolitan Subway Lines opened (Seoul-Suwon, Guro-Incheon, Yongsan-Seongbuk)

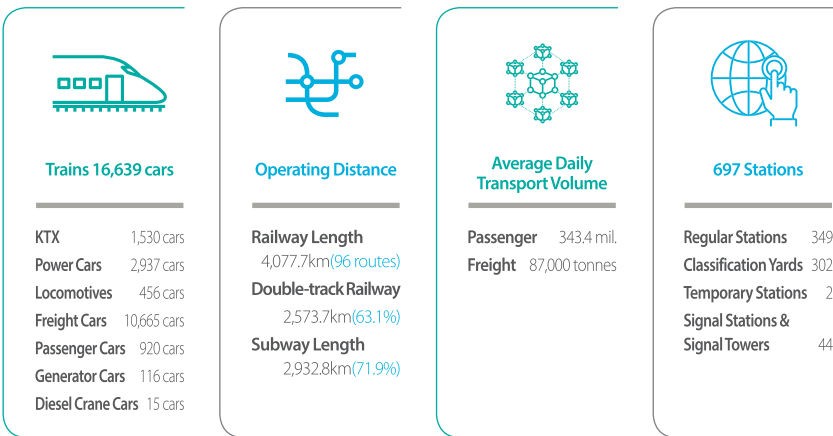
1800~

- 2004** Phase 1 opening of the Gyeongbu High-Speed Railway
- 2005** Korea Railroad Corporation founded
- 2007** Number of KTX passengers exceed the 100 million mark  
Inter-Korean Railway Line test-operated
- 2010** Phase 2 opening of the Gyeongbu High-Speed Railway  
KTX Gyeongjeon Line opened
- 2011** KTX Jeolla Line opened
- 2012** Number of KTX passengers exceed the 300 million mark

2000~

Facilities & Transport Performance

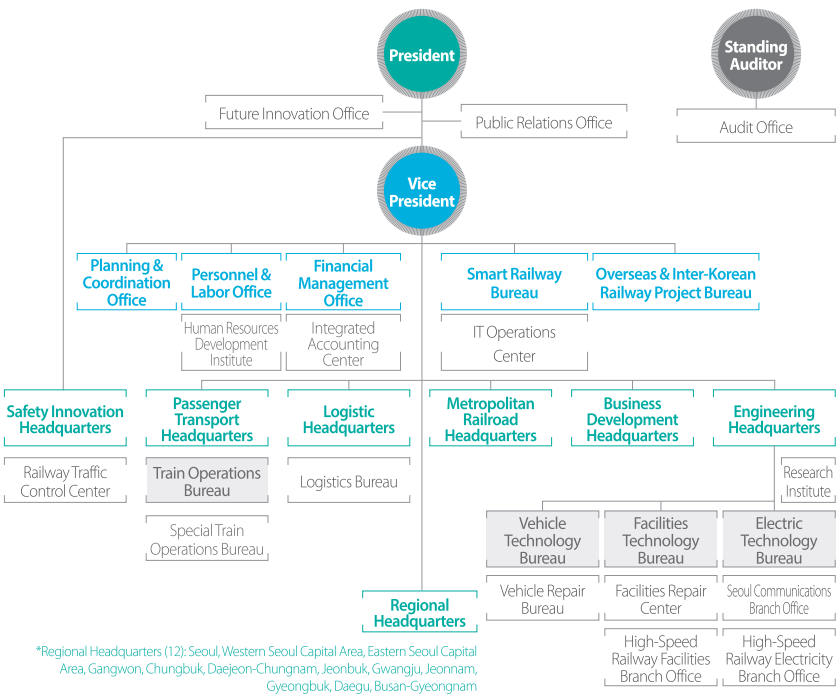
(As of April, 2018)



Organization

KORAIL is comprised of 6 headquarters, 6 offices, 6 bureaus, 65 divisions, 12 regional headquarters and 23 affiliated organizations.

Organizational Chart



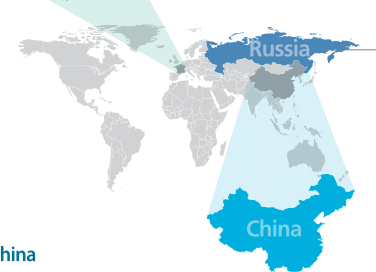
Key Tasks at Offices Overseas

France

- Building networks with railway operators and affiliated agencies
- Researching and analyzing railway policies, services, and business strategies
- Efficiently procuring supplies & parts from overseas
- Providing support in technical/training exchanges with SNCF

Russia

- Korea-Russia and South-North-Russia Railway Cooperation Projects
- Establishing a cooperative network for connecting Eurasia continental railway
- CIS national railway operation information investigation and collection analysis



China

- Researching and analyzing operational information of Chinese and Northeastern railways
- Building networks needed to connect the Eurasian railway
- Marketing and promotional activities to attract inbound Chinese tourists

Overview of Offices Overseas

Being recognized for the high technical skills, KORAIL operates offices overseas to share advanced foreign railway policies and operational know-hows. KORAIL's office in Paris, France has established networks with railway operators and authorities and is procuring parts and supplies needed. KORAIL's office in Beijing, China is building exchange and cooperative networks necessary to connect the Eurasian Railway and is involved in marketing activities to attract Chinese tourists. KORAIL is also planning to establish an office in Russia in the second half of 2018 to strengthen relationship with the Russian railways operators and to connect the Inter-Korean Railway to the Trans-Siberian Railway.

Subsidiaries

KORAIL manages subsidiaries to develop expertise in specific business areas. By coordinating businesses between the subsidiaries, KORAIL strengthens competitiveness and revenue base of the subsidiaries, generates synergy and ultimately achieves sustainable growth.

(As of March 31, 2018)

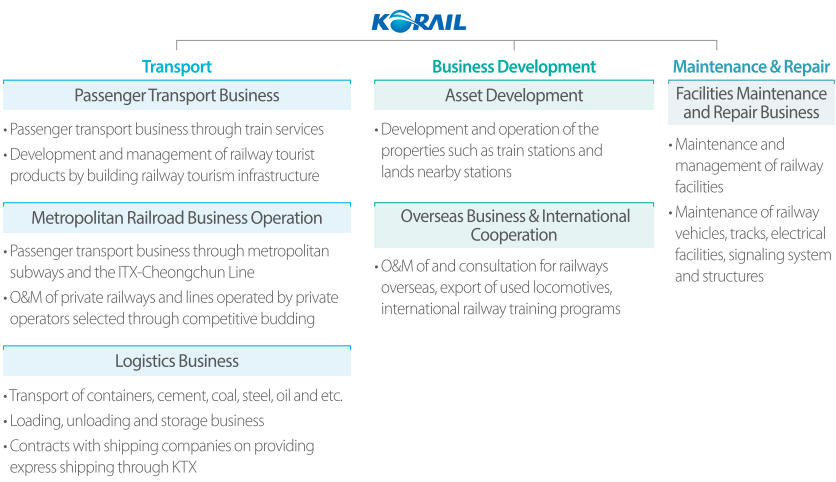
Company	CEO	Business	No. of Employees	Capital (KRW 100 mil)	Sales in 2017 (KRW 100 mil)	Stake (%)
KORAIL Retail	Kim, eun sun	Commercial facility operation, advertising media operation	455	60	2,838	100.0
KORAIL Logis	Park, kee hong	Railway logistics business	132	77	526	92.1
KORAIL Tourism Development	Kim, soon chul	Tourism & leisure, retail/crew business	1,065	40	559	51.0
KORAIL Networks	Kang, kwi seob	Labor management and customer center contracts, parking lot operation	1,635	72	846	89.5
KORAIL Tech	Ban, kueg dong	Management of tracks, electrical facilities, train maintenance	600	19	366	97.3



Business Areas

KORAIL was established to contribute to the development of the railway industry and national economy and is striving to provide safe and convenient railway services. To become the KORAIL of the people and of the future of Korea, it is continuously diversifying businesses and working to provide more advanced services.

Key Business Areas



Passenger Transport Business

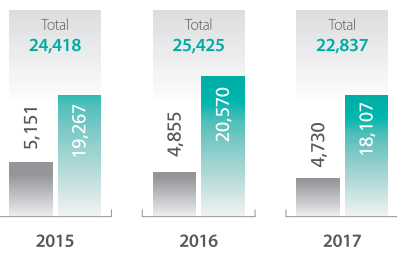
KORAIL generates revenue by operating trains and transporting passengers on express trains (KTX) and regular trains (ITX-Saemaoul, Saemaoul, Mugunghwa, Nuriro and commuter trains) and by developing tourism products and infrastructure. KTX services which were launched in 2004 significantly reduced travel times and changed people's lives putting the entire nation with a 2-hour travel zone. The accumulated number of passengers surpassed 643 million in June 2018 with the highest ever growth rate. With the Five Railway Tourism Belts (Jungbu Naeryuk Belt, Namdo Haeyang Belt, Pyeonghwa Saengmyeong Belt, Gangwon Cheongjeong Belt and Seohae Gold Belt) we have built, we satisfy our customers' needs, invigorate the local economy and offer a variety of train tour products such as Rail Green, Ocean Train, Wine Cinema, and e-Train.

Overview of Passenger Transport Business

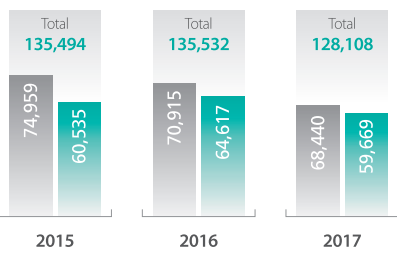


Key Achievements in Passenger Transport Business

Revenue (Unit: KRW 100 mil)

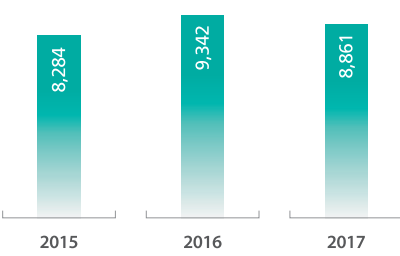


Transport Volume (Unit: 1000 people)

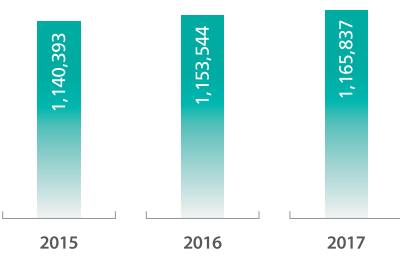


Key Achievements Metropolitan Railroad Business

Revenue (Unit: KRW 100 mil)



Transport Volume (Unit: 1000 people)



Metropolitan Railroad Business

KORAIL's metropolitan railway started with 29 stations in 1974 and currently serves as a primary transportation system for the citizens of the Seoul Capital Area, accommodating on average 3 million passengers per day at 261 stations. KORAIL values its customers' time and it is continuously working to develop more express lines, optimize the transfer system, reduce the transfer distance between major railway lines and subway lines and ultimately, to shorten customers' travel time. KORAIL currently operates a total of 14 metropolitan subway lines including Gyeongbu Line, Gyeongin Line, Gyeongwon Line, Janghang Line (Line No.1), Ilsan Line (Line No. 3), Gwacheon-Ansan Line (Line No. 4), Bundang Line, Gyeongui-Jungang Line, Gyeongchun Line, Suin Line, Gyeonggang Line and Donghae Line. KORAIL will continuously develop new subway lines, improve its services and work to build a metropolitan subway system that is loved and trusted by the people.

Overview of Metropolitan Railroad Business



Operational Performance in 2017	
Metropolitan Train Transport Distance	619.0km
Average Daily Train Runs	2,558runs
Average Daily Ridership	319mil
Average Daily Revenue	KRW 2,428 mil

Logistics Business

KORAIL operates a comprehensive logistics service that includes transport, warehousing, loading and unloading of containers, cement, coal, steel and other major freight. Through train transport, KORAIL can safely transport more than 1,000 tonnes of freight at a time, without being affected by congestion delays or weather conditions like snow, rain and wind. It's also an economical and eco-friendly mode of transport that only uses 1/14 of energy and emits 1/13 of carbon dioxide compared to freight trucks. KORAIL's goal is to increase its share of freight transport up to 10% to reduce the cost of transporting raw materials which serve as the foundation for Korea's industrial development.

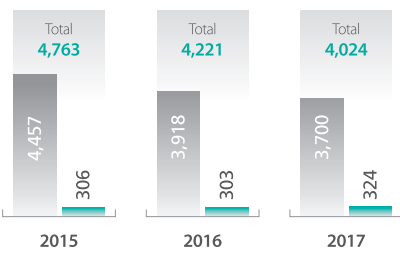
Overview of Logistics Business



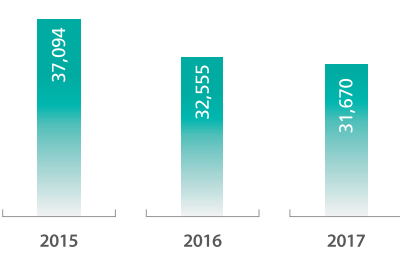
Operational Performance in 2017	
Freight Transport Distance	3,064km
Average Daily Train Runs	223runs
Average Daily Transport Volume	8.7tonnes
Average Daily Revenue	KRW 1,102mil

Key Achievements in Logistics Business

Revenue (Unit: KRW 100 mil)



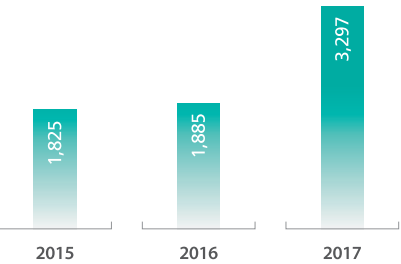
Transport Volume (Unit: 1000 tonnes)





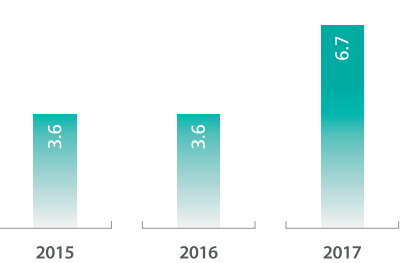
Key Achievements in Asset Development Business

Revenue\* (Unit: KRW 100 mil)



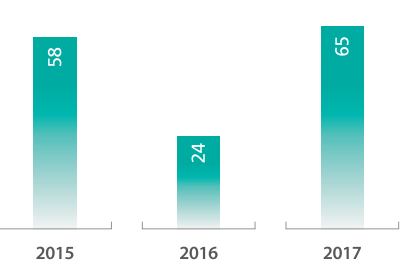
\*Excluding the revenue from overseas business

Ratio of Revenue from Diversified Business (Unit: %)

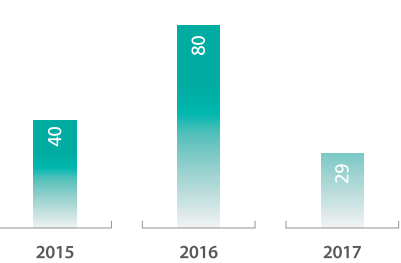


Key Achievements in Overseas Business

Revenue (Unit: KRW 100 mil)



Ratio of Service Business (Consulting, O&M) (Unit: %)



Asset Development Business

KORAIL operates an asset development business by carrying out various service businesses around the train stations. Developing the areas surrounding the train stations, KORAIL invigorates the local commercial areas and culture and ultimately, enhances the quality of people's lives. Also, using the space within the train stations, KORAIL creates themed shops, sells the products of small and medium-sized companies, promotes special regional products and leases conference rooms. KORAIL modernizes and infuses cultural elements into train stations to improve passenger convenience and experience. In 2017, KORAIL signed a business contract to develop the Kwangwoon University Station area and is developing station-surrounding areas in Yongsan, Susaek, northern part of Seoul Station and Daejeon. KORAIL also completed developing the old Sungkyunkwan University Station and significantly improved customer convenience.

Overview of Asset Development Business



Operational Performance in 2017 (Unit: KRW 100 mil)

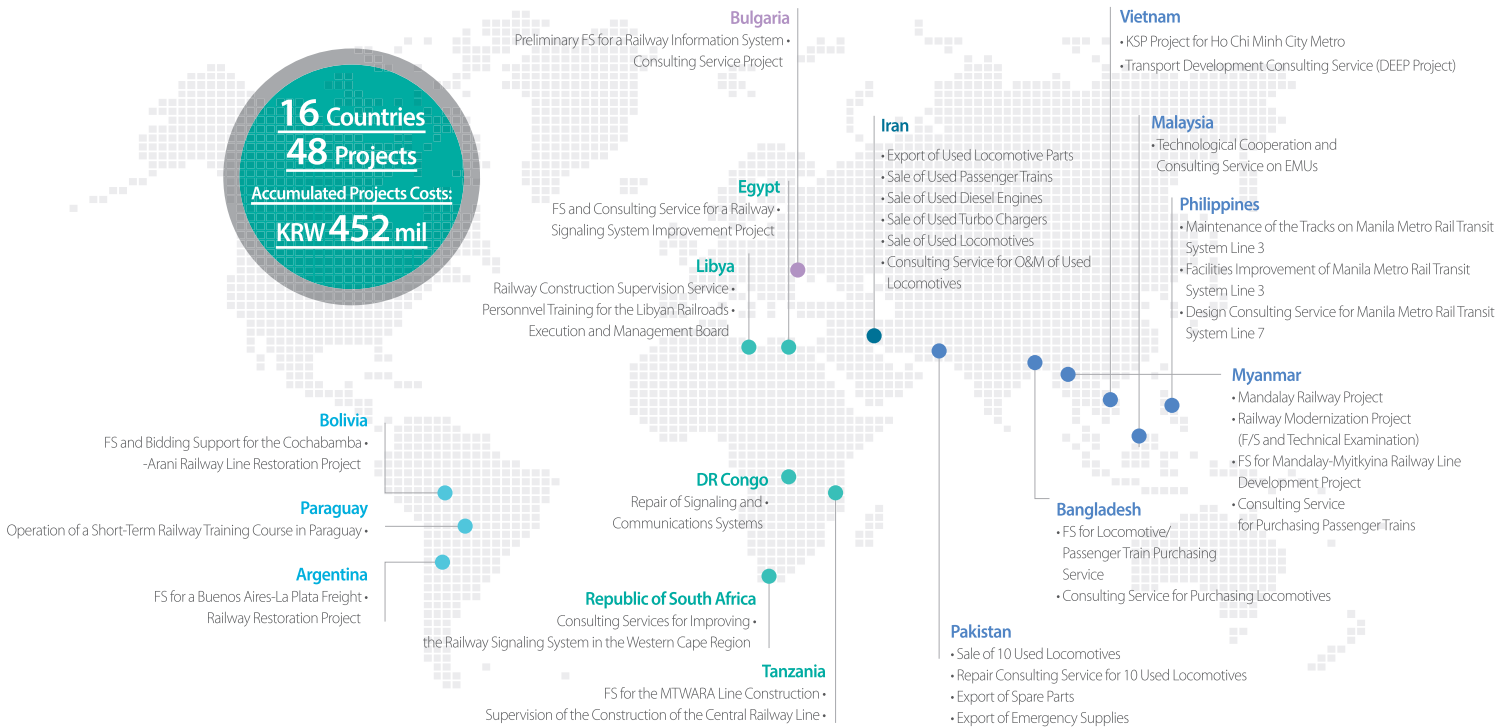
Leasing	Lease of Korea Railroad Corporation's assets	542
Retail	Sales commission received by KORAIL Retail	706
Advertising	Revenue from outdoor advertisements and commercials in KTX trains	240
Parking Lot	Revenues from train stations' parking lots and unused properties	126
Development of Train Stations	Usage fees for the ownership shares of the commercial facilities from the construction and operation of private/integrated train stations	47
Real Estate Development Revenue from development	Revenue from development of unused lands and areas surrounding the train stations	15
Other	Fees from recharging transportation cards, vehicle lease and maintenance fees, fees for issuing cash receipts, fees for using employee training centers	1,621

Overseas Business & International Cooperation

KORAIL develops new growth engines by operate overseas business with its railway operation know-hows and technologies acquired over decades. Starting with the technological cooperation on electric multiple units (EMUs) and consultation services (repair of 50 trains) for Malaysia in 2007, KORAIL has been providing total railway solutions overseas, offering consultations and carrying out O&M of railways oversea. In 2017, KORAIL established a foundation to enter the African market by winning a KRW 14.1 billion construction supervision project for the central railway line in Tanzania. KORAIL also won a consultation project to purchase passenger trains for Myanmar and another consultation project to purchase locomotives for Bangladesh.

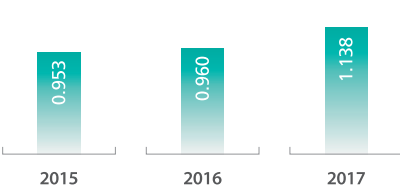
Overview of Overseas Business & International Cooperation

Development and Operation of Overseas Business	Saudi Arabia	Riyadh Metro O&M Project
	Philippines	Design Consulting Service Contract for Manila Metro Line MRT-7
	Malaysia-Singapore	Support for AssetsCo Tender for the KL-Singapore HSR (High-Speed Rail) Project
Development of Comprehensive Plans and Strategies for Overseas Business	Vietnam	Development Consultation Service for the Transport Sector
	Tanzania	Consulting Services Supervising the Design and Construction of the Central Railway Line in Tanzania
	Myanmar	Consulting Services in Train Purchasing
Exchanges and Cooperation with Foreign Railway Operators and International Railway Organizations	Bangladesh	Consulting Services in Train Purchasing
	Germany	Export of Used Locomotives
	Iran	Export of Used Diesel Locomotive Parts
	Pakistan	Consulting Services in Repairing Used Locomotives

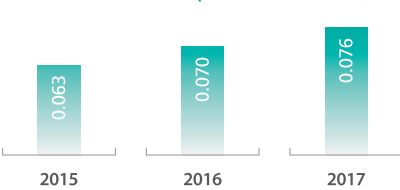


Key Achievements in Overseas Business

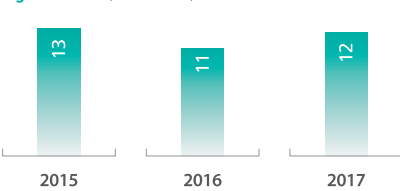
Facilities Failures (Unit: Failures/1,000 km)



Parts Failures From Poor Inspection (Unit: 100 mil Km)



Signal Failures (Unit: Failures)



Facilities Maintenance and Repair Business

To ensure safe train operations and safety of the citizens, KORAIL prevents electrical problems and track failures in advance through real-time monitoring and works to make sure the facilities are maintained in the best condition. KORAIL has established a facilities management system that takes into account of seasonal and environmental disaster factors such as rockfalls during thawing period, heat wave and heavy rain in the summer and broken rails in the winter. KORAIL has also established an ICT-based maintenance system and modernized its work process to allow automated measuring, remote monitoring and diagnostics and, quick response to emergency situations. KORAIL is constantly repairing and improving its facilities to prevent railway failures and accidents and, ensure safety in all areas of its railway operations.

Overview of Facilities Maintenance and Repair Business

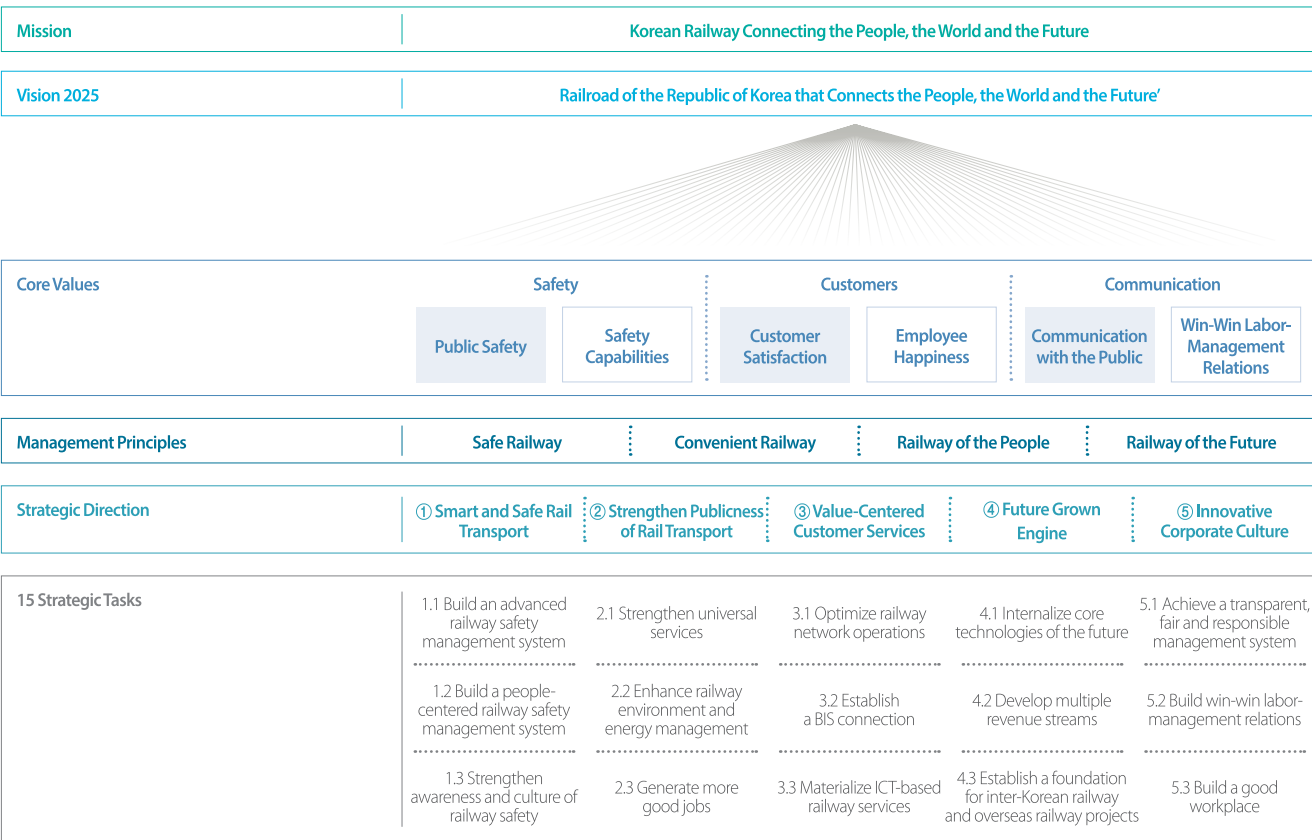
Work	Key Achievements in 2017
Maintenance, Repair and Safety Management of Track Facilities - ICT-based maintenance system	Real-time monitoring and measuring of rail track temperature
Maintenance, Repair and Safety Management of Civil Engineering Facilities - Facilities improvement work to ensure safety in railway infrastructure	Establishment of an advanced monitoring system on sites with high-risk of rockfalls and inspection of hazardous elements near facilities using drones
Maintenance, Repair and Safety Management of Architectural Facilities - Improvement work to facilities that customers use to protect citizens' lives	Development and installation of safety bars on platform screen doors



Management Value System

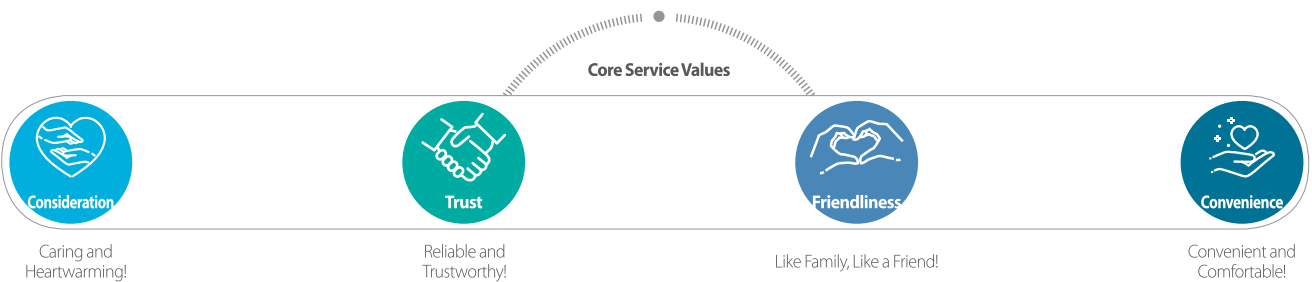
In May 2018, KORAIL declared a new vision entitled, 'KORAIL for the People and Future of Korea'. This vision holds KORAIL's will to lead the future of Korean rail transport and a meaning that the citizens are the owner of KORAIL. KORAIL will expand the railways across the Korean Peninsula and across the world and, lead the future of Korean rail transport. Also, by strengthening its publicness, it will always stay as a true public corporation and offer a brighter future to the nation and the citizens.

KORAIL's Management Value System



New Service Slogan

Connecting Minds, Your KORAIL



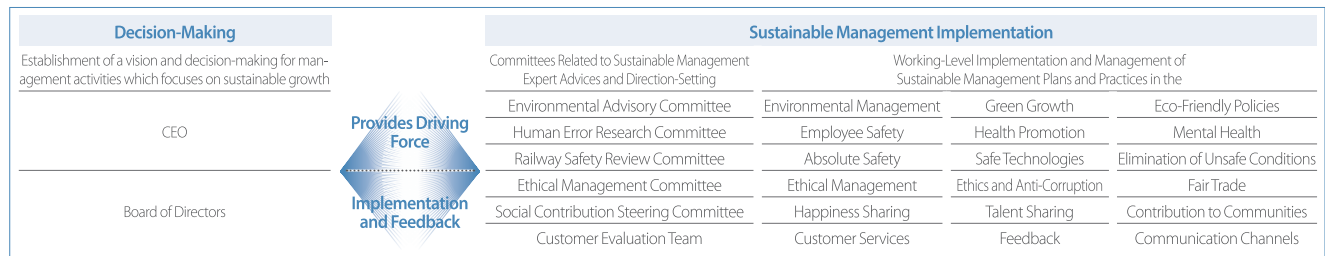
Value System for Sustainable Management

To realize its mission and generate social values as a public corporation while pursuing sustainable growth, KORAIL carries out CSR activities that are unique to KORAIL. KORAIL'S CSR activities are divided into 10 categories and for each category, a committee comprising of inside and outside experts develops and executes tasks related to KORAIL's sustainable management in economic, social, ethical and environmental areas. Based on its implementation system for sustainable management, KORAIL checks its strategies and roadmap, implements sustainable management all through the corporation while taking into account of sustainability risks and incorporates the opinions of various stakeholders into its management practices to enhance the future value of the railway industry.

Vision and Strategy for Sustainable Management



Process for Implementing Sustainable Management



Divisions Implementing Sustainable Management and Their Roles

Strategic Goal	Category	Roles and Focus		Implementing Bodies
Reliable Corporation	Sustainability	• Overall management of sustainable management	• Inspection of progress and consultation	Cultural Promotion Division
	Ethics	• Awareness building and promotional activities		
Fulfillment of Social Responsibilities		• Operation of policies and regulations related to anti-corruption and ethics	• Promotion of ethics-related support and incentives	Ethics Review Division
		• Internalization of ethical mindset among executives and employees (training, policy improvement)		
Passionate Organization	Social Contributions	• Overall management of CSR activities	• Development and promotion of CSR activities that KORAIL specializes in	Cultural Promotion Division
	Win-Win Growth	• Implementation of policies that promote community development		
Innovative Corporation Focused on Customer Satisfaction		• Formulation and implementation of policies that promote win-win growth		Material Management Division
		• Overall management of policies and programs supporting small and medium-sized companies such as condition purchase technology development programs		
Green, Eco-Friendly Railway	Personnel	• Overall management of government policies and compliance to the Labor Standards Act	• Operation of capacity building programs for employees	HRD Division
	Health	• Fair and non-discriminatory personnel policies (hiring and appointment policies)	• Operation of welfare policies for realizing a GWP	
Green, Eco-Friendly Railway		• Operation of policies and regulations related to anti-corruption and ethics	• Promotion of ethics-related support and incentives	Ethics Review Division
		• Internalization of ethical mindset among executives and employees (training, policy improvement)		
Green, Eco-Friendly Railway	Customer	• Formulation and implementation of policies for improving customer services	• Operation of VOC processing and information protection systems	CS Planning Division
	Safety	• Development of customer communication channels and customer feedback gathering		
Green, Eco-Friendly Railway		• Formulation and implementation of policies related to railway safety	• Operation of customer safety management systems	Safety Innovation Division
Green, Eco-Friendly Railway	Environment	• Formulation and overall management of policies for environmental work	• Introduction and use of eco-friendly technologies	Environmental Systems Division
	Energy	• Formulation and implementation of waste management systems		
Green, Eco-Friendly Railway		• Formulation and overall management of energy-saving policies	• Development and use of new and renewable energy	Environmental Systems Division
		• Operation of energy efficiency programs	• Implementation of GHG emission reduction policies	



# KORAIL

## Core Values & Issues

Let's  
KORAIL

Stakeholder Inclusiveness

Material Sustainability Issues

Connecting People, Connecting Hearts

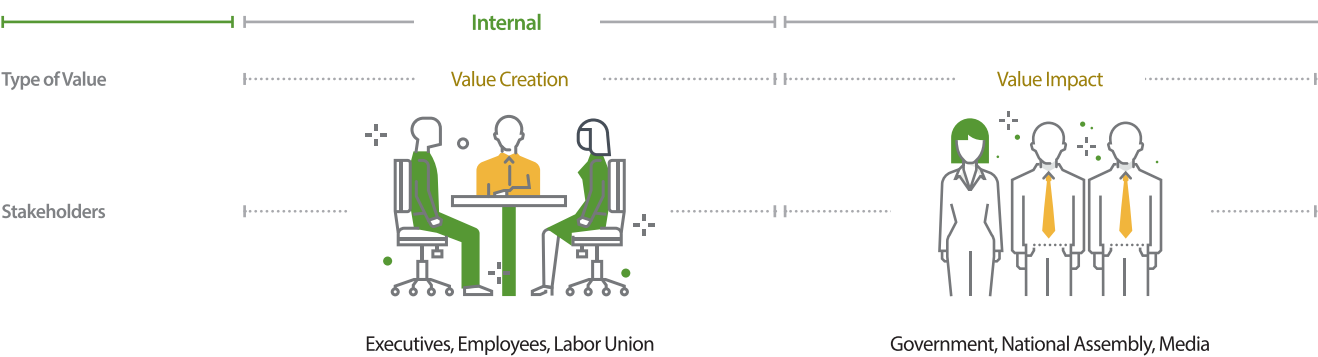
Connecting the World with Communication

Connecting Future, Connecting Values



## Communication with Stakeholders

KORAIL categorizes stakeholders in terms of steps of the value stream such as value creation, value impact, value delivery and value purchasing and, gathers stakeholders' opinions through various communication channels. The valuable opinions of stakeholders are incorporated into KORAIL's sustainable management activities and KORAIL aims to become a reliable corporation through continuous communication and cooperation.



Interests	Sustainable Management / Welfare and Working Conditions	Policy Projects / Publicness, Public Interest
Communication Strategy	Value System Sharing / Strengthened Trust and Cooperation	Promotion of Government Policies / Establishment of a Positive Consensus
The Bodies in Charge of Communication	Strategy Planning Division, Labor-Management Cooperation Division	Planning and Budget Division, Media Promotion Division
Communication Channel   Online	KORAIL Group Portal / KORAIL Forums (Communication Room, Opinion Room)	Business Website, Company Website, KORAIL Blog / KorailTalk+, Social Media (Facebook, Twitter)
Communication Channel   Offline	KORAIL's Thoughts Talk! Talk! / Labor-Management Committee / Family Gathering Event	Council of Organizations under the Ministry of Land, Infrastructure, and Transport / Press Conferences / Face-to-Face Communication
Key Communication Efforts in 2017	<ul style="list-style-type: none"><li>• Held employee-centered innovative idea presentation contests (20 times)</li><li>• Operated 9 innovative idea clubs (1,300 participants)</li><li>• Video meetings, focused discussions, brainstorming meetings (158 sessions)</li><li>• Invited outstanding employees and their families to 'Family Gathering' (41 times)</li><li>• Management visits (6 times), conferences (14 sessions), labor-management meetings (29 sessions)</li><li>• Established and operated an employee complaint resolution system</li><li>• Answered employees' online inquiries within 3 days and reduced the maximum complaints processing period from 10 days to 7 days</li></ul>	<ul style="list-style-type: none"><li>• Strengthened operation of an executive division (chiefs of divisions, stationmasters) exclusively in charge of dealing with the members of the National Assembly</li><li>• Held events appointing members of the National Assembly honorary stationmasters and held events (16 times)</li><li>• Discussed policies with the government and public organizations attending promotion council meetings (monthly)</li><li>• Held press conferences more frequently (264 times)</li></ul>
Key Communication-Related Achievements in 2017	<ul style="list-style-type: none"><li>• KRW 15.8 bil achieved from outstanding innovative tasks</li><li>• Special promotions of individuals (5) that showed outstanding idea performance and overseas training (2 trainees)</li><li>• Drew up 64 outstanding tasks, completed 61 of them</li><li>• Concluded wage agreements without disputes</li><li>• Complaints processing (1,686 cases)</li><li>• Policy improvements (24 cases)</li></ul>	<ul style="list-style-type: none"><li>• Received an award from the chair of the Land Infrastructure and Transport Committee of the National Assembly</li><li>• 340 press releases on government policies were issued</li><li>• 336 press releases on corporate policies and services were issued</li></ul>



Fair Work / Win-win Growth	User Convenience / Customized Services
Strengthen Partnerships / Establish an Ecosystem for Win-win Growth	Strengthen MOT (moment-of-truth) Services / Develop Customizable Services
Win-win Growth Center, Material Management Division	Passenger Marketing Division, Metropolitan Service Operations Division
Business Website, Company Website, KORAIL Blog / KorailTalk+, Social Media (Facebook, Twitter)	Business Website, Company Website, KORAIL Blog / KorailTalk+, Social Media (Facebook, Twitter)
Win-Win Cooperation Academy / Conferences with Partners / Purchasing Conferences	KORAIL Happy Citizens' Group / Customer Service Review Group / Foreigner Service Review Group
<ul style="list-style-type: none"><li>• Increased the number of personnel for the body in charge of win-win growth (64 employees, 13 more than the previous year)</li><li>• Established and operated the "Operating Standards for the Railway Technology Commercialization Support Project" and "Operating Standards for the Committee for Managing Co-Developed Products"</li><li>• Operated KORAIL-SMEs-Affiliated Foundations 'Win-Win Cooperation Academy'</li></ul>	<ul style="list-style-type: none"><li>• Established and operated 71 KORAIL Happy Citizens' Groups (1,548 people)</li><li>• Selected new KORAIL Customer Review Groups (466 people), gathered real-time feedback on customer satisfaction level</li><li>• Established Foreigner Service Review Groups, reviewed MOT services</li><li>• Gathered customers' opinions through the annual transport market survey</li></ul>
<ul style="list-style-type: none"><li>• Won an award at the Bangkok International Intellectual Property, Innovation, and Technology Exposition (IPITEx)</li><li>• Established partnerships with commercialization (1) and development companies (7)</li><li>• Improved regulations through feedback from affiliated companies (6)</li></ul>	<ul style="list-style-type: none"><li>• Received 99.14p for service monitoring (0.52p ↑)</li><li>• Made improvements (556) as suggested by the KORAIL Happy Citizens' Group, Achieved KRW 1.7 bil revenue increase</li><li>• Resolved repeatedly received complaints (On returning tickets, purchasing mobile tickets and foreigner services)</li></ul>



## Interview with Stakeholders



Discount Policies, Expansion of  
Connected Transport Networks,  
Efforts to Increase Railway Publicness

**Chae Seung-bok**, Officer of Gangwon Province Tourism Marketing Division

"KORAIL has been continuously cooperating with local governments to promote railway tours and is meeting people's demands and contributing the growth of local economies by developing and operating various packaged tourism products. During the 2018 Pyeongchang Winter Olympics period, KORAIL satisfied customers from all over the world providing safe and convenient services through the Gangneung KTX line. After the Olympics successfully ended, KORAIL and Gangwon Province signed a business agreement to co-develop tourism products and has been cooperating on developing products using the railways in Gangwon Province. KORAIL and Gangwon Province launched 'Yeong-mi Curling Experience Train' named after South Korean curler Yeong-mi Kim who showed phenomenal performance at the Pyeongchang Winter Olympics and offered promotional FAM tours and discounts on connecting transportation expenses. This shows that the cooperation between KORAIL and Gangwon Province is not just a one-time event but the two are dedicated to contributing to the growth of local economy and satisfying the customers with great transport services. We look forward to seeing KORAIL promoting domestic railway tours through great discount policies and strengthen railway publicness and access by expanding connected transport networks."



Proactive Services to Passengers,  
Global KORAIL

**Hong Seong-jong**, Travel Writer, KORAIL Customer Review Group

"When the Inter-Korean Railway and Eurasian Railway are finally built, people will be able to travel to even as far as Europe and KORAIL's global status and influence will be greater than ever. To prepare for this day, I hope KORAIL can strengthen even the smallest details of their services and continually maintain the stability of their operations. I do think KORAIL is doing a terrific job as a public corporation supporting startup funds and leasing out the spaces within train stations at a low cost to young entrepreneurs. As a railway user myself, I also feel happy when I see KORAIL implementing policies which take into account of the small things that really improve the customer experience. I do wish KORAIL can take a step forward and make some improvements as well such as providing detailed information about the station on their app and through guide maps within the trains and by the ticket booths so that the customers can better understand the stations. The trains also sometimes arrive late and this needs to be improved as well. I sincerely wish to see KORAIL getting the appraisals they deserve for their world-class services and also improve customer satisfaction."



I Hope KORAIL Considers the  
Value of Sustainability When  
Making Important Decisions

**Lee Eun-gyeong**, Senior Researcher

"KORAIL became a participant to the United Nations Global Compact initiative in 2007 and is publishing its 10th sustainability report. It has been making great efforts to improve the sustainability of the corporation. KORAIL has established various system to strengthen its sustainability and has been focused on various CSR areas such as human rights, ethics, environment and coexistence. To incorporate the opinions of key stakeholders gathered from various communication channels into corporation decisions and direction and to generate sound social values, KORAIL must continuously strengthen its system and process for monitoring, goal-setting and disclosing information. Also, like many leading corporations around the world, KORAIL must focus on their governance and corporate-wide awareness so that 'sustainability' is always considered when making important decisions."



Proper Conditions and Environment that  
Will Make All Companies to Trust the Rail Transport  
and Allow Safe and Consistent Transport

**Yu Hyo-geun**, Division Chief, Yoosung TNS

"KORAIL has recently been very open to the opinions of its stakeholders. At the overnight workshop held in May, the stakeholders were able to freely share their opinions and it really was a good opportunity for us to understand each other. I really hope this type of opportunity is given more regularly in the future. Up until this point, trying to follow government policies, KORAIL focused more on reducing the deficits and somewhat neglected publicness as a public corporation. This led to significant decline in the volume of railway transport and its share of transport. But I am excited now because the new administration believes it is important to strengthen the publicness of public corporations. I strongly believe that the government must continuously invest in eco-friendly rail transport and enable the rail transport to handle more than 15% of all freight transport in the nation. I also hope KORAIL establishes a long-term master plan for freight transport and builds an environment that allows all companies to trust in the Korean railway system and safely transport their freight."



Harmony between Labor-Labor  
through Communication  
between the Employees

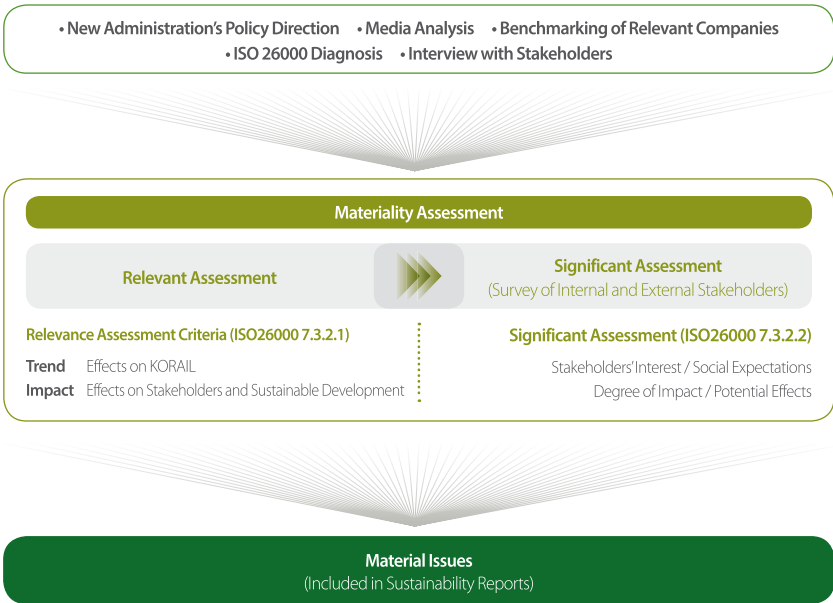
**Heo Eun-lim**, Public Relations Office, KORAIL

"KORAIL is working very hard to build a corporate culture that promotes work-life balance. KORAIL complies with the 52-hour workweek mandate and hires a great number of new employees every year. It's also actively promoting the 'Social Equality Hiring' policy and is discussing the conversion of temporary employees into full-time regular employees as one of its key agenda. Following the direction of government policies, KORAIL moved towards converting temporary employees into full-time regular employees and directly hiring outsourced workers but the employees hired through internship programs and regular, pre-employment tests are not happy about this change. I hope KORAIL establishes trust and harmony between trade unions through thorough explanation on this matter and uses communication to solve all the complaints. KORAIL must also look into the organization for any risk of sexual harassment and sexual assault which have become a serious social issue recently and, carry out preventive activities more actively. I also hope KORAIL handles occupational diseases that can occur in the railway sector with a more preventive approach."



Overview of  
Materiality Assessment

To draw material issues relevant to KORAIL, we have extracted core issues from a pool of issues drawn using the materiality assessment methods suggested in the ISO 26000 Standard and GRI Standards.



Drawing Issues Relevant to CSR Management

Process	Details	Outcome
Analysis of Internal Environment (Government Policies)	• Framework Act on Social Values (Bill) • 2018 Manual for Assessing Management Performance of Public Institutions • 100 National Policy Tasks • Master Implementation Plan for Government Innovation	Drew new issues to respond to
Analysis of Management Strategies and Sustainability Performance in the Previous Year	• Mid-to-long-term management strategies • Management Performance Assessment Reports • 2016 KORAIL Sustainability Report	
Media Analysis	• Economic, environmental and social news articles related to KORAIL (2015-2017)	Searched a total of 16,747 articles searched, drew key issues from all areas
Benchmarking of Relevant Companies	• Société Nationale des Chemins de Fer Français (SNCF, "French National Railway Company"), Deutsche Bahn AG ("German Railway"), East Japan Railway Company	Drew new issues and benchmark cases
ISO 26000 Diagnosis	• Diagnosis based on ISO26000 checklist	Drew priority tasks to carry out for CSR

We drew 29 issues by analyzing external environment, management strategies, material sustainability issues of the previous year, media, benchmarking relevant companies and through ISO 26000 diagnosis.

Collecting Stakeholders' Opinions

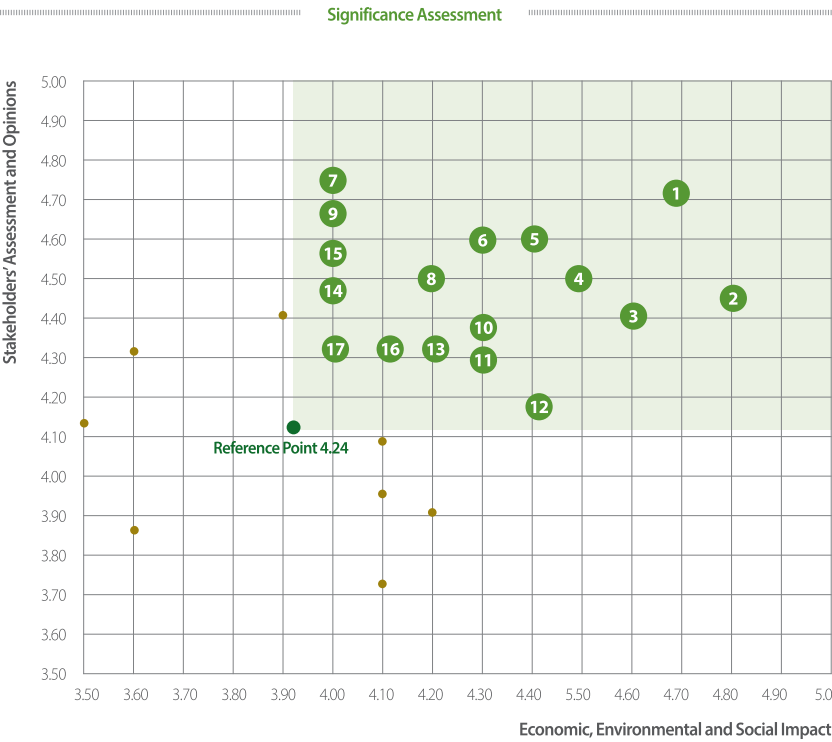
We gathered stakeholders' opinions by surveying internal and external stakeholders have sufficient understanding of KORAIL's businesses and CSR management.

Collecting Stakeholders' Opinions	
Period	July 20, 2018 – August 1, 2018
Methods	Offline Survey (Internal Stakeholders) Online Survey (External Stakeholders) Internal Stakeholders Executives and Employees (22 individuals in charge of Sustainability Reporting) External Stakeholders CSR Experts (Economy, Environment, Labor, Human Rights, Community, etc.) 10 people
Key Questions	• General, economic, environmental and social material issues to consider for KORAIL's sustainability • The roles KORAIL must take on to fulfill social responsibilities and achieve sustainable growth

Materiality Assessment  
Results

NO	Key Issues	Page	Boundary
1	Customer Safety and Health (Safe Railway Operations)	31~33	Internal
2	Customer Satisfaction	37	External
3	Strengthened Anti-Corruption Work and Transparency	76~77	Internal
4	Increased Railway Publicness (Strengthened Universal Service)	46~49	Internal
5	Strengthened Ethical Management	76~77	Internal
6	Future Growth Engines (Internalizing Core Future Technologies)	70~71	Internal
7	Work-Life Balance	42	Internal
8	Workplace Safety and Health	34	Internal
9	Foundation for Inter-Korea Railway and Overseas Railway Projects	9~10	External
10	Stakeholder Inclusiveness (Strengthened Communication with the Customers, Communities, Public)	24~27	Internal
11	Fair Contract and Procurement	53	Internal
12	Strengthened Environmental Management	60~67	Internal
13	Job Creation	47~48	Internal
14	Information Security and Protection of Customers' Personal Information	35	Internal
15	Advanced Work Systems that Use Technologies of the 4th Industrial Revolution (AI, IOT, Mobile)	71	Internal
16	Continuous Expansion of Railway Network	70~71	Internal
17	Equality and Diversity in Recruiting and Hiring Practices	78	Internal
18	Securing Human Resources	49	Internal
19	Establishing and Operating Transparent Governance	74~75	Internal
20	Establishing Win-Win Labor-Management Relations	78	Internal
21	Prohibition of Human Rights Violations	78	Internal
22	Reduced Transportation Disadvantaged Areas	47	Internal
23	Win-win Growth with Affiliated Companies	51~52	External
24	Reduced GHG Emissions	66~67	Internal
25	Improved Energy Management in Railway Environment	66~67	Internal
26	Increased Community Contribution Activities	54~58	External
27	Improved Treatment of Temporary Employees	48,78	Internal
28	Generation and Distribution of Economic Values	69	Internal
29	Assessment of Labor Practices of Affiliated Companies	34	External

Based on stakeholders' opinions, we assessed the materiality of 29 key issues that are most important and relevant to KORAIL. Putting economic, environmental and social impact (The degree of impact of KORAIL's business activities) as X-axis and stakeholders' assessment and opinions as Y-axis, we were able to draw 17 material sustainability issues.



KORAIL'S external stakeholders s selected 'Customer Satisfaction' and international stakeholders s selected 'Work-Life Balance' as their first priority. Both type of stakeholders selected 'Customer Safety and Health (Safe Railway Operations)' as a material sustainability issue.

External Stakeholders (CSR Experts)	Internal Stakeholders (Executives and Employees)
1 Customer Satisfaction	Work-Life Balance
2 Customer Safety and Health (Safe Railway Operations)	Customer Safety and Health (Safe Railway Operations)
3 Strengthened Anti-Corruption Work and Transparency	Foundation for Inter-Korea Railway and Overseas Railway Projects
4 Increased Railway Publicness (Strengthened Universal Service)	Strengthened Ethical Management
5 Strengthened Ethical Management	Future Growth Engines (Internalizing Core Future Technologies)
6 Strengthened Environmental Management	Information Security and Protection of Customers' Personal Information
7 Job Creation	Increased Railway Publicness (Strengthened Universal Service)
8 Stakeholder Inclusiveness (Strengthened Communication with the Customers, Communities, Public)	Continuous Expansion of Railway Network
9 Future Growth Engines (Internalizing Core Future Technologies)	Workplace Safety and Health
10 Fair Contract and Procurement	Equality and Diversity in Recruiting and Hiring Practices



# Connecting People, Connecting Hearts

Safe Railways that People Can Rely On  
Railway Services that Connect Customers' Hearts  
The Best Workplace Everyone Is Proud of



# Safe Railways that People Can Rely On

**Related Department**  
Safety Innovation Headquarters

**Related Stakeholders**  
Executives, Employees, Customers, Government

**Link to SDGs**



## Business & Social Context

Safety is what KORAIL values the most. Since even the smallest amount of negligence could result in a serious accident and injuries, the CEO and all the individuals working for KORAIL emphasize that 'safety is a core value and the first priority that cannot be replace with anything else' and promote the safety culture throughout their work. KORAIL ensures safe operations with a 24-hr response system, operates safety systems for public safety and works with a cooperative system for safety management. KORAIL also has established and operates a comprehensive safety system that manages all safety issues from emergency disaster response to cyber security.

## Progress

- Established a risk analysis system
- Strengthened the earthquake response system
- Public safety campaigns, facilities improvement, human error management
- Established a safe, worker-centered environment

## Future Plan

- Establish a mid to long term roadmap for protection of employees' health and lives
- Integrated big data-based safety management with the real-time decision support system
- Establish a smart safety management system using advanced technologies
- Improve information protection infrastructure using ICT

## 2017 Key Performance



1.386

Safety Management Rate\*  
(\*Number of Incidents/  
Train Travel Distance)



0.388

Human Error Rate  
(Number of Negligence Cases  
/Train Travel Distance)



ZERO

Cyber Incidents



## Safety Management Implementation System

### Safety Management System

KORAIL operates a safety management system to maintain the world's highest level of railway safety. KORAIL strictly complies with the safety regulations of the Railroad Safety Act and Industrial Safety and Health Act, has established a risk-based railway safety management system (SMS) and has acquired KOSHA 18001 Certificate for Safety and Health Management System for its headquarters and 31 affiliated organizations.

#### Safety Management Strategy

Objective	To lead the world's railway industry maintaining the world's highest level of safety		
Safety Management Goal for 2017	Establish a comprehensive disaster management system and safe railway system that people can rely on		
	Safety Management Rate	Human Error Rate	
	1,461 cases / 1 mil km	0.486 cases / 1 mil km	
Implementation Direction	Change the paradigm of safety management	Strengthen crisis response capabilities	Strengthen industrial safety management
3 Strategies	Improve safety management system	Strengthen disaster management system	Establish a people-centered safety management system
Tasks	<ul style="list-style-type: none"><li>Establish a risk management system</li><li>Protection of the lives and health of the public</li></ul>	<ul style="list-style-type: none"><li>Develop ability to respond quickly</li><li>Strengthen disaster management capabilities</li></ul>	<ul style="list-style-type: none"><li>Establish a cooperative safety management system</li><li>Labor-management cooperation in developing a safe workplace</li></ul>

## Advanced Safety Management

### Advanced Safety Management System

#### Preventive Safety Management System

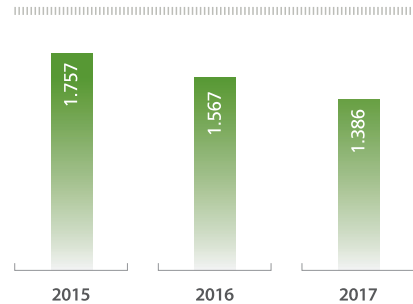
The public demand for increased safety has continuously increased but the existing case-centered, selective safety management system became so routine that there were always fundamental risks being overlooked. To establish a proactive and preemptive safety management system, KORAIL clarified the goals and the roles of the bodies in charge of safety management, implemented an exhaustive, field-centered safety management system and increased the motivation for safety management by using incentives.

KORAIL newly established divisions for safety policy development and overall management of innovative work and, increase the overall number of personnel for safety management bodies in preparation for opening of new railway lines. KORAIL also re-set its safety goal 5% higher than the government's and included safety management performance in its internal assessments. KORAIL carried out safety inspections and training on constructions near the operating tracks and, carried out safety training with the subsidiaries and contractors. For safety policies, KORAIL received advise from the outside experts in the 'Railway Safety Innovation Committee' and operated the 'Railway Safety Review Committee'. KORAIL also holds weekly focused discussions and emergency safety planning meetings. Moreover, KORAIL expanded the reward system for railway safety prevention by giving rewards on a monthly basis instead of the usual quarterly basis and, greatly increased the number of the entities that must aim to achieve zero accidents from 29 to 320.

#### Preventive Control of Risk Factors

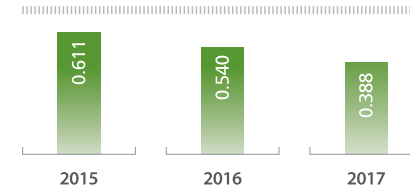
By establishing a data-based risk management analysis system, KORAIL strengthened its capabilities to control and prevent safety risk factors in advance. KORAIL carried out a multidimensional analysis on safety-related data being monitoring in real-time by time, location, railway line and train type. This allowed KORAIL to determine risk factors in advance, eliminate them and make decisions much quickly.

Safety Management Rate\* (Unit: cases/1 mil km)



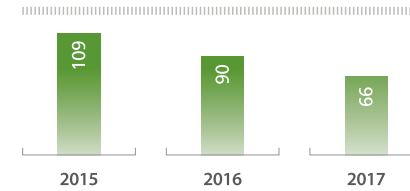
\* Number of Incidents/Train Travel Distance

Human Error Rate\* (Unit: cases/1 mil km)

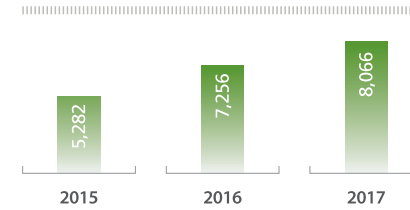


\* Number of Negligence Cases/Train Travel Distance

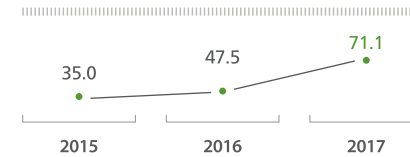
Passenger & Public Casualties (Unit: people)



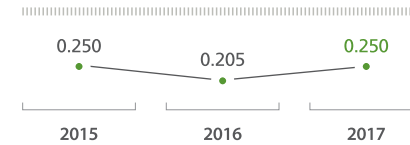
Safety Investment (Unit: KRW 100 mil)



Platform Screen Door Coverage (Unit: %)



Industrial Accident Rate\* (Unit: %)



\* Number of Victims/Number of Worker

#### Safety Training (2017)

<b>Training on Safety-Related Job Skills</b>	<ul style="list-style-type: none"><li>Legally Mandatory Disaster Safety Management Training (62 people)</li><li>Comprehensive Training on Initial Response</li><li>CDP Training for Safety Managers (88 people)</li><li>Safety Management Skills Training (161 people)</li></ul>
<b>Mental Health Counseling</b>	<ul style="list-style-type: none"><li>Psychological Counseling (220 people)</li><li>PTSD Prevention</li><li>Personality Counseling (49 families, 153 people)</li><li>Outside Counseling (100 people)</li></ul>
<b>Railway Safety Aptitude Test</b>	<ul style="list-style-type: none"><li>Preliminary Test (2,313 people inside and outside KORAIL)</li><li>Periodic Test (1,744 people inside and outside KORAIL)</li></ul>

Meanwhile, KORAIL is continuously eliminating the safety blind spots through voluntary safety inspections in the field and the senior managers are constantly communicating in the field to develop corporate-wide solutions. KORAIL also discovered potential risk factors for work processes first by cross-checking different fields within the affiliated organizations and secondly by cross-checking the affiliated companies. Moreover, by analyzing CCTV images of work that is at high risk of safety accidents due to human errors.

### Strengthened Disaster Response System

KORAIL strengthened its disaster response system to quickly respond to disasters and emergency situations using its know-hows in railway operations and scientific analysis techniques. Korea has recently experienced a series of large earthquakes and realizing that Korea is no longer an 'earthquake-safe' zone, KORAIL systemized stage-by-stage action plans for earthquakes and revised the earthquake response manual, specifying the scope and methods of inspections for key facilities. KORAIL also strengthened the role and function of the control tower so that it can effectively respond to emergency situations with the real-time video support system. KORAIL is focused on preventing terrorist threats as well. All of KORAIL's railway business sites are equipped with an autonomous fire safety management system. Also, KORAIL operates disaster management systems for general safety management, operations, vehicles and facilities to protect the health and lives of the public even during crisis.

### People-Centered Safety Management System

#### Customer Safety: Railway Safety that People Can Relate to and be Satisfied With

KORAIL is constantly making improvements to railway facilities to protect passengers from safety accidents. KORAIL completed installing platform screen doors at 175 stations out of 246 stations (58 stations in 2017) on metropolitan lines, installed safety bars on screen doors and modernized the emergency exits. KORAIL also developed an emergency rescue device for elevators and installed them first on 4 stations. KORAIL is installing safety brakes on elevators as well (5.1%, 32 elevators out of 1,802 elevators have been installed with emergency auxiliary brakes in 2017). KORAIL also installed 1,726km (aggregate) out of 1,817km of fences along the railways (51km in 2017).

KORAIL carried out activities to promote railway safety as well. 6,153 people participated in Railway Safeguard and railway experience programs and 43,284 people including students took KORAIL's National Railway Safety Training Course. Also, 25,468 people participated in the National Railway Safety Campaign. Meanwhile, KORAIL signed a MOU with the Korea Suicide Prevention Center to cooperate in suicide prevention activities, promoted a suicide prevention campaign in stations and trains and, carried out a joint campaign with 28 suicide prevention institutions across the nation.

#### Improvement of Customer Facilities

Category	Risk Factors	Improvements
Strengthening seismic performance of railway facilities	<ul style="list-style-type: none"><li>Increase in public's anxiety from earthquakes</li></ul>	<ul style="list-style-type: none"><li>Strengthen seismic performance of railway facilities such as train stations, bridges (to withstand magnitudes from 6.0 to 6.5) (strengthened 96.6% of the facilities; 4,122 out of 4,268 facilities)</li></ul>
Preventing accidents and injuries from getting caught between the platform screen doors	<ul style="list-style-type: none"><li>Passengers getting caught between screen doors getting on and off the train</li></ul>	<ul style="list-style-type: none"><li>Develop and install safety bars for platform screen doors (3 stations)</li><li>Enhance emergency exits (5 stations) and laser sensors (14 stations)</li></ul>
Preventing elevator accidents	<ul style="list-style-type: none"><li>E/S over-accelerating or going into reverse</li><li>Passengers unable to respond quickly trapped inside E/L (due to the variety of door keys)</li></ul>	<ul style="list-style-type: none"><li>Install emergency auxiliary brakes on E/S (92 units)</li><li>Develop emergency rescue device and use standardized keys (4 stations)</li></ul>
Preventing level crossing accidents	<ul style="list-style-type: none"><li>Inability to confirm the direction a train is traveling on a single-rail track</li><li>Train delays due to failures in obstacle detection device</li></ul>	<ul style="list-style-type: none"><li>Install direction indicators that show the direction of trains on the alarm system at level crossings (217 sites)</li><li>Develop and install laser obstacle detection systems (2 sites)</li></ul>



Labor and professional central consultative body



Safety of Executives and Employees: Safe Workplace for Labor & Management

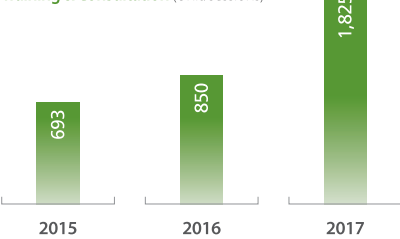
To improve the safety of workers who become exposed to danger during shunting and track maintenance work, the management and the representatives of the trade unions drew safety improvement plans by holding management-labor conferences. The track maintenance time was increased by 16.8%p than last year to 3.5h/day and ‘focused working hours’ policy was introduced to work that requires long hours. The work on operating tracks are carried only when the tracks are closed. KORAIL also has developed an app that provides workers information about train operation and provides high visibility safety clothing and gears to workers. KORAIL also modernized and mechanized the maintenance work which have been solely handled manually, introduced drones to safety inspection work and established a remote control shunting system. KORAIL strengthened workers’ safety education and training to stop workers from repeating ban and inaccurate customary work, clarified the cross-checking process for work sites, strengthened safety managers’ duty to check the work sites and strengthened construction workers’ duty to stay at their work sites.

Safety of Partners: Safety Cooperation System

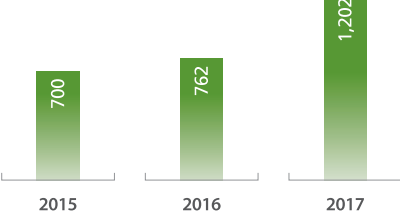
Due to various work KORAIL is contracting out, KORAIL’s partners are becoming more diverse. To prevent industrial accidents and injuries of the partners’ workers, KORAIL has established a safety support system and is aiding small partner companies and partners in the ‘station influence areas’ that are not sufficiently prepared in terms of safety management. Also, to communicate better with the representatives of the partner companies and projects KORAIL is contracting out, KORAIL operates Joint Safety Management Council and holds council meetings more than once a month. KORAIL also provided educational materials on work environment management, invited professional instructors to train workers and provided consultations on preventing industrial accidents and injuries. KORAIL expanded safety facilities by installing 7 solid insulated switchgears and 46 emergency alarm units to prevent electrocution, bridge sidewalks to prevent falls and expanded the roadbed width.

Support for Partners (Contractors)

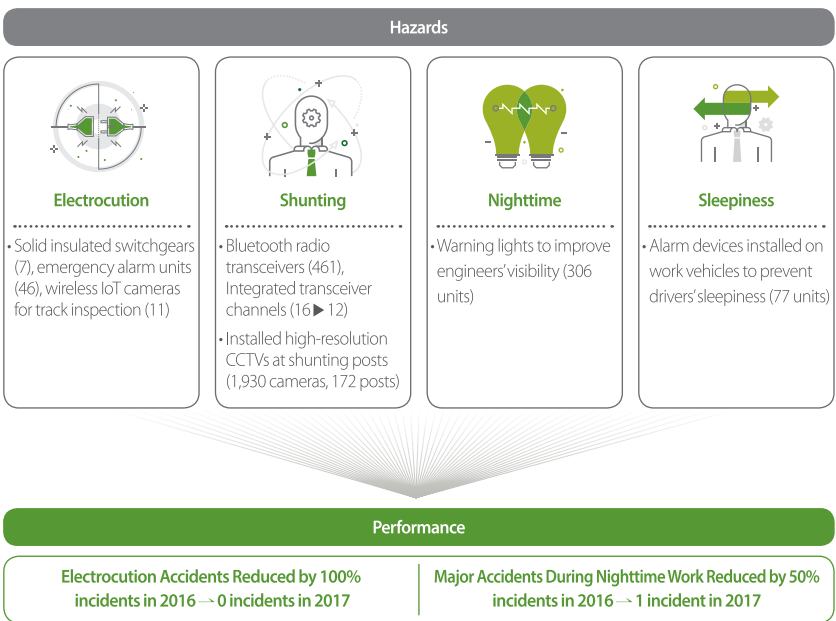
Training & Consultation (Unit: sessions)



Provision of Information (Unit: cases)



Expansion of Facilities & Equipment for Workers' Safety

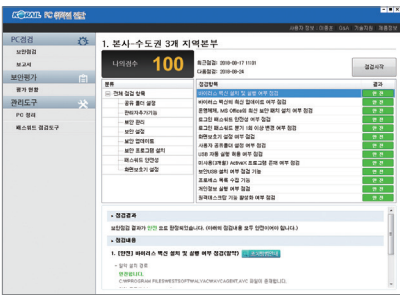


Cyber Security

KORAIL TALK



PC vulnerability diagnosis (monthly)



Strengthened Information Security Management System

To achieve the highest level of information security among public institutions, KORAIL has strengthened the internal stability of its management system for information security, reinforced infrastructure and established plans for preventing and responding to information security threats. Also, KORAIL strengthened the roles and functions of the bodies in charge of information security management, increased the number of specialized personnel, divided the corporate internet network and established an integrated, big data-based security control system using advanced ICT. There has not been a single cyber threat in the last 3 years and KORAIL has acquired the Information Security Management System (ISMS) Certificate for the 2<sup>nd</sup> consecutive year.

System for Improving Information Security Management

Objective	Achieve the highest level of information security among public institutions			
Strategy	Increase the internal stability of the information security management system	Increase personal information protection activities	Strengthen capabilities to prevent and respond to cyber threats	Strengthen information security management infrastructure
Tasks	<ul style="list-style-type: none"><li>Secure bodies in charge of information security and the necessary budget</li><li>Supplement information security policies</li><li>Maintain Information Security Management System Certificate acquired from the certificate authority</li></ul>	<ul style="list-style-type: none"><li>Divided corporate internet network</li><li>Establish mobile security system</li><li>Strengthen work related to managing system access and control</li><li>Improve information security facilities</li></ul>	<ul style="list-style-type: none"><li>Establish an integrated, big data-based information security management system</li><li>Draw infrastructure-related risk factors</li><li>Strengthen capabilities for responding to cyber threats</li></ul>	<ul style="list-style-type: none"><li>Take measures to improve personal information security</li><li>Strengthen training and education on personal information security</li><li>Improve monitoring of personal information security</li><li>Strengthen information security of subsidiaries</li></ul>

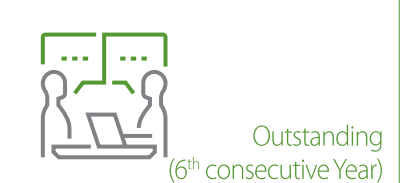
Strategy	Information Security Management System Certificate	Assessment of the State of Information Security Management	Cyber Threats	Diagnosis of Personal Information Management Level
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National Intelligence Service's Response Training for Attacks on Control System



Outstanding Institution

Ministry of Land, Infrastructure, and Transport's Cyber Simulation Training



Outstanding (6<sup>th</sup> consecutive Year)

Strengthened Personal Information Management Capabilities

To prevent leaks of personal data and confidential information, KORAIL prohibits the collection and use of resident registration numbers and uses mobile OTP. KORAIL also secured and encrypted the documents and files on confidential personal information collected and stored on work computers and disconnected the network for computers that have not been secured with encryption to prevent leaks of personal information. KORAIL’s personal information processing system uses encryption and access control on personal information and KORAIL completed privacy impact assessments on 3 systems including the system for issuing booked tickets. KORAIL also strengthened the management capabilities of those handling personal information by carrying out customized, job-specific training on employees that handle personal information and providing consultations on privacy protection to the subsidiaries carrying out contract work.



# Railway Services that Connect Customers' Hearts

## Related Department

Future Innovation Office

## Related Stakeholders

Customers

## Link to SDGs



### Business & Social Context

Railways are deeply connected to people's lives and KORAIL's work and efforts directly lead to the improvement of the quality of people's lives. KORAIL is always striving to provide the best customer services 24/7, 365 days a year and to not just satisfy the customers but to truly touch their hearts providing the highest value possible. KORAIL is constantly improving the quality of services, building infrastructure and enhancing customer experience so that customers can safely and conveniently use the rail transport. It's also trying to incorporate the valuable opinions of the customers into developing better products and services.

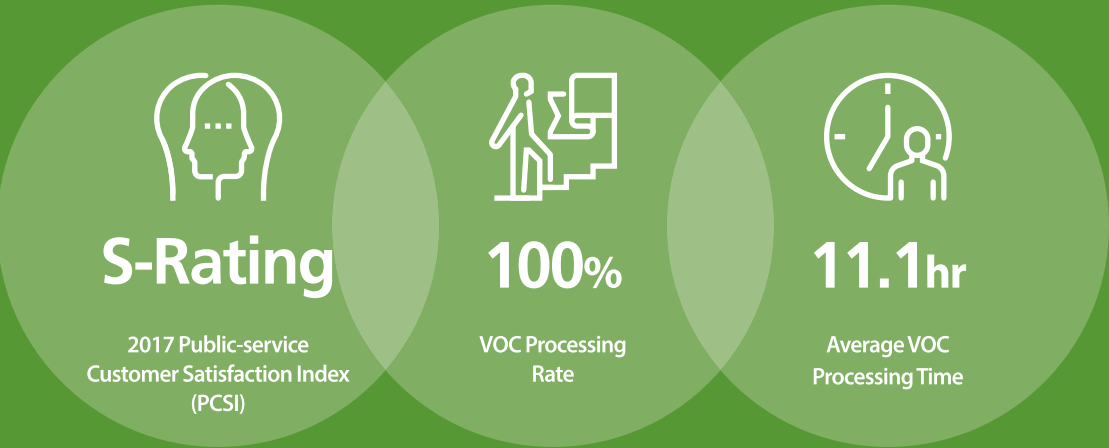
### Progress

- Reorganized the service manual
- Improved the service mindset of the field employees in the 'moment of truth'
- Improved convenient facilities for the customers
- Offered unique services that meet customer needs

### Future Plan

- Maintain the highest level of customer satisfaction
- Reinforce field coaching and training to enhance the job skills and quality of services provided by the 'moment-of-truth' employees
- Strengthen communication with the customers and incorporate customer needs and feedback

### 2017 Key Performance

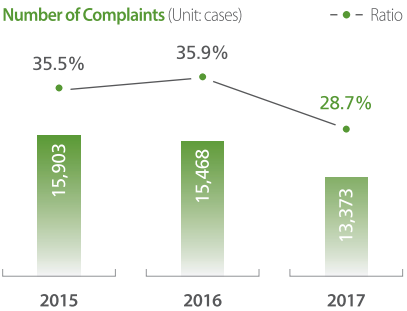


## Increasing Customer Valu

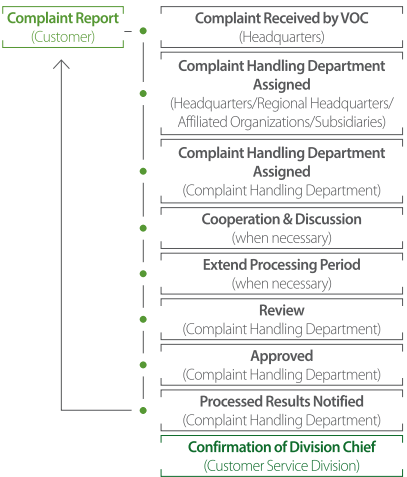
Public-service Customer Satisfaction Index (PCSI) (Unit: rating)



VOC Complaints Received



VOC Handling Process



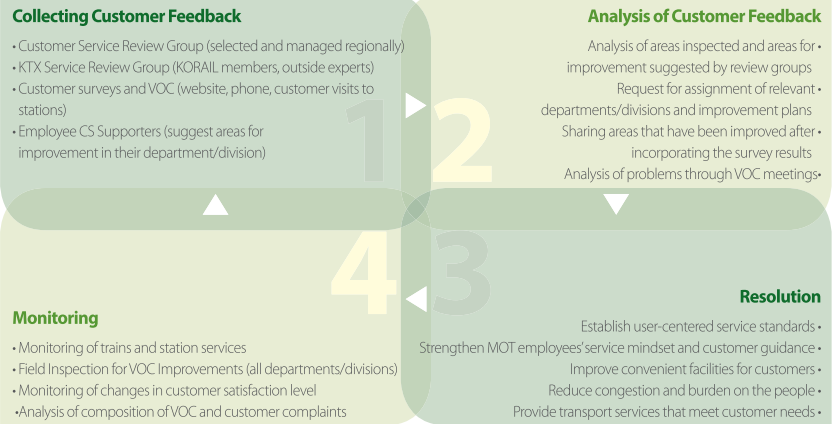
### S-Rating for Customer Satisfaction

In 2017, KORAIL received S-Rating in the Public-service Customer Satisfaction Index (PCSI) Survey scoring 93.8 with a YoY increase of 2.1p. KORAIL is used by an average of 3.5 mil people every day. KORAIL has much more moments of truth compared to other public institutions and despite this difficult environment that makes it difficult for KORAIL to achieve customer satisfaction, KORAIL has been continuously improving its services and customer convenience. In 2017, KORAIL made various efforts to improve customer experience, opening Gangneung Line and a City-Airport Terminal, launching KorailTalk+, operating KTX shuttle buses and developing tablet ticket machines. These efforts eventually led to a significant increase in customers' perceived satisfaction level. KORAIL will continue to provide various services that customers can noticeably experience and always strive to improve the quality of the services it provides.

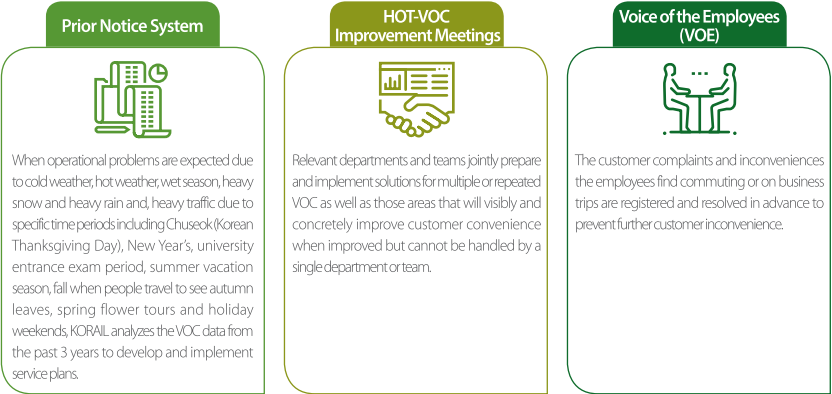
### Communication with Customers

KORAIL greatly values customers' opinions and uses the feedback to improve its service quality. KORAIL receives customers' feedback through various on- and offline channels including customer centers, mails and real-time messages. KORAIL also manages frequently received VOC and opinions on improving the services into categories and makes improvements according to the priority with the support of inside and outside advisors. Also, KORAIL is working in advance to reduce the complaints by preventing and eliminating elements that may cause customer inconvenience.

### Process for Collecting and Handling Customer Feedback



### Activities to Prevent Complaints





# Railway Services that Connect Customers' Hearts

## Strengthened Service Competitiveness

### Strengthened Capabilities of Field Employees at MOT

#### Consultation on KTX Crew Service

Service diagnosis, suggestions, customized training by service experts and consumer groups



#### Coaching on Guide Service at Train Stations

Field training on emotional communication and services that satisfy all five senses of customers



#### Standardization of Services Contracted Out

Standardization of customer handling methods of contract workers for cleaning service, express shipping and cabin supplies



### Improved Convenient Facilities for Customers (Schedule Boards)

#### Before

행선지	열차명	열차번호	출발시간	타는곳	승차안내	지연
목포행	K T X	519	15:10	4번	승차준비	0
서울행	K T X	514	15:12	1번		0
부산행	K T X	141	15:16	2번		01
용산행	K T X	410	15:20	3번		01
평산행	K T X	712	15:44	1번		01
목포행	K T X	521	15:50	4번		0

#### After



## Improving Service Quality

In order to provide user-centered service manuals and increase the level of perceived customer satisfaction to services, KORAIL collected internal and external feedback and established service standards. KORAIL collected the voices in the field by interviewing the Solidarity Against Disability Discrimination (SADD) group and Korea Transportation Safety Authority and collected opinions about what really needs to be improved by observing the field and interviewing its employees. Based on these interviews and observations, KORAIL developed service standards that meet customer needs, established detailed, easily-applicable and user-centered manuals and job scripts. Meanwhile, to encourage the MOT employees in the field to have a proactive, service mindset and their overall service skills, KORAIL carried out training, consultations on KTX crew service, coaching on guide services at train stations and standardization of services contracted out.

## Improving Foreign Customers' Convenience in Using Rail Transport

The number of foreign customers using rail transport is increasing with the increase in the number of foreign travelers visiting Korea. And, KORAIL is working hard to improve foreign customers' convenience in using rail transport. KORAIL assigned 9 operators exclusively for handling foreign customers to the customer center and revised the guide signs according to multi-language manuals. Also, KORAIL made foreign language announcements to be automatically provided during emergency situations. The existing infrastructure was enhanced as well. KORAIL assigned 60 operators exclusively for handling foreign customers to the 6 stations on Gyeonggang Line and established English-, Chinese- and Japanese-version website and KorailTalk+.

## Improving Convenient Facilities for the Customers

KORAIL also built a pleasant and convenient travel environment by improving convenient facilities for the customers in trains and stations. KORAIL expanded the free Wi-Fi capacity in trains by 27 times, increasing the number of devices that can be connected at a time from the usual 90 to 270. Also, after repairing interior materials (17 cars) and restrooms (168 cars) on old trains and, repairing old air-conditioning units (47 cars), VOC related to train facilities were reduced by 35.3% from the previous year. KORAIL also set up a 'Business Zone' in station lounges so that passengers can take care of simple business in the station. Also, KORAIL enhanced the quality and visibility of the information on schedule boards about departure/arrival times, stops and destinations.

## Introducing ICT-Based Payment System

To continuously improve customer-centered services, KORAIL upgraded its mobile application KorailTalk and launched KorailTalk+. The app allows the users to purchase tickets and access various services. The GPS in the app recognizes arrival information and provides automatic push alarm when the train arrives at the station earlier than the scheduled time. The upgraded version also allows the users to purchase products through an easy-reservation process or using QR codes. KORAIL also receives reservations via phone for those customers who are not comfortable with the online reservation process.

# The Best Workplace Everyone Is Proud of

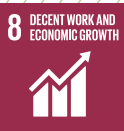
## Related Department

Personnel & Labor Office

## Related Stakeholders

Employees

## Link to SDGs



## Business & Social Context

Members are important resources in the process of achieving the mission and vision of KORAIL. We compose organizational culture where members can display all abilities and we contribute to the sustainability by achieving the goal of individual and groups while helping members to excavate potential capabilities. We execute open recruitment through transparent and systematic procedures and we support various systems to bring out the best outcome while focusing on the self-implementation of individuals. Also, there are rewards according to the results that are fairly evaluated.

## Progress

- Expand culture of open employment based on work ability
- Maintain personnel system and fair performance evaluation
- Compose balanced culture between work and life
- Establish organization culture of win-win between labor and management

## Future Plan

- Continue to put effort in resolving employment barriers
- Train personnel according to the 4<sup>th</sup> industrial revolution through convergence training
- Expand non-monetary welfare service
- Expand labor and management communication culture

## 2017 Key Performance



2017 Public Institution Far Employment System Improvement

Minster's Award from Ministry of Planning and Finance



Family-friendly Company

Ministry of Gender Equality and Family



507 Course management, 78,094 people completed

Evaluation of Educate



## Fair Human Resource Policies

Excellent Company for Improvement in Fair Employment 2017

Minister's Award  
by Minister of Economy  
and Finance



No stereotype employment/blind employment competition

Minister's Award  
by Minister of Education



### Who We Look For

The type of individuals KORAIL looks for throughout all personnel-related processes from recruitment, promotion, training, and assessment are 'Creative and Innovative Individuals, Global Individuals and Professional Individuals that Can Lead the Railway Industry'.



### Open Employment

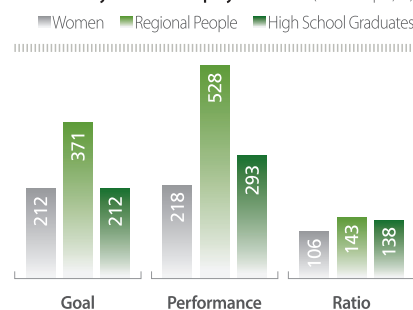
KORAIL selects new employees through job ability focused evaluation based on the National Competency Standard (NCS). In 2017, the blind employment system was adopted and this excluded the stereotypes by not collecting some of the information irrelevant to the job such as photo, gender, educational background, and age. Also, employment was executed by only verifying the qualifications needed for the duty without requiring any unnecessary qualification for application. Moreover, fair employment system was established by executing transparent procedure and revealing the exact schedule, test items, and number of people for recruitment.

### Blind and Fair Employment Process

Employment Process	Blind Employment System (Verify the specs only needed for the job)	+	Establish fair System (Transparent and fair employment for each employment procedure)
Announcement Application	• No need to collect some information irrelevant to the job such as photo, gender, educational background, and age.	+	• Reveal exact employment schedule, test items, and number of people to be employed. • Announce cancellation of employment when employment irregularity such as request occurs
Document	• Exclude unnecessary qualification for application such as language ability and grades	+	• Remove choosing over documents, choose through written test
Written Test	• NCS Job Ability Test (questions, problem solving and etc.) • Reveal sample questions to the test takes for each evaluation section	+	• Replace test paper -> Transfer -> Take taste -> Test Result -> OMR Answer sheet - Gold Process from grading
Interview	• Blind some information such as the name and contact number • Exclude questions irrelevant to the job (Structure interview question)	+	• Place interviewer on the day of the interview, external interviewer participating as well • Audit on all processes of the interview and OMR handling of the evaluation index

Fair competition guaranteed for employment through blind employment

### 2017 Socially Balanced Employment



### Expand Socially Balanced Employment

KORAIL expanded socially balanced employment for the disabled, high school graduates, and regional people. Employment is continued to be expanded through high school graduates competition and new form of employment by recruiting the disabled was adopted. Additional points are granted for men of national merit where the number of employments is gradually being expanded in stages through new and separate employment. On the other hand, flexible work schedule is provided for employees including women where we are actively participating in sharing jobs. In 2017, KORAIL executed the Government Recommended Policy by exceeding the employment goals.

## Systematic Training of the People

### Land and Transportation Competition

Grand Prize  
(Minster's Award of Minister of  
Land, Infrastructure, and Transport)

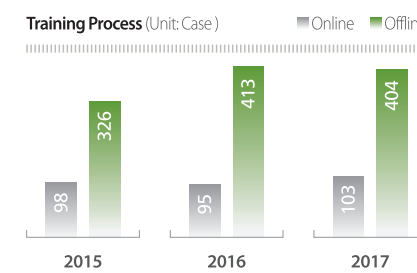


### Training Budget for each employee

(Unit: 1,000 KRW)

	2015	2016	2017
In-house	198	200	191
Outside the company	119	120	115
Total	317	320	306

### Training Process (Unit: Case)



### Trainees

(Unit: people)



### Training Program for Youth Job Seekers

Railway Car Maintenance Licensed Technician Test

Writing/Practical Test for Railway Transportation Industry Engineer

Electric Railway Industry Technician Test

Type 2 Electric Carriage Driver's License Function

### Establishing Human Resource Strategy to Achieve Management Goal

KORAIL sets HRD Mission as 'Creating Values of KORAIL based on the talented people and technology' and established 4 management strategies including surplus management – absolute safety – creative management – organizational innovation to achieve them. We fully support the improvement of professionalism of the members.

### Strategy of Human Resource Development

HRD Mission	Creative values of KORAIL based on talented people and technology			
Mid to Long Term Strategy	Operate HRD focused on performance	Organizational culture of learning	Acquire future growth	HRD organizational professionalism
Strategy Assessment	• Performance creation training • Train business experts	• Self-motivated learning culture • Activate work place learning	• Train core people • Acquire future growth motivation	• Improve training environment • Strengthen professionalism
Evaluation Reflex	• Excavate education demand and needs -> Distribute resource/establish plan -> operate training -> Feedback and reflect • Derive and return improvement assessment through various assessments such as application and training satisfaction			

### Execute Core Capability Training based on Necessary Capability and Needs

KORAIL reflected the needs of individuals and training demand of the organization along with the mid to long term training plans to establish and operate the core capability training process. Especially, through various professional training operation, convergence training of people is executed in preparation for the 4th industrial revolution.

### Korean Railroad Corporation Core Capability Building Process

Classification	Training Process	Number of Trainees
Advanced Technology Training	Big data expert process, drone facility inspection experts, and etc.	69people
Job Training	Process for operation/technology advanced engineer process, project manager process and etc.	216people
Global / IT Training	Information security process, mobile/web expert process, foreign language in-depth process	757people
Leadership Training	KORAIL Academy leadership process, online micro learning process, and etc.	641people

### Training Quality and Training Environment Improvement through Active Support of Training

KORAIL continues to improve the training environment and quality to support self-motivated learning and capability improvement of members. With 281 external lecturers composed of doctors and masters, there are 1,064 in-house lecturers. Especially, training process has been expanded and operated with the best lecturers (66 in 2016 to 90 in 2017). Also, training satisfaction evaluation system was established by using mobile to check the opinions of trainees during and after the training process to reflect needs and we have focused on improving the training quality in this way. Not only that but we continuously invest to improve the training environment by adopting VR contents, training materials, modernization of equipment, maintenance of training center, and etc. As a result, we received 'Grand Prize at Land and Transportation Competition'.

### Supporting Professional Training Service to Realize Social Values

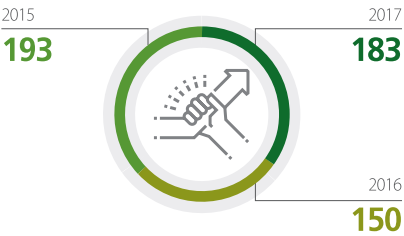
To implement social values, KORAIL supports railway expert processes by each field such as license for driving the car, railway car maintenance process, and etc. Especially, we placed lecturers with experience in evaluating functional test at the Korea Transportation Safety Authority to improve satisfaction and effectiveness of training. From now on, KORAIL will strive to implement social values as a railway training institution.



## Balance of Work and Life

### Flexible Work System Situation

#### Time Selection System (Unit: People)

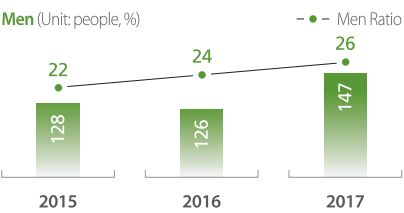


#### Flexible Working Arrangement\* (Unit: People)

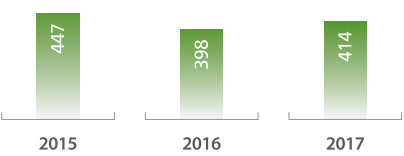


\*Time-phased commuting + operational working hours

### Parental Leave Situation



#### Women (Unit: people)



#### Total (Unit: people)



### Flexible Work System

KORAIL is doing the best to improve the quality of life of the employees by resolving long-term labor. We execute flexible time schedule and flexible work schedule to be boosting user satisfaction through surveys every 1 year. IN 2017, we established a system for activation plan based on the survey that was executed in the previous year. We subdivided the participants by type to operate according to the situation of each group. AS a result, there was increase of participants in all types in contrast to the previous year.

### Work-Home Compatibility Support

KORAIL supports pre-and post-maternity leave, parental leave, optional working ours, flexible working arrangement, and childcare policy to create an environment where work life and family life such as pregnancy, childbirth, and childcare can be combined. We have been encouraging our employees to have more time with their families by improving the conditions of annual leave through prescheduling and carrying-over system, provided KRW 300,000 at the birth of the first and second child and KRW 1 million at the birth of the third child, and expanded daycare centers at workplace. In 2017, we encourage our employees to enjoy time with family by granting parental leaves, vacations, and etc.,

### Family-Friendly Company Certification

KORAIL has obtained family-friendly certification, which is a system that grants certification through examining the institutions that conduct exemplary work by evaluating childbirth support, childcare support, flexible work arrangements, and family-friendly workplace culture by the Ministry of Gender Equality and Family. The certification has been maintained since 2010 to 2018, for 8 consecutive years. In 2017, total of 41 events were held where 1,405 people of 469 families participated. Every Friday is designated as 'Family Day'. Also, through the events of family empathy, Happy Movie Day and others, we encourage staff pride and loyalty to our company, and certainly became a family-friendly management company.

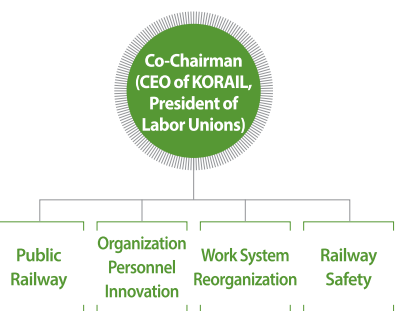
### Welfare System

KORAIL maintains an appropriate level of welfare system while at the same time manages its stable living environment and commitment to work by institutionalizing them based on reasonable standards. In order to prevent employee morale from being restricted due to the limitation of welfare and welfare expenses expansion, we have provided a support system according to the needs. We grasp the needs of employees and reflect the needs to the system to be providing a welfare system appropriate for the employees, and we have been improving the system for user convenience such as simplification of the procedure. In addition, we created pleasant working environments by expanding partner services and improving working conditions.

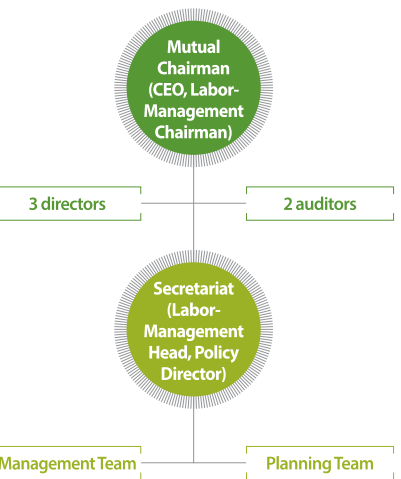
Welfare System		
Occupational Safety	Livelihood Security	Other Welfare Support
<ul style="list-style-type: none"><li>Employee group insurance (KRW 200 million compensation at work disasters)</li><li>Employee health checkups (once a year for site workers, once every two years for office workers)</li><li>Disaster relief (if the settlement is lost or damaged due to disaster, subsidy is provided.)</li></ul>	<ul style="list-style-type: none"><li>Free financial support (high school students, college student loans with no interest)</li><li>Scholarship (railway scholarship), operation of children's dormitory, day care facility at work</li><li>Employee housing management (employee apartment, company, crew housing)</li><li>Support for childbirth supplies and optional welfare points</li><li>Retirement support (retirement allowance, retirement training program, training for retirement etc.)</li></ul>	<ul style="list-style-type: none"><li>Support for the cost for family events, wreaths, and other funeral supplies</li><li>Operating employee recreational facilities (Naksan, Muchangpo, and Mangsang)</li><li>Supporting sports facilities (gym, tennis court etc.) and in-house clubs</li><li>Legal insurance support: national pension, health insurance employment insurance, and industrial accident insurance</li></ul>

## Harmonious Labor-Management Culture

### Labor-Management Joint Operated Organizations



### Hope Railway Foundation



### Labor Union of KORAIL

There are 4 multiple labor unions in the Labor Union of KORAIL. The representative labor and managements include Railway Labor Union and the Korea Railroad Construction Labor Union. KORAIL considers the characteristic of these multiple labors to execute individual negotiation with the two labor unions.

Also, KORAIL established labor and management relationship by following the principles sand related law to communicate and negotiate actively between the labor and managements. Other than the regular labor and management conference, the National Railroad Labor Union puts effort to discuss the current items and the Korea Railroad Construction Labor Union puts effort in negotiating on various discussion items through Mutual Cooperation Meeting that is held once every month.

### Organizations Jointly Operated by Labor and Management

KORAIL operates joint implementation organization of labor and management and executes communication between the labor and managements for the purpose of implementing the mutual labor and management relationship for the development of railways. The Labor and Management Joint Implementation Organization sets CEO and the labor and management chairman as representatives, and the group is divided into public railway, organization personnel innovation, work system reorganization, and railway safety.

The 'Hope Railway Foundation; was also established to appoint CEO and labor and management chairman as executive directors, and activities to create social values are performed. Main social contribution activities include railway culture experience, multicultural family experience, and hiking with the congenital hear defect patients. The Hope Railway Foundation stands as a model for labor and management cooperation activities in the public institution.

### Strategy for Labor and Management Relations

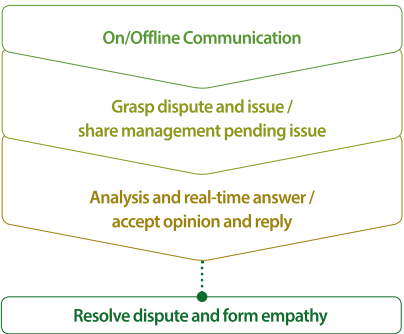
KORAIL has established trust by transparently communicating with the labor union and employees and strives to establish role model of the labor and management relationship. Based on the 2018 goal 'Implementing Win-Win Labor and Management Relationship through Communication and Trust', we have been promoting reasonable labor-management relationship, activation of communication, strengthening of labor-management cooperation, and advancement of labor-management relationship strategy. In particular, we have been putting effort to make resolutions on reinstatement of laid-off workers, redemption of unfair profits of previous KTX crew, irregular to regular employee, incentive, salary, and collective agreements.

Labor-Management Strategy (2017)				
2018 Index Management Goal	Implement Win-Win Labor-Management Relationship through Communication and Trust			
Index Strategy	Improve Labor-Management Strategy	Strengthen Labor-Management	Activate Labor-Management communication	Reasonable Labor-Management Relationship
Performance Index	<ul style="list-style-type: none"><li>Labor-Management relationship index</li><li>Labor-Management mid to long term strategy rolling</li></ul>	<ul style="list-style-type: none"><li>Hope Railway Foundation business promotion result</li><li>Labor-Management Mutual Program promotion result</li><li>Labor-Management cooperation index</li></ul>	<ul style="list-style-type: none"><li>Labor-Management communication index</li><li>Labor-Management training</li></ul>	<ul style="list-style-type: none"><li>Wage increase rate</li><li>Time-off</li><li>Irrational system improvement</li><li>Execution of government policy</li></ul>
Assessment	<ul style="list-style-type: none"><li>Labor-Management relationship advancement strategy</li><li>Boost Labor-Management relationship strategy</li></ul>	<ul style="list-style-type: none"><li>Create social values of Labor-Management</li><li>Cooperative Labor-Management culture</li></ul>	<ul style="list-style-type: none"><li>Communication to recover trust between Labor-Management</li><li>Strengthen capability of Labor-Management relationship</li></ul>	<ul style="list-style-type: none"><li>Reasonable operation of Labor-Management related system</li><li>Follow government policy</li></ul>



# The Best Workplace Everyone Is Proud of

## Labor-Management Dispute Prevention System



## Cheongju Flood volunteer activity



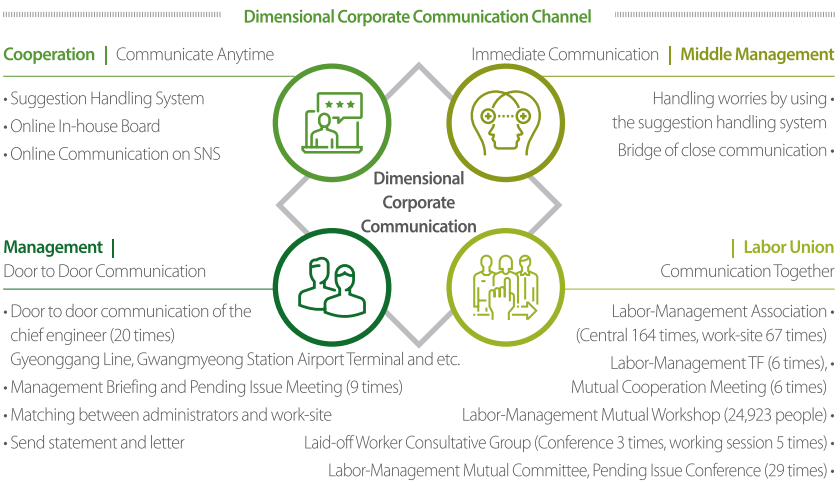
**Stage 1**

**Open**  
Operate channel of accepting opinions where anyone can communicate

KORAIL Plaza	Provide open discussion
Online Q&A System	Operate Q&A System on in-house board
Survey	Execute survey to all employees
Suggestion Handling System	Establish/operate system to resolve worries of the managers

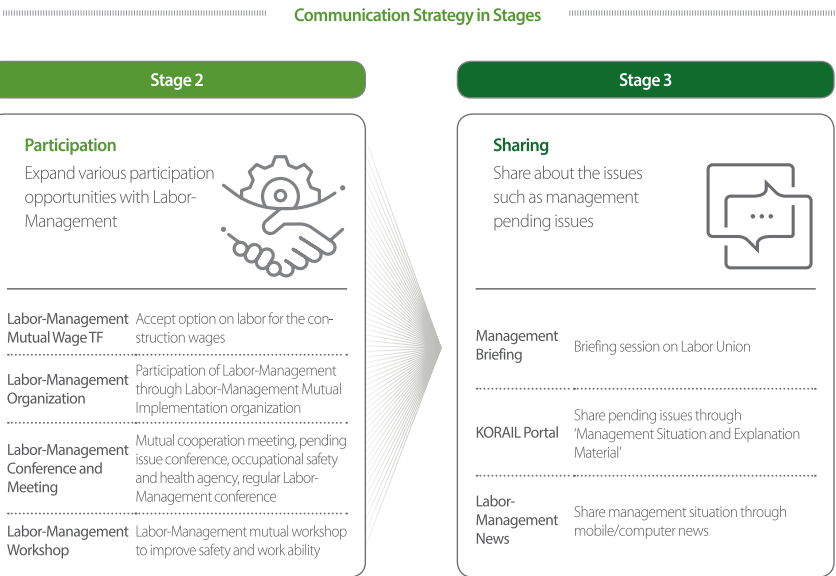
## Labor-Management Communication

KORAIL establishes dimensional communication system where all members can participate. Based on the themes including Door to Door Communication by the Administrators, Immediate Communication of Middle Management, Communication Anytime, and Communication with the Labor Union, we have been focusing on forming empathy through communication. This kind of strategic communication system is becoming a foundation for efficient communication.



## Effort to Form Labor-Management Empathy

KORAIL promotes communication strategy in the order of Open > Participation > Sharing so that smooth communication can be operated between Labor-Management. We operate channel where anyone can communicate through KORAIL Plaza and Online Q&A System. We are expanding various participation opportunities with the Labor-Management in executing Labor-Management mutual wage TF, Labor-Management meeting, Labor-Management conference, and Labor-Management mutual workshops. Also, we share various issues of KORAIL through Labor-Management News, KORAIL Portal, and Management Situation Briefing



# Connecting the World with Communication

Realizing Social Values for the Public  
Win-win Growth with Partners  
Sharing with Communities





Related Department  
Common

Related Stakeholders  
Citizens, Government

Link to SDGs



Business & Social Context

KORAIL's first priority is to satisfy customers by providing convenient, pleasant and comfortable services for everyone. KORAIL is striving to maintain the publicness of Korean railway system by providing universal rail transport services, increasing access to services for the transport disadvantaged groups and improving services in remote areas. KORAIL is also continuously expanding new recruitment and generating quality jobs for the society.

Progress

- Operated shuttle service to improve the transport access of the disadvantaged areas
- Increased the access and reduced the cost burden of the transport disadvantaged group
- Established strategies and a roadmap for generating quality jobs
- Established plans to generate jobs in the private sector

Future Plan

- Improve the services on remote railway lines and general trains
- Improve the air quality in stations and trains
- Execute the plans to generate quality jobs without setbacks
- Generate quality jobs related to the railway industries

2017 Key Performance



Providing Universal Rail Transport Services

Priority Seats for Pregnant Women



Public Discounts (2017) (Unit: 1,000 people, KRW 100 mil)

	Persons with Disabilities	Men of National Merit
Number of People	7,375	331
Discount Amount	3,728	464
Senior	3,927	307
Children	341	71

Mileage Policy



Improving Convenience of the Vulnerable Groups

KORAIL is always striving to improve the convenience of using train services for the vulnerable groups. For pregnant women, KORAIL increased the number of priority seats and, changed the design and added a floor sign to enhance the visibility of the priority seats for pregnant women. Also, for passengers traveling with young children, KORAIL modernized and increased the number of the baby change and feeding rooms. KORAIL installed addition wheelchair lifts so that persons with disabilities can more easily get on and off the trains. Moreover, for persons with developmental disabilities, KORAIL developed and installed guiding tools that help them purchase tickets and use the facilities to protect everyone's right to mobility.

Strengthening Services and Operatons of Remote Railway Lines

KORAIL operates trains on non-profitable railway lines. KORAIL maintains operating the remote lines such as Gyeongbuk Line, Gyeongjeon Line, Daegu Line, Donghae Nambu Line, Yeongdong Line, Jeongseon Line and Taebaek Like that have to be operated with deficits due to their low demand and high operating costs in the non-electric sections. KORAIL also offers community shuttle train services like Gyeongbuk Circulating Line, Chungbuk Longitudinal Line, Gwangju Shuttle Line and Gyeongwon Line to provide greater access to train users. In Januray 2018, KORAIL newly opened Donghae Line (Pohang-Yeongdeok) which is currently used by approximately 1,200 locals a day. As such, KORAIL is striving to fulfill its social responsibilities by maintain stable train services on low-demand lines and reaching out to various remote areas with convenient rail transport services.

Reducing the Cost Burden

KORAIL offers various public discounts that amount to KRW 117.3 bil a year for persons with disabilities, men of national merit and senior passengers. Also, KORAIL offers KTX Love Travel Package, special discount on empty KTX seats, discount on KTX 4-person family seats and discount on Gyeonggang Line for early reservations to allow the customers to access rain transport at a much lower cost. Also, by changing the Mileage Saving Program from offering discount coupons to point saving, KORAIL allowed everyone to actually receive all the benefits. KORAIL also increase the use of the mileage program and improved customer satisfaction by allowing the customers to use points not only for purchasing rickets but for upgrading to first-class seats, paying return fees and for various stores in the stations.

Expanding Rail Transport Services

To reduce the time it takes for the residents living outside the Seoul Capital Area to get to the urban area, KORAIL expanded its train operating area. KORAIL extended Suin Line from Songdo to Incheon, Jungang Line from Yongmun Station to Jipyeong Station and Gyeongchun Line from Sangbong Station to Cheongnyangni Station to improve customer convenience. Also, KORAIL increased the regions that benefits from metropolitan subways and contribute to the development of local economies by successfully opening Gyeonggang Line (Pangyo-Yeouju) and Donghae Line (Bujeon-Ilgwang) and offering people greater access to rail transport.

Strengthening Support for the Transport Disadvantaged Areas

To improve the access of rain transport for the transport disadvantaged areas, KORAIL operates a shuttle bus service at Gwangmyeong Station. Also, KORAIL newly established New Passenger Business Group directly under the control of the chief of Passenger Business Headquarters and is improving passenger services. Moreover, KORAIL is increasing the number of train runs and diversifying railway lines by analyzing high-demand time periods. With the start of a bus service traveling from Sadang Station to Gwangmyeong Station in January 2017 and a new line connecting Songnae Station in Incheon and Gwangmyeong Station at the end of 2017, the access to Gwangmyeong Station and the traveling cost greatly improved for the residents of the southwestern region. Also, the interval of the Songnae Station-Gwangmyeong Station line was reduced from the usual 1hr to 30min and the operating hours were increased by a total of 1.5hr by starting the first run 30 minutes early and delaying the last run 1hr later. KORAIL also added more buses and is currently planning to cut the interval to less than 15min depending on the demand in the future. Currently, KORAIL operates a total of 5 KTX Shuttle Bus lines and is planning to increase the lines.

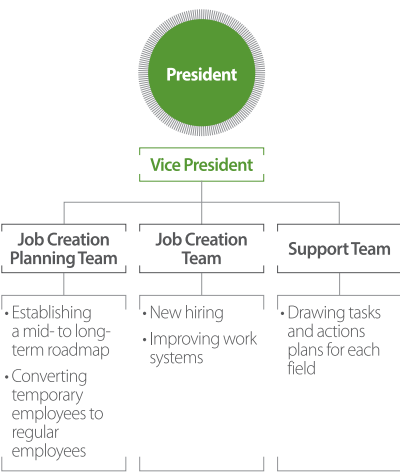


## Creating Jobs

### Job Creation System

Unemployment, lack of quality jobs and wage gap have become serious social issues and the stakeholders including the public are increasingly demanding public corporations to create sufficient amount of quality jobs. Taking into account of the characteristics of the organization and the work it does, KORAIL established mid- to long-term roadmap and strategies for creating sustainable jobs to efficiently convert temporary employees to regular employees, create quality jobs for the society and prepare for the 4th Industrial Revolution and various changes in the future. Also, to successfully implement the strategies and maximize its execution performance, a group exclusively in charge of implementing the roadmap and strategies was established with the president of KORAIL as the director of the group.

#### Railway Industry Job Creation Task Force



#### Converting Temporary Employees to Regular Employees by 2021



#### Plan for Converting Temporary Employees to Regular Employees

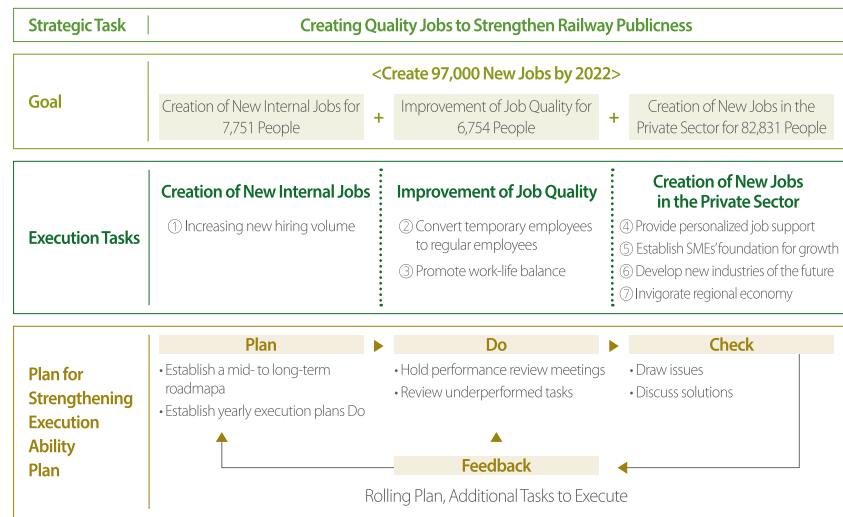
(Unit: people)

Category	Temporary Employees			Conversion Plan				Excluded
	Fixed-Term Workers	Contract Workers	Total	Fixed-Term Workers	Contract Workers	Conversion Rate (%)	Total	
Number of People	164	6,793	6,957	47	6,707	97.1	6,754	203*

\* Excluded from Conversion: 117 fixed-term workers, 86 contract workers, 2,464 workers contracted out from the subsidiaries (currently working to convert them to regular employees of the subsidiaries)

\* Reasons: fixed-term workers – 31 workers aged 60 and older, 43 athletes, 3 temporary positions, 10 professional positions / contract workers - 86 workers to be assigned to specialized positions in the private sector, 2,464 contracted out from the subsidiaries

#### Mid-to Long-Term Strateg for Creating Jobs



### Converting Temporary Employees to Regular Employees

To convert temporary employees to regular employees, KORAIL surveys the job types, number of temporary employees, work conditions and benefits and whether the temporary jobs require conversion to permanent jobs. The survey showed that there is a total of 9,421 temporary workers including 164 fixed-term workers working as station workers, vehicle operators, athletes, specialists and appointed researchers, 9,258 contract workers (6,793 from private service companies, 2,464 from subsidiaries) working as ticket office staff, call center staff, crew staff, vehicle, facilities and electric maintenance staff and cleaning staff. KORAIL established the 'Committee for Reviewing Conversion to Regular Employees' and 'Labor-Management-Expert Consultative Committee' and discussed the target temporary employees to convert to regular employees, the size and period of and the necessary budget for conversion. Currently, KORAIL is working to convert a total of 6,754 temporary employees to regular employees by 2021 excluding those over the age of 60, those working in temporary jobs and professional workers. KORAIL is also trying to convert the 2,464 contract workers from its subsidiaries to regular employees of those subsidiaries.

### Increasing Hiring Volume

KORAIL decided to reduce the percentage of the difference between the fixed number of employees and current number of employees from 4.3% to 3% according to its mid- to long-term personnel management plan. And with this decision, KORAIL will reduce the percentage to 2.9% by 2020. KORAIL also revised its rank structure by changing special positions and 7th level positions of which the number of personnel is difficult to increase, to 6th level positions. Also, to strengthen customer service and railway safety, KORAIL recruited 300 more new employees in addition to the original hiring plan (754) for 2017. KORAIL also increased the quality of life by promoting flexible working hours and taking annual leave as well as reducing working hours while achieving a foundation for job-sharing by hiring 17 additional employees.

### Creating Jobs in the Private Sector

To create new jobs in the private sector operating railway businesses, KORAIL established a systematic strategy. KORAIL is planning to implement 4 key tasks, 'Personalized Job Support', 'Establish SMEs' Foundation for Growth', 'Develop New Industries of the Future' and 'Invigorate Local Economy' and create new jobs for approximately 83,000 people over the next 5 years by 2022. KORAIL has a goal to create new jobs for 14,959 people in 2017 but KORAIL achieved surpassed the goal by 11.5% and last year's performance by 22.8%, creating jobs for 16,704 people.

#### New Employees



#### Strategy for Creating Jobs in the Private Sector

Key Tasks	Personalized Job Support	Establish SMEs' Foundation for Growth	Develop New Industries of the Future	Invigorate Regional Economy
Goal (Investment/ Number of People)	KRW 2 bil / 528 people	KRW 2.6458 tril / 8,408 people	KRW 36.8 bil / 3,662 people	KRW 6.8658 tril / 70,233 people
Execution Tasks	Manage internal startups / Support youth startups / Provide jobs to homeless people	Develop markets for SMEs / Maintain expertise / Provide businesses and projects / Support vehicle manufacturing business	Modernize security management / Expand IT platform / Utilize digital ads	Establish a public-private partnership system / Develop railway resources / Build a logistics center
Goal for 2017	• Job support for the disadvantaged groups • Operate Job Stepping Stone program & support youth startups	• Create jobs by increasing investment • Support SMEs' growth through indirect support	• Strengthen global competitiveness • Realize a smart railway system	• Promote tour industries and stores in stations • Carry out transport integration projects

#### 2017 Performance in Creating Jobs in the Private Sector

Personalized Job Support	Establish SMEs' Foundation for Growth	Develop New Industries of the Future	Invigorate Regional Economy	
<b>Disadvantaged Groups</b> • Provide jobs and wage to homeless people • Aid in settling in the community	<b>Vehicle Purchasing</b> • Increase railway vehicle purchasing to prepare for opening of new lines and to strengthen safety	<b>Strengthen Global Competitiveness</b> • Carry out joint overseas projects • Develop overseas network • Carry out vehicle purchasing consultation and indirect investment projects	<b>Transport Integration Projects</b> • Open Gwangmyeong Station's City-Airport Terminal • Increase the number of KTX shuttle bus lines • Establish a carsharing system	<b>Stores in Train Stations</b> • Chandeulmaru (2 stores) • Gohyang Ddeurak (5 stores) • Myeongpummaru (4 stores including the one in Seoul Station)
<b>Job Stepping Stone</b> • Support university students' practical/job training and the expenses	<b>Vehicle Modification</b> • Indirectly support vehicle modification through SMEs	<b>Build Smart Railway System</b> • Carry out advanced tasks on IoT and technologies of the 4th Industrial Revolution • Support for the development of original parts within Korea • Establish an IT-based safety management system	<b>Parking Lot Business</b> • Gwangmyeong Station (1,822 lots) • Mangwoo Station (200 lots)	<b>Promote Tourism Industry</b> • Increase the income of small business owners by launching package tour products • Promote 5 Tourism Belts • Develop themed stations through the Hometown Stationmaster Policy
<b>Support Youth Startups</b> • Support interior design expenses • Promotional support, business consultation	<b>Indirect Support</b> • Support SMEs' growth through stable payments and improvement of regulations			
Jobs Created	110 People	5,045 People	396 People	11,153 People
Total				16,704 People



# Win-win Growth with Partners

**Related Department**  
Financial Management Office

**Related Stakeholders**  
Partners

**Link to SDGs**



## Business & Social Context

To compose a healthy railway industry ecosystem, win-win cooperation with the small and medium partners is an important element. Through business model of win-win and by expanding services to provide information and strengthen technical cooperation of the small and medium businesses, companionship plays the social roles and at the same time advances the growth of KORAIL and the industry. Also, settlement of performance distribution culture and fair trade make small and medium businesses healthy leading to the industrial development of countries. KORAIL provides systematic foundation for the win-win growth with the partners and fair trade and also operates various support programs to develop a cooperative business ecosystem.

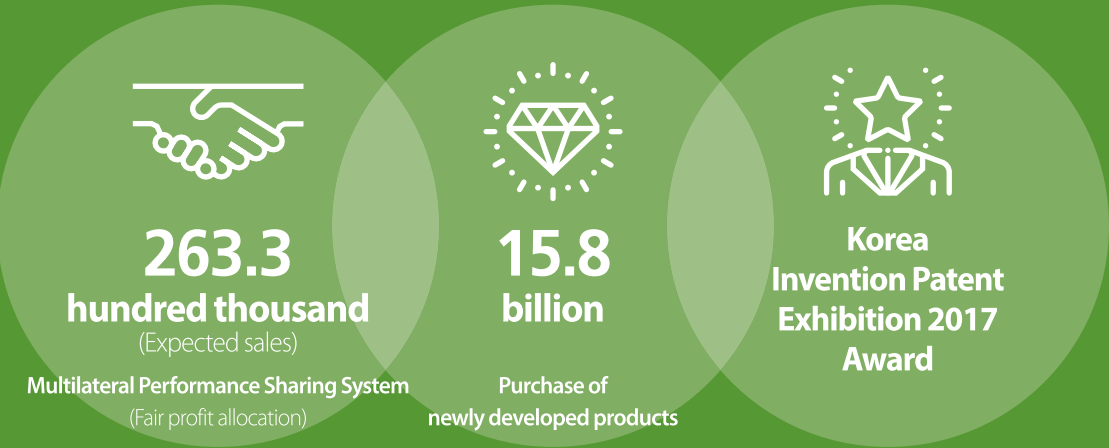
### Progress

- High-value technology joint development regarding excellent small and medium business and 4th industry
- Purchase newly developed products and joint technology development with small and medium businesses
- Perform multilateral performance sharing system and expand performance sharing system through diversification of model
- Provide foundation based on fair and stable activity of small and medium businesses

- Expand technical development support business promotion of small and medium businesses by holding regular business briefings
- Execute "Technology Conference" between KORAIL – Small and Medium businesses
- Continue to promote entering the overseas businesses with small and medium businesses
- Continue to promote pioneering the new overseas market

### Future Plan

## 2017 Key Performance

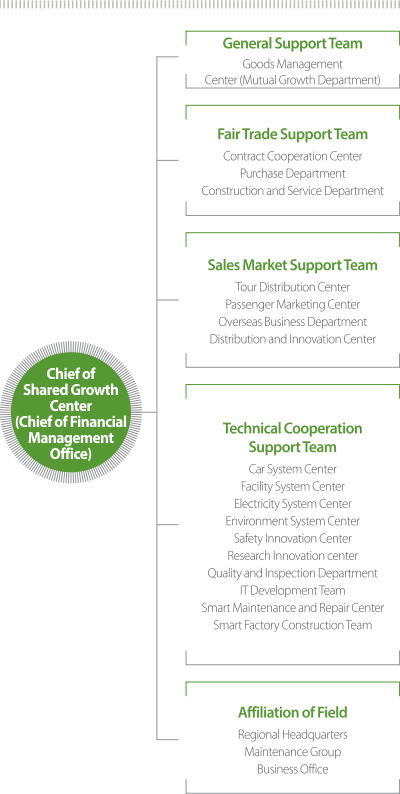


## Win-win Growth with Partners

### System for Promoting Win-Win, Win-win Growth

KORAIL has been promoting win-win growth by sharing know-how on technology and by putting effort in composing win-win culture with the partners for healthy industry ecosystem and the development of the railway industry. KORAIL's goal for win-win growth is to achieve 'win-win growth that realizes social values' and to achieve this, KORAIL implements 3 strategic tasks including 'Development of the System for Promoting Win-win Growth', 'KORAIL Business Model Development for Win-win Growth', and 'Development of the Foundation for Coexisting with Small and Medium Businesses'. KORAIL puts effort in becoming the center of regional economic development while supporting the growth of small and medium businesses.

### Promoted Groups



### Promotion Strategy for Growing Together

Goal	Win-win Growth that Realizes Social Values		
Strategic Tasks	Development of the System for Promoting Win-win Growth	KORAIL Business Model Development for Win-win Growth	Development of the Foundation for Coexisting with Small and Medium Businesses
Central Assessment	<ul style="list-style-type: none"><li>• Strengthen capability and identify will</li><li>• Active communication for shared growth internally and externally</li></ul>	<ul style="list-style-type: none"><li>• Strengthen Technology cooperation such as 4th industrial technology</li><li>• Expand market with small and medium businesses</li><li>• Support entering overseas market</li><li>• Advancement of performance sharing system</li></ul>	<ul style="list-style-type: none"><li>• Acquire stability based on activity of small and medium companies</li><li>• Expand priority purchase of government recommended items</li></ul>
Detailed Implementation	Establish and promote detailed implementation plan to strengthen promotion of each business (Railway technology commercialization technology development, performance sharing system, smart maintenance and repair, master plan, tour product excavation plan, and etc.)		
Inspection and Feedback	<b>Monitoring System</b> <ul style="list-style-type: none"><li>• Board of Directors Meeting</li><li>• Technology Development Conference</li><li>• Performance Sharing System Research Group</li><li>• Mutual growth Manager Conference</li></ul>	<b>Evaluation and Incentive</b> <ul style="list-style-type: none"><li>• Department and Department Head Evaluation</li><li>• Incentive Grade Payment</li><li>• Personnel Connection, Excellent Employee Award and etc.</li></ul>	<b>Annual Reflux</b> <ul style="list-style-type: none"><li>• Analyze performance and issues</li><li>• Reflect mid to long-term management strategies</li></ul>

### Development of the System for Promoting Win-win Growth

KORAIL's mutual growth is operated by composing Mutual Growth Center focused on the General Support Team for the mutual growth of Supplies Development Department. There is a total of 64 personnel in charge, showing an increase of 13 people since the previous year. Especially, Smart Maintenance and Repair Center, Smart Factory Construction Team, and IT Development Team were established for joint development with the small and medium businesses that possess 4th industrial technology. Also, 59 awards were given while specialized training was executed twice in 2016 to strengthen incentive and to train the talented people while also expanding the management will of the CEO on mutual growth.

### KORAIL Business Model Development for Win-win Growth

#### Strengthen Technical Cooperation such as 4<sup>th</sup> Industrial Technology

KORAIL contributes to the innovative growth of small and medium businesses through joint development of 4<sup>th</sup> industrial revolution advanced technology. To preoccupy the 4<sup>th</sup> industrial technology of the railway field, KORAIL applied maintenance and repair to the facilities by developing IoT/IcT, drone, mobile imaging surveillance, railway RAIL-VIEW and etc., according to the necessity of technical development by cooperating with the excellent small and medium businesses. Also, through test business of the Smart Factory, advanced equipment, CBM equipment, auto control robot, 3D printing and other technologies were used to implement smart passenger service such as tablet-type auto ticket machine, GPS for engine drivers, and establishment of app.



## Support Business Briefing



## Briefing for each part



## Expanding Market by Using Railway Network

Small business market expansion is supported through activation of railway tour products. Among annual average of 130 billion railway users, around 56.3% use KORAIL Talk+ to develop the contents in KORAIL Talk+. The regional small businesses and small and medium travel agency markets have been expanded by activating railway tour product such as the 'Total Travel Service'. Also, KORAIL cooperated with Gangwondo to excavate railway tour products to activate the regional economy of Gangwon area through the 2018 Pyeongchang Winter Olympics and opening of the Gyeonggang Line to develop the products connected to the corresponding area's tour resources and also contributed in the activation of the regional economy.

## KORAIL-Small and Medium Business, Mutual Expansion to Overseas Business

KORAIL pioneers the market according to the overseas business order policy for special development type and is establishing a model to enter the overseas business through mutual growth with the private small and medium businesses. The Central Line Construction Business in Tanzania that was received on April 2017 is executed with 8 companies of 6 countries including Cheil Engineering Co., Ltd., and Ilsin Co., Ltd., as joint ventures. Also, to support the entrance to the overseas market of the domestic railway parts companies, domestic and foreign networks were expanded by holding exchange meetings, exhibitions, and forums with countries from France and China participating to provide the opportunity in entering the overseas market. Continuously, KORAIL will continue to promote ways to enter the overseas market and expand the opportunity to participate in the market so that small and medium businesses can have the opportunity to enter the overseas market by applying the KORAIL brand.

## Expansion of Performance Sharing System

KORAIL introduced multilateral performance sharing system and is expanding targets to share performance to secondary and third partners. Various performance sharing models such as joint technology development, technology transfer, performance test support, and other sales and market support models for small businesses were excavated. Also, Autonomous Promotion Agreement was signed to expand the multilateral performance sharing system. In 2017, 16 new assessments were excavated and registered including 2 multilateral sharing systems and 6 of the assessments were completed.

## Small and Medium Business Win-Win Companionship Support

### Support for Building Sustainable Foundation of Small and Medium Businesses

KORAIL contributes in strengthening the stability based on the activity of the small and medium businesses by expanding the opportunity to participate in the public market through 'Small and Medium Business and Social Enterprise Limited Competition'. Railway Crossing Consignment Management Service was bid through limited competition between the small and medium businesses, and limited competition was executed on social enterprises, persons of national merit, and association of the handicapped on 30% of the car and station cleaning service. Furthermore, the use of trademark rights and patents possessed by KORAIL was approved to aim for win-win growth by providing opportunities for developing new products.

## Coexistence Program to Support New Market Entry

On the other hand, KORAIL held Visit Briefing Session to excavate excellent railway car parts companies. Around 246 people of 129 companies in the automobile parts and radiation along with industrial machine fields participated in the briefings that were executed 3 times in total at Changwon National Industrial Complex, Namdong National Industrial Complex, and Gyeongbuk Technopark. KORAIL executed individual consultation by providing information on the support business and essential parts of the railway car technology development. Through this, there were 8 new excellent small and medium businesses found, and currently joint technical development is in progress with the companies.

## Building Foundation for Fair Society

### Disclosure on Subcontract Payment Status

순번	구분	종사자	직업	직업	직업
200	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
201	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
202	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
203	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
204	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
205	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
206	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
207	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사

### Illegal Subcontract Report Center

하도급불법윤영신고

신고인명: [ ] 신고인성명: [ ] 신고인직업: [ ] 신고인전화: [ ]

신고대상: [ ] 신고대상명: [ ] 신고대상소재지: [ ] 신고대상전화: [ ]

신고내용: [ ]

신고일자: [ ] 신고시간: [ ]

신고장소: [ ]

### EBID System

순번	구분	종사자	직업	직업	직업
100	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
101	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
102	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
103	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
104	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
105	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
106	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
107	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사
108	공사	경남고속도로공사	경남고속도로공사	경남고속도로공사	경남고속도로공사

### Anti-Corruption Center

고객지원

고객지원: [ ] 고객지원명: [ ] 고객지원소재지: [ ] 고객지원전화: [ ]

고객지원내용: [ ]

고객지원일자: [ ] 고객지원시간: [ ]

고객지원장소: [ ]

## Establishment of Fair Trade Order

KORAIL established Fair Trade Order and System Improvement by operating transparent ethics and management committee. Suggestions were accepted through active communication with small and medium businesses through events such as Partners Meeting and Purchase Conferences, and the system is continuously being improved through communication on the transparency and fairness and protection of authority of the small and medium businesses. Especially, by preventing illegal subcontract and delay of payment for subcontract, secondary and third partners are being protected. In 2017, Public Procurement Service's 'Subcontract Protector' system was introduced to strengthen the direct payment of wages. The payment surveillance has been strengthened to disclose and monitor the payment situation in real-time. Also, the report center for illegal subcontract has been operated continuously where the actual conditions are inspected 2 times a year leading to 100% payment of subcontract payment in 2017.

## Execution of Fair Contract

KORAIL signed MOU to improve professionalism and promote fair agreement services and is leading in grasping the integrative situation through the electronic procurement system. EBID System and Anti-Corruption Center are operated to reveal all the information regarding procurement agreement. Also, report on corrupted actions are received and the information of KORAIL upright policy is revealed to strengthen transparency on agreements. Furthermore, Standard Agreement is applied for each business field and revealed to expand the fair trade. In the stage of executing the agreement, the autonomous implementation program is used to execute post-monitoring to check and correct all the unfair elements.

## Promotion of Communication

KORAIL communicates with small and medium companies by using the On-Off Line channels. The suggestions of the partners are applied to reflect to the mutual growth policy and the rights of the small and medium businesses are protected by improving the irrational systems. Regulatory Reform, Public Room, Agreement Information, Notification Service (SMS), Mutual Growth Center, EBID System, Anti-corruption Center, Bareumi Report and other On-Line communication channels are used to immediately accept and handle the complaints and suggestions of the small and medium businesses. Coexistence Academy, Railway Future Technical Item Exhibition, Railway Main Parts Purchase Conference, provision of communication place, Railway Parts Delivery Partners Meetings, and other Off-line communication channels are used to expand the direct communication opportunity with the small and medium businesses.

### Communication Channels with Small and Medium Businesses

#### On-Line Communication Channel

**Regulatory Reform/Public Room**  
Listen to the voices of the citizens on the old regulations that suppress activities of the companies and customer inconvenience

**Agreement Information/Notification Service (SMS)**  
Provide SMS service for the agreement information

**Mutual Growth Center**  
Accept complaints and suggestions of small and medium business along with guide on the mutual growth policy

**EBID System**  
69 Information revealed about KORAIL Procurement and 52 cases on Q&A

**Anti-Corruption Center**  
57 cases on KORAIL Listening Policy and activities revealed

**Bareumi Report**  
100% Anonymous Assurance report System on corrupted reports

#### Off-Line Communication Channel

**Coexistence Academy**  
Open coexistence cooperation academy with large companies, small and medium companies, and agriculture and fishery cooperation foundation to provide a place of communication with small and medium companies

**Exhibition of Future Railway Technology Products**  
Display the will of technical development with small and medium businesses through exhibition of technology products

**Railway Core Parts Purchase Conference**  
Purchase conference to enter the railway market of small and medium businesses of general cars

**Provide Place of Communication**  
Open KTX Test Drive of Gyeonggang Line by inviting distribution partners

**Railway Goods Delivery Partner Conference**  
Strengthen communication by searching for coexistence methods such as improving irrational matters and resolving complaints on goods inspection



Related Department

Public Relations Office,  
Future Innovation Office

Related Stakeholders

Community/Citizens

Link to SDGs



Business & Social Context

The social contribution activity of company is being expanded as social innovation of providing sustainable foundation of the community where the company is affiliated. KORAIL creates social values through social contribution activities by contributing to the long-term development of the community and is doing the best in developing activities continuously and strategically to help in the not only events that are held one-time or as exhibition but to help the community. Also, as a public corporation that operates the railway, the company establishes culture of growing with the community by leading social development and resolving the social issues based on the basic services and roles.

Progress

- Activation of the community through development of stations with themes and tour products
- Create economic wave effect of the community by operating public interest stores within the stations
- Continue to promote the 3 core areas of social contribution
- Expand beneficiary of Happy Train

Future Plan

- Expand coexistence development program of community for related organization cooperation (Expand Homeless Hope Project)
- Continue to excavate social contribution programs specialized for the characteristic of the business world
- Continue to develop social contribution activities through external partnership
- Expand Mecenat activity such as KORAIL Symphony Orchestra

2017 Key Performance



Shared Development  
with Communities

Buncheon Santa Village



Performance in Promoting Themed Stations (2017)

Jeongdongjin Station
Improved station platform within the station and renewed Sunrise Platform (Gangneung City Cooperation) Annual 327,000 people visit
Dorasan Station
Platform Renewal (Germany Government, Ministry of Unification, Gyeonggido Paju City Cooperation) Annual 6,600 people visit
Buncheon Station
Support Pyeongchang Winter Olympics Torch Relay and Operate Santa Village (Gyeongsangbuk-do Cooperation) Annual 434,000 people visit

Agrifood Chandeulmaru Operation, Division of Labor

KORAIL	Store, Development, Business, Management, Store, Approval
KORAIL 코레일유통	Store Composition and Management, Product selection and sales
농림축산식품부 aT 한국농수산식품유통공사	Recommendation of company Store construction and marketing support

Gohyang Tteurak



Small and Medium Company Premium Maru



Promotion of Regional Tour Industry

KORAIL composes tour culture by composing distinct railway stations such as Jeongdongjin Station, Deungyang Station, Buncheon Station, and Dorasan Station to contribute in activating the regional economy. Especially, the forgotten temporary stations are added with history to develop a tourist attraction to be found by people and KORAIL continues to put effort in creating tour demands and activating the regional economy. By developing 8 stations including Samtan/Yeonsan Station, the temporary stations are being changed to tourist attractions and the railway station culture herbs are being improved. On the other hand, customized tour trains for each season such as O/V/S/DMA/A/G-Train, Paldo Market Tour Train, Ocean Train along with Fantasy Line Snowflake Train, Danpung Train Jinhae Gunhang Festival Train and etc., are operated to overcome the boringness of traveling on the train and the regional tour products are also promoted as well. Especially, to activate the connected tour of Gangneung Line, Gangwondo and Korea Tourism Organization established partnership with related organizations to develop 22 package tour products such as National Contest Product, Ski and Sunrise Product, and etc. The effect on regional production inducement through KTX tour products in 2017 was 1.168 billion KRW and achieved 2% increase in contrast to the previous year for the personnel of employment inducement regarding tour through the regional tour related products. Also, the number of people using the tour train reached 3.1 million people showing 14.4% increase compared to the previous year.

- O Train: Central Inland Cycle Train (Seoul - Chul-Am)
- S Train: Namdo Island marine sightseeing train (Busan - Boseong)
- A train: Jeongseon Anirang train (Cheongryangri-auraji)
- Sea trains: Samcheok-Gangneung section
- V Train: Baekdudaegan Gorge Train (Chul-Am - Buncheon)
- DMZ Train: Peace Life Tour Train (Yongsan-Dorasan / Seoul-Baekma-goji)
- G Train: West Sea Golden Train (Yongsan-Iksan)

Operating Public Interest Store within Stations

KORAIL established coexistence model of KORAIL type to contribute to the economic development of agriculture and cultivate specialized industry to operate 'Chandeulmaru', a sales/exhibition store with only small and medium food products. Chandeulmaru established partnership with KORAIL, KORAIL Retail, and Agro-Fisheries & Food Trade Corporation where 2 stores are being operated in Yongsan and Moran Station. Also, local specialties store brand 'Gohyang Tteurak' is operated to sell the local specialties around the country. Through this, the excellent product market is being diversified. On the other hand, 'Small and Medium Company Premium Maru' is operated to activate sales of local specialties. KORAIL applies low commission rate in contrast to department stores and home shopping malls. As a result, KORAIL provides exhibition and sales opportunity along with market expansion of small and medium businesses reaching sales of 420 million KRW in 2017.

Performance of Public Interest Store Operation (2017)		
Stores	Support	Sales
Chandeulmaru	Operated 11 times for Korean Thanksgiving, always operating in Yongsan and Moran	550 million KRW
Gohyang Tteurak	Always operating in 5 places including Yeongdeungpo and Pohang, operated 36 times for short period for each product	950 million KRW
Small and Medium Company Premium Maru	Operating in 4 places : Seoul, Daejeon, Dongdaegu, and Gwangju	420 million KRW

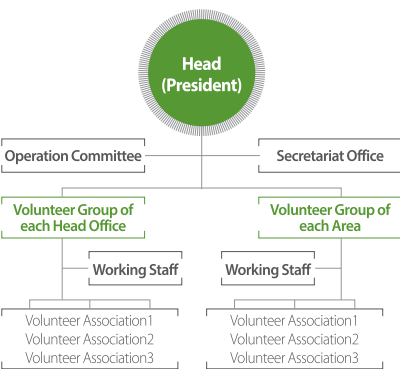
Promotion of Station Related Business using KORAIL Talk+

KORAIL Talk+ is a real-time reservation system. It is used to provide connected services such as lunch boxes, car sharing, and vessels. Corresponding service is registered and connected with 26 stores within the stations and the accessibility has been raised so that passengers can reserve lunch boxes and purchase tickets at the same time. Through this, the Cheongchun Chef store sales in 2017 increased by 230% in contrast to the previous year. On the other hand, car sharing infrastructure was implemented in the main stations to launch rent car companies in the stations. Sixty-two parking spots in 15 main stations were allotted to the corresponding service and convenience was improved by providing the reservation system on KORAIL Talk+. Through the corresponding business, transportation network between train and car was connected to expand accessibility of transportation on the main tourist attractions and it will also contribute in activating the regional tour in the future.



## Social Contribution Activities

KORAIL Community Service Group Organization Chart



Community Service Group Emblem



- **Circle** "Everyone Together" meaning of harmonization
- **5 colored lines** Train that is on the railway
- **Red** Active and motivated
- **Yellow** Bright and brilliant
- **Green** Making the mind calm
- **Purple** Precious and Solemn
- **Black** Calm and giving stability

Social Contribution Activity Resource

Love Fund (Unit: Million KRW)



Matching Grant (Unit: Million KRW)



## Social Contribution Promotion System

### Promotion System

KORAIL takes all social responsibility to become a company that can be trusted and relied by the people, and the company promotes social contribution activities in relations to the community. With the slogan, 'Making a Happy World by Connecting With Rails' the company develops social contribution activities based on 3 core areas of sharing talent, sharing happiness, and regional contribution. To enhance social contribution performance, 'KORAIL Community Service group' is operated composed of in-house employees. The CEO is the head of the volunteer group and the KORAIL Community Service group is active with 50 volunteer groups in the country and 390 volunteer associations. Also, by maintaining close relationship with the external partnerships for social contribution activity, KORAIL's inherent duty and business in connection with the characteristic of each social welfare institution are in progress.

### Social Contribution Promotion Strategy

Vision	National Happy Korail		
Slogan	A Happy World by Connecting with Rails		
3 Core Areas	Sharing Talent	Sharing Happiness	Regional Contribution
	Apply railway infra such as railway facility and talents of employees	National Empathy Program specialized to the business such as traveling on train	Apply nationwide network in units of affiliation and regional headquarters
Promotion System	Internal		
	• establish operate KORAIL Community Service Group (since 2006-) – 50 volunteer groups in the country, expanded to 390 volunteer associations • Establish/renew social contribution portal site - Manage systematically for the volunteer performances		
Promotion System	External (Partnership)		
	시외버스사업자협의회, 대한적십자사, 조록우산, 어린이재단, 한국과학창의재단, etc. NGO		

### Promotion Resource

Since 2006, 'KORAIL Love-Fund' was developed to provide resources for social contribution. Employees donate a certain amount voluntarily from their salary every month. Also, 1:1 matching is done for this donation to use important resource during social contribution activities through 'Matching Grant'. The donations are used for business for beneficiaries such as neglected class support and the related data is disclosed for transparent operation.

### Love Fund Operation System



### Social Contribution Time per each person



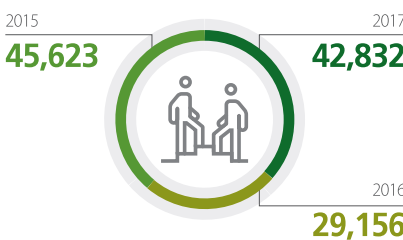
## KORAIL Village Beneficiaries

(Unit: People)



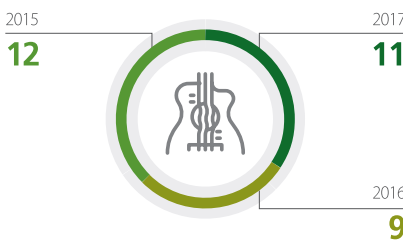
## Number of People at Railway Experience Center

(Unit: People)



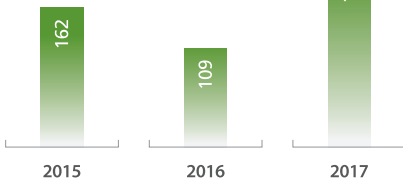
## Number of Performances of KORAIL Orchestr

(Unit: Times)

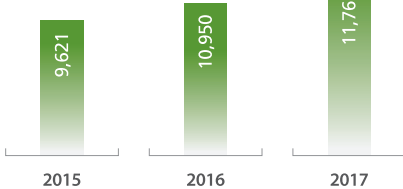


## Happy Train operation performance

### Number of Operations (Unit: Times)



### Beneficiaries (Unit: People)



## Happy World Connected through Railways 1: Sharing Talent

### KORAIL VILLAGE

KORAIL Village is composed of sharing talents and technology of the employees through activities of improving the living space by visiting residence of socially weak people or the neglected class. By the name of 'Energy Dream Project', employees of electricity field and civil engineering field provide floor construction, replacement of boiler, reinforcement of walls in the residential facilities of the neglected class around the railway and the beneficiaries have been expanded through environment improvement business in 2017. Also, Village Wall Painting was executed to improve the residential environment of the socially neglected class through regeneration business of old areas.



### Railway Experience Center

To provide opportunities to students on searching for career, 18 places were designated as railway experience centers to be operated for career/culture experience, museums, car maintenance group, and train station. Along with the 4th industrial revolution generation arriving, the interest on the future generation about the railway industry is boosted and events such as education exhibitions are held. Also, in connection with the free semester system, KORAIL supports so that consultation on experience and career is possible. Around 42,832 students visited the Railway Experience Center in 2017.



### KORAIL Symphony Orchestra / Sports Group

Various performances are provided in the concert halls such as Seoul Station, Yongsan Station, Busan Station, and Seoul Arts center for the culture alienated groups to enjoy culture. Classic culture performances are provided. For this, Talen Sharing Orchestra was created in 2012. Audition is held to recruit members of the orchestra and these people donate their talents. On the other hand, KORAIL Sports Group athletes operate coaching program for need such as 6 riding classes with club member, 12 self-protection lessons, and soccer clinic.



## Happy World Connected through Railways 2: Sharing Happiness

### Happy Train

Happy Train is one of KORAIL's representative social contribution program providing train tours for children in orphanages, senior citizens living alone, and the disabled. In 2017, beneficiaries reached 100,000 people. In 2017, the separated families were invited to take the DMZ train to arrive at the event held in Imjingak. Free Traveling was executed as event on the considered class and 11,765 people participated in the event that has been held 193 times.



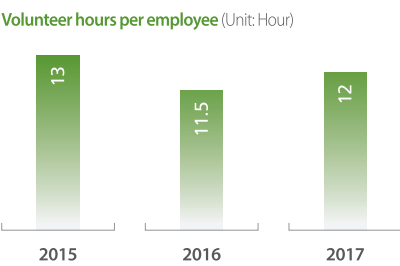


# Sharing with the Communities

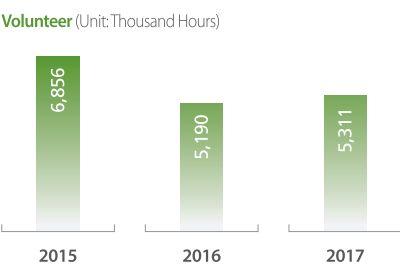
Homeless Hope Project Performance (Unit: People)



KORAIL Volunteer Performance



Local Volunteer Group Performance



## Hope Railway Foundation

KORAIL established the Hope Railway Foundation to fulfill coexistence and sharing with the community. The foundation delivers warmth by supporting the neglected class and teenagers. The Labor and Management Joint Social Contribution Corporation was approved by the Ministry of Employment and Labor among the public companies on February of 2016 to be established. Also, Foundation Office was opened and jointly operated with the labor and management. The foundation excavates social contribution activities by considering the characteristic of each area and is active in systematic social contribution activity such as supporting business for multicultural families, neglected class, children of immigrated family, and displaced persons.



## Homeless Hope Project

KORAIL executes projects to improve occupation ability and programs for self-reliance and self-support to support the independent people by boosting the will of working for the homeless. The Homeless Hope Project that has been executed 9 times since April of 2012 is being operated every 6 months in groups of 20 for each event. Total of 244 homeless people participated in the program until 2017. Total of 86 people were connected with stable jobs such as public employment general employment. From 2018, Hope Project is expected to be expanded in 5 main stations including Busan Station. KORAIL will continue to contribute to recovering the sociality by introducing stable jobs and planting the ill of self-support to the homeless.



## Happy World Connected with Rails 3: Regional Contribution

### Area Integrated Volunteer

KORAIL shares ritual goods during holidays to the neglected class every Korean New Year and Korean Thanksgiving and performs Love Share Events by delivering donations. KORAIL supports relief activities when damage occurs due to natural disasters and collects funds to support energy to the low-income class. Also, the company executes volunteer by making Kimchi for neighbors in need. The number of volunteers of the regional volunteer group recorded 5,311 times in 2017. The total hours of volunteer recorded 246,964,000 hours. This kind of performance was acknowledged where KORAIL Community Service group received Minister's Award from the Ministry of Health and Welfare on October of 2017. Also, KORAIL was honored by receiving 8 awards from other institutions such as Daejeon Veterans Affairs Secretary in the social contribution field.



## Public Interest Product Release and Operation

KORAIL operates customizes traveling products for socially weak people and low-income neglected class. By cooperating with the orphanages, 'LOVE Travel' is executed for DMZ Cheorwon Tour for the children in the orphanages. Also, there are other programs such as career experience program for low-income class teenagers 'Dreaming Children', 'Happy Train to the Forest' for juvenile delinquents, and 'Munhwanuri Rail Pass' that provides free traveling for Basic Livelihood Recipients. Furthermore, KORAIL strengthens public roles as a public corporation while contributing to the local society by operating the public interest products.



# Connecting Future, Connecting Values

Operating Environment-Friendly Railways  
for Our Next Generations

Achieving Sustainable  
Performance for Tomorrow



# Operating Environment-Friendly Railways for Our Next Generations

## Related Department

Safety Innovation Headquarters  
(Environment and Management Division)

## Related Stakeholders

Local Community / NGO

## Link to SDGs



## Business & Social Context

Railway contributes to environmental sustainability as the economic transportation of minimizing social costs due to occurrence of environment pollution in contrast to the road. KORAIL uses the excellent energy efficiency of the railway to take responsibility in environment preservation while taking a part in the global climate change activity. KORAIL also invests in installation of environment pollution prevention facilities and its improvement businesses to minimize the discharge of environment pollutions of business places. Environment influence is minimized through resource management of a strict level than the regulated standard.

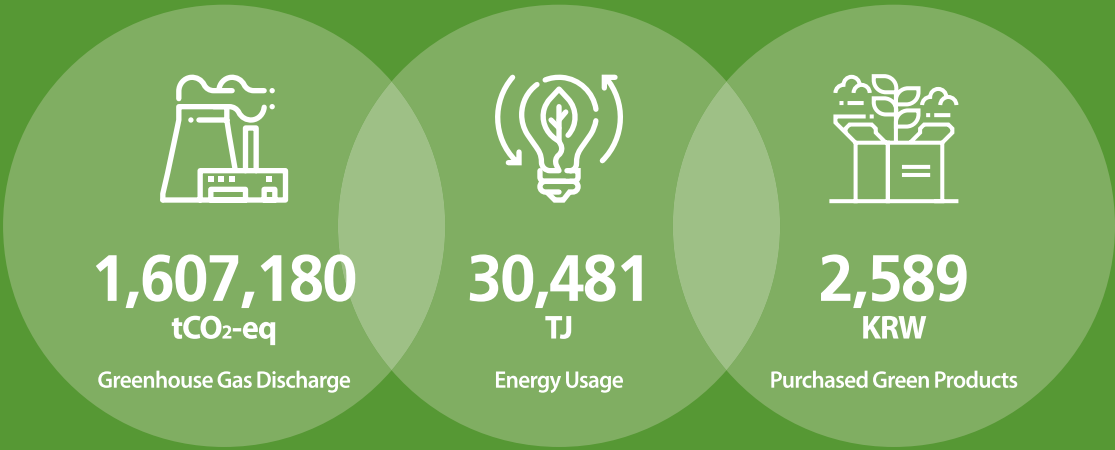
## Progress

- Establish and execute environment pollution discharge minimization strategy
- Installation of environment pollution and investment in improvement business
- Establishment of greenhouse gas / energy reduction goal of high standard than the approved discharge
- Operate Greenhouse Gas /Energy Committee

- Establish and Manage environment goals of standards higher than the regulated environment standard
- Expand railway low-carbon product certifications
- Seek sustainable environmental management through activation of purchasing green products
- Challenge in zero environmental accidents

## Future Plan

## 2017 Key Performance

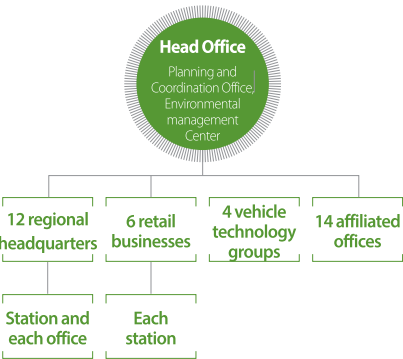


## Realizing Environment-Friendly Railways

### Environmental management Operation Method

- First** Full attention to the environment regulations according to the International Climate Agreement
- Second** Put full power in managing the environment to minimize pollution emission
- Third** Always put effort in environment-friendly improvement of transportation by establishing environmental management system
- Fourth** Taking social responsibility of company though active environment protection activity

### Bodies in Charge of Environmental Management



## Environmental Management System

### Vision and Strategy

KORAIL established vision and strategy along with operation methods of environment to implement environment-friendly green railway and is establishing highly advanced environmental management system. The goal of the environmental management is 'Providing Foundation for Environmental management Settlement and Climate Change Adaptation'. Based on this, 12 assessments from the 3 top strategies are selected to procure the environment. Also, KORAIL confirmed detailed assessments and mid to long term goals until 2025 to provide clean environment for the next generation. By using the energy efficiency of the railway, KORAIL contributes to the reduction policy of the government and takes all responsibility in environment procurement. Also, KORAIL does the best to achieve assessments and goals to minimize discharge of environment pollution.

### Environmental Management Promotion Strategy

Vision	Implement Environment-friendly Green Railway		
Goal	Highly advanced environmental management and strengthen Climate System Response		
Top 3 Strategies	Climate Change Comprehensive Response	Environment Infra Integrative Management System	Environment-Friendly Empathy Activity
	Strengthen greenhouse gas goal management system	Legal management of wastes and strengthen recyclables of resources	Expand autonomous environmental management system
	Provide comprehensive measures for climate system	Effectively operate railway land management programs	Strengthen good indoor air quality management
	Promote certificates to respond to carbon emission rights	Establish water quality pollution prevention system through reliability management	Railway environment culture settlement activity
12 Assessments	Strengthen energy saving activity and management	Strengthen noise management and effectively respond to environment regulations	Strengthen communication for open environmental management

### Mid to Long Term Roadmap for Environmental Management

	Short Term (2017~2019)	Mid Term (2020~2022)	Long Term (2023~2025)
Goal	Achieved target of GHG reduction (530,129 tons of CO <sub>2</sub> -eq)	Achieved target of GHG reduction (582,237 tons of CO <sub>2</sub> -eq)	Achieved target of GHG reduction (639,508 tons of CO <sub>2</sub> -eq)
Tasks to be implemented	<ul style="list-style-type: none"><li>• Establish sustainable environmental management system through establishment of organization in exclusively in charge of climate change</li><li>• Establish measures to adapt to climate change in railway sector</li><li>• Strengthen environmental management in contrast to participation of trade for carbon emission rights (2<sup>nd</sup> period)</li><li>• Environment information system authentication</li><li>• Introduce energy meter in stages</li><li>• Promote environment-friendly business</li><li>• Select business through comparison and competition of technology development business</li><li>• Review and design new renewable energy - Photovoltaic Power, Wind Power, Region, and etc.</li><li>• New environment regulation (light pollution, electromagnetic waves and etc) establish measures</li></ul>	<ul style="list-style-type: none"><li>• Boost operation of environmental management system for environment cost management</li><li>• Create revenue through participation in trade for carbon emission rights</li><li>• Execute and return climate change adaptation measures</li><li>• Achieve goal through operation of appropriate system to the greenhouse gas energy goal management response</li><li>• Measure and analyze railway car energy consumption</li><li>• Expand environment-friendly facility</li><li>• Install new renewable energy test - 3mW Photovoltaic Power Facility</li><li>• Compose New Environment Regulation of Railway Field</li></ul>	<ul style="list-style-type: none"><li>• Boost operation of environmental management system through carbon emission rights trade</li><li>• Establish and execute secondary measures for climate change adaptation</li><li>• Expand environmental management through expansion of facilities and excavation of environment-friendly business</li><li>• Boost management system through effective operation of environmental management statistical management</li><li>• Review expanding operation and installation of new renewable energy.</li></ul>

### Promotion Organization

KORAIL has exclusive department for environment work at the head office to systematically operate and manage environment while perform promotion strategies of environmental management and operation methods of environmental management. There are around 70 people in charge at the regional headquarters, retail business group, car maintenance group, and the affiliated office. Through strengthening of communication in work with the related institutions out of the company, efficient and active work is being promoted.



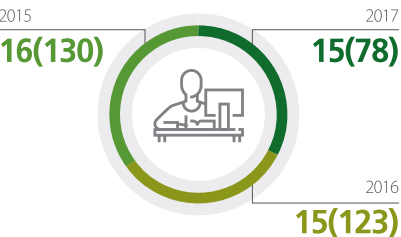
# Operating Environment-Friendly Railways for Our Next Generations

## Situation on Environmental Training

### Autonomous Training (Unit: Times (people))



### External Institution (Unit: Times (people))



## Environmental Facility Investment

### Water Quality (Unit: Case, million KRW)

	2015	2016	2017
Case (New)	6(3)	25(1)	23
Cost	103	430	278

### Atmosphere (Unit: Case, million KRW)

	2015	2016	2017
Case (New)	2(1)	3	7
Cost	153	150	23

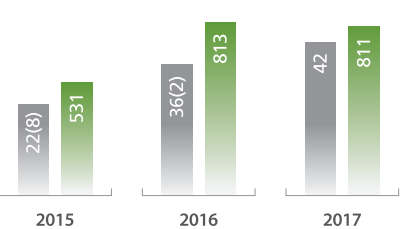
### Land (Unit: Case, million KRW)

	2015	2016	2017
Case (New)	12(1)	5	7
Cost	214	134	330

### Waste (Unit: Case, million KRW)

	2015	2016	2017
Case (New)	3(1)	3(1)	5
Cost	61	99	180

### Total (Unit: Case, million KRW)



## Boosting Environmental Management

### Environment Information System

KORAIL operates environment information system established to analyze and manage the environment resource, facility, investment, and information and KORAIL performs systematic management of environmental management activity through connection with ERP system and establishment of environment regulation response process. Also, the company actively puts effort to promote sustainable environmental management such as quick decision and investment on environment issues through boosting work of environmental management information system.

### KORAIL Environmental Management Information System



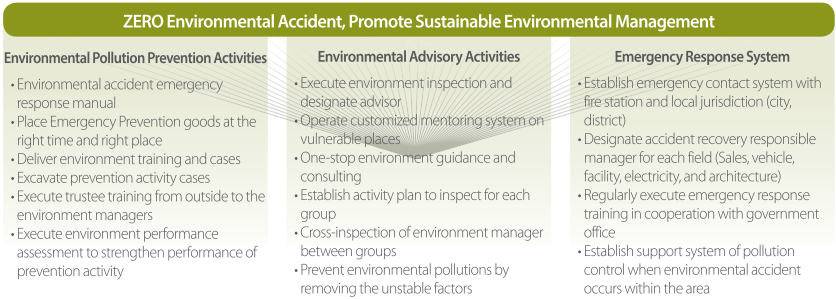
## Training and Producing Environmental

KORAIL puts active effort in efficiently operating environment facilities, environment procurement, sharing information, and environmental technologies, and also puts effort in training professional personnel in the environment field with response ability to climate change along with reasoning of using energy. Training from an outside institution and in-house training were executed on all employees and all the managers in charge of the environment work. Through training, support of acquiring environment-related licenses such as land, atmosphere environment, noise and vibration, water quality environment, and wastes was executed. Total of 243 licenses are possessed by managers and employees as of 2017.

## Environmental Accident

KORAIL sets goal for ZERO environmental accidents by preventing them through case training, emergency response training, and composing manual for environmental accidents and also establishing system connected to related organizations to provide prevention and emergency response system on environmental accidents to prevent expansion of damages and to quickly make initial responses when environment pollution accidents occur.

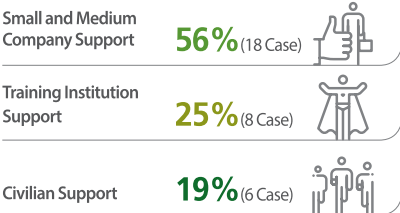
### Environmental Accident Prevention Process



## Environmental Facility Investment

KORAIL invested 811,000,000 KRW and executed 42 environmental facility constructions in 2017. Especially, local improvement construction of wastewater treatment facility was executed to prevent environmental risk that can occur in the period of lacking water or improving the effluent water quality.

## 2017 Supported Fields

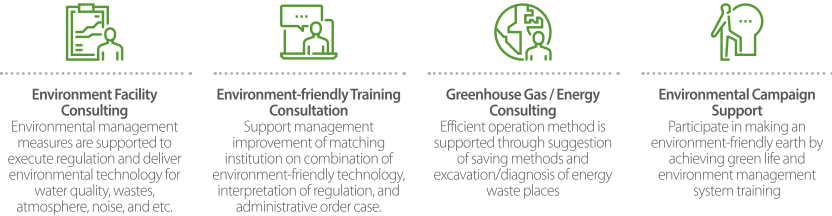


## Spreading Environmental Values

### KORAIL Environment Pro Bono Activities

KORAIL continuously executes technical support consulting, environmental training, and campaigns to NGO groups, social companies, and small and medium businesses by sharing talent of the employees with professional capabilities and environment infra to promote environmental improvement of the community, and KORAIL also puts effort to achieve mutual growth with local companies and accomplish social responsibilities. KORAIL Environment Pro Bono is the consultation service on the environment management such as atmosphere, water quality, wastes, energy, noise, and greenhouse gas and it is a specialized activity of KORAIL that combined Pro Bono Publico to the environment area.

### Main Activity Range



### Environment Pro Bono Promotion Performance

**2017 Pro Bono Matchings** KORAIL executed Environmental Pro Bono and matching institutions such as 2017 small and medium professional knowledge consulting, environmental regulation execution guiding, and environmental training and campaign.

Contents	Performance (Case)	Number (people)
Small and medium business support	18	427
Training institution support	8	547
Civilian Support	6	271
Total	32	1,245

## Internal and External Nature Protection Activity Expansion

KORAIL designated 'Railway Environment Special Area' since 1999 to execute focused refining activity in places where wastes are dumped such as the train station, trackside, and nearby mountains and rivers. Even during the vacation season such Korean New Years or Korean Thanksgiving, 'Environment-friendly Vacation' promotion and refining work of the environment in mountains, rivers, and oceans are focused. On the other hand, KORAIL participates and actively supports 'Making Clean Korea', a true environmental event. Especially, KORAIL actively participates in national policy of separating daily trash and improving promotion activity/expanding and inducing active participation of pan-national general cleaning movement.

## Railway Green Business

KORAIL puts effort to make better railway in Korea with the people, world, and future by composing clean traveling environment and preventing global warming through composition of green space and planting trees through improvement business of the railway area and business of composing soundproof to the railway facilities close to the zone of the general people.

## Green Consumer Culture Expansion

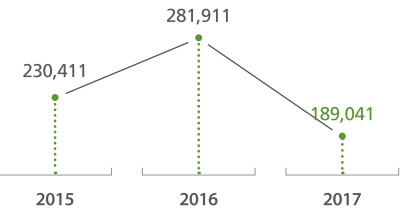
KORAIL prevents pollution and waste of resources and also puts effort in expanding the green consumer culture by promoting and using railway station, reflecting regulations regarding green products purchase, participating and delivering training, and monitoring purchase records of green products to contribute to the sustainable development of the national economy.



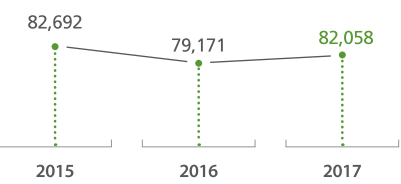
# Operating Environment-Friendly Railways for Our Next Generations

## Water Pollution Substance Discharge

### Waste Water Treatment Amount (Unit: m<sup>3</sup>)



### Passenger Car Waste Water (Unit: m<sup>3</sup>)



## Environmental Management Result

### Water Quality Management

Water pollution discharged at KORAIL is classified into domestic sewage occurring from station operation facilities and vehicle inspection facilities, wastewater occurring from train restrooms, and waste water occurring from car wash/cleaning and alteration from trains. The waste water and sewage water that occurs from train maintenance and work place are handled to below the approved standard level of discharge and treated at the water pollution prevention facility. The wastewater is managed by measuring through external company or autonomously for the water pollution to inspect the appropriate operation status of the waste water discharge facility and prevention facility while it is discharged through physical and chemical treatment process such as cohesion, sediment, filtration, and carbon absorbent. On the other hand, in the case of domestic sewage, water saving is fulfilled by controlling the water level and procuring water saving and KORAIL actively participates in water quality management through installation of treated water supply, waste water discharge, and reuse of rainwater.

### Air Quality

KORAIL manages the atmospheric environment by operating air pollution prevention system and managing indoor air quality. The air quality inside the railway station is measured and monitored for clean indoor air quality and effort is put to prevent danger of the environment and procurement of the atmospheric environment by cleaning the air conditioning equipment, tunnel area of the basement, operating ventilation equipment, and etc. air quality management of each passenger car follows 'Transportation Vehicle Manufacturing and Operation Management Guideline for Indoor Air Quality Management' to measure and manage the air quality. Also, the air conditioner, heater, filters, ventilation equipment in each passenger car, and restrooms are kept clean to above the recommended standard. On the other hand, in the railway yard, exhaust occurs during inspection and hydrocarbon (THC) also occurs during the external painting process. To manage this kind of air pollution discharge substance, the railway yard is installed with dust collector to prevent air pollution discharge. The railway car is prevented with air pollution through expansion of introducing and operating electric cars that are harmless to the air.

## Indoor Air Quality Measurement Result

Railway Station								Railway Car							
Item	unit	Measurement Result (Average)						Item	unit	Classification of cars 2015	Measurement Result (Average)				
		2015		2016		2017					2015	2016	2017		
		Basement	Ground	Basement	Ground	Basement	Ground								
Fine Dust	μg/m³	76	43	68	56	69	61	Fine Dust	μg/m³	Metrorail	59	56	66		
Carbon Dioxide	ppm	501	469	507	493	523	488			General Train	64	66	55		
formaldehyde	μg/m³	21	14	11	10	9	12	Carbon Dioxide	ppm	Metrorail	Crowded	1,196	1,260	1,263	
										Normal	1,011	989	1,048		
Carbon monoxide	ppm	1	1	1	1	1	1			General Train	Crowded	1,172	1,455	1,351	
									Normal	1,013	1,243	1,225			

## Waste Treatment

### General Waste (Unit: ton)



### Designated Waste (Unit: ton)



## Waste Management

KORAIL installed and operates waste separation and storage place in all operating places to reduce emission and to appropriately handle the wastes that occur in the trains and stations. Each group sets goal for recycling and reducing waste and transparency is boosted for management by executing real name when discharging waste and designating manager in charge. Waste treatment is executed through professional entrustment. As a result, the Ministry of Environment revealed the All Baro System where collection, storage, treatment, and management of waste can be done correctly. Also, the waste manager induces other employees to participate through training of an outside company. On the other hand, the domestic wastes that occur in stations and trains are collected and stored through garbage collection and separation work is also separately done to reduce wastes. Also, KORAIL actively leads in recycling waste resource by providing use of waste wood fuel, recycling of waste air hose, and separation of waste filter and waste brake shoes.

## 2015-2016 Ministry of Environment Soil Measuring Network (Places)

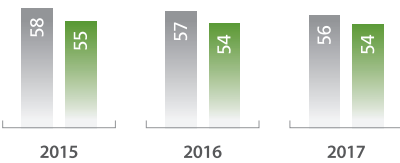
Designated by city	Branch per railway zone	Average TPH (mg/kg)	Remarks
Gyeonggido	2	185	Seoul HQ, metropolitan area
	Metropolitan area		Seobu HQ, metropolitan area
Incheon	1	138	Dongbu HQ, metropolitan area
	Chungcheong area		metropolitan area railway car maintenance group, metropolitan logistics business group
Daejeon	2	51	Daejeon Chungnam HQ, Daejeon Railway Car Maintenance group, Chungcheong Logistics Business Group
Chungcheongdo	3		
Gwangju	1	124	Jeonnam HQ, Gwangju HQ, Jeongbuk HQ, Honam Railway Car Maintenance Group, Honam Area Logistics Business Group
Jeollado	5		
Busan	1	-	Busan Gyeongnam HQ, Daegu HQ, Busan Railway Car Maintenance Group, Youngnam Area Logistics Business Group
Gyeongsangdo	5		
No measuring network	Jungby area	-	Gyeongbuk HQ, Gangwon HQ, Chungbuk HQ, Jungbu Area Logistics Business Group
Total	21	124 (Average)	

\* TPH (Total Petroleum Hydrocarbon): TPH is the standard content of the petroleum fuel included in the soil. The soil pollution risk standard is 2,000mg/kg.

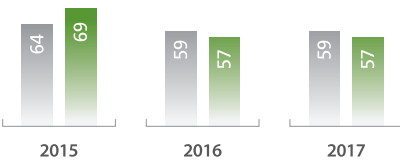
\* In the case of soil measurement of the Ministry of Environment, it is operated every other year. Result of 2017 has not yet been announced.

## Noise Measurement

### On top of land (Unit: Leq dB(A))

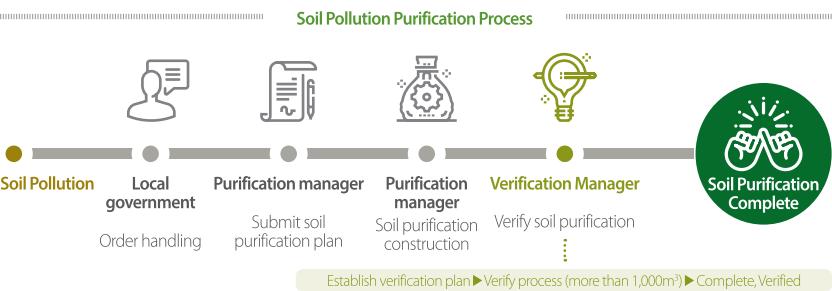


### Max Prediction (Unit: Leq dB(A))

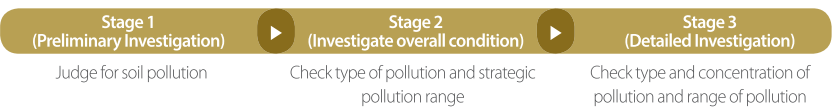


## Soil Management

KORAIL executes soil pollution investigation on the branches with the probability of soil pollution and actively puts effort in soil environment procurement such as executing purification business in the branches discovered with pollution. KORAIL makes sure there is no harm to the environment and the human body by removing or reducing pollution from the soil as soon as soil pollution is discovered. Also, the Ministry of Environment showed satisfactory level for Area 1' in 21 branches with railway soil measuring network. On the other hand, KORAIL issues and distributes soil environment assessment casebook with all the case studies according to non-use and the cases on success according to the use of land environment assessment.



## Soil Environment Assessment Process



## Noise · Vibration Management

Railway noise can be classified into noise of the train due to the rail, machine noise, aerodynamic noise, and other noises that occur during operation (whistle, warning sound, and etc). KORAIL blocks the noise sources to reduce noise occurrence. Excluding urgent cases, low-noise cars were introduced by applying indoor and outdoor noise recommendation standard from the manufacturing stage. Also, KORAIL puts effort to reduce the trackside noise in negotiation with Korea Rail Network Authority on installing soundproof/dust production facilities and long welding rail attachments.

## Railway Noise and Vibration Reduction Efforts

### Machine Noise

Diesel engine train changed to low-noise car (EMU, electric car)

### Rolling Noise

Improve to long welding rails of heavy weight with no joints between the rails

### Aerodynamics noise

Reflecting to car design and manufacture while reducing aerodynamics noise according to ISO-3095 when bringing in car  
※ ISO-3095: International Standard for measuring noise applied to the railway

### Other Driving Noise

Execute special training for crew such as refraining train whistle in populated areas.

Before

After Improvement

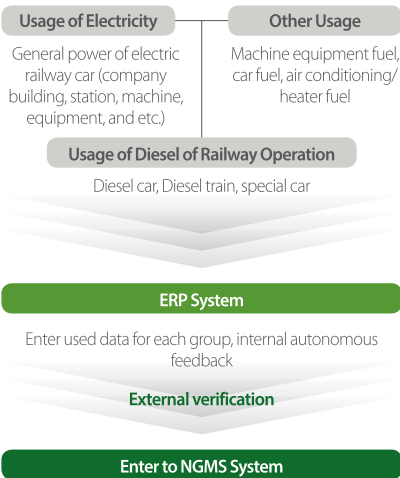
Produce car design

Special training for crew



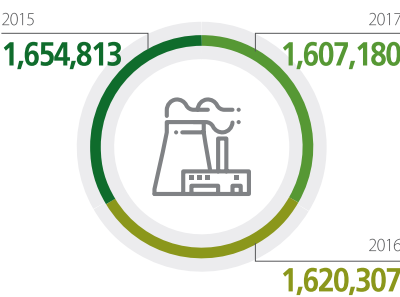
# Operating Environment-Friendly Railways for Our Next Generations

## System



## Greenhouse Gas Discharge

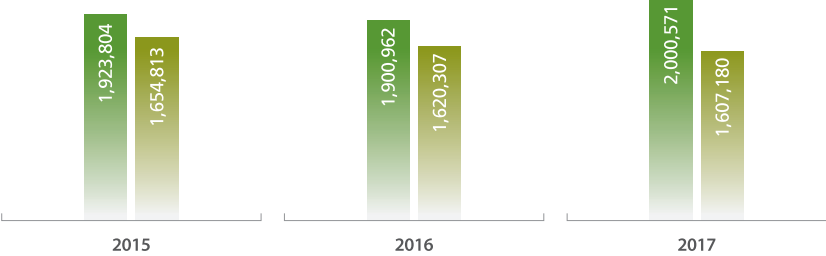
(Unit: tCO<sub>2</sub>-eq)



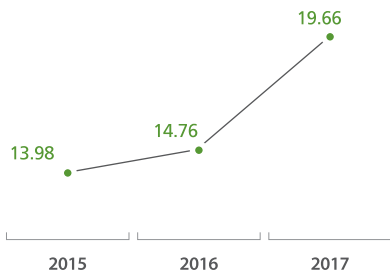
## Greenhouse Gas Reduction Result

(Unit: tCO<sub>2</sub>-eq)

■ Discharge Approval ■ Discharge Amount



## Reduction Rate (Unit: %)



## Response to Climate Change

### Greenhouse Gas · Energy Management System

The main emission source of greenhouse gas is classified into energy for operation and vital energy to operate railway facilities. 'Greenhouse Gas Inventory' is established and operated to grasp and manage the discharge amount of greenhouse gas on the business paces (27 places) in the country. Also, KORAIL puts effort to achieve reduction goals through monthly and quarterly feedbacks to be receiving appropriate judgment in the verification by external institution for greenhouse gas and energy goal management system. Furthermore, 'greenhouse gas / energy committee' was composed to execute systematic greenhouse gas /energy management, and KORAIL is ahead in reducing greenhouse gas by creating greenhouse gas / energy management results.

### Greenhouse Gas · Energy Management Result

#### Railway Car Energy Management

Energy consumption of KORAIL mostly occurs due to railway operation. KORAIL puts effort in reducing railway car energy to achieve greenhouse gas reduction goals despite the difficult situation to reduce energy due to increase of operating trains due to the new opening of subway/train lines. High-efficient electric railway cars are continuously being introduced instead of the diesel railway cars and effort is being put to reduce energy and prevent environmental pollution by reducing greenhouse gas and minimizing air pollution by operating energy storage system (ESS), optimal operation of freight car, optimal fueling of railway car, ECO-Driving, and establishing car operation plans by considering passenger demand.

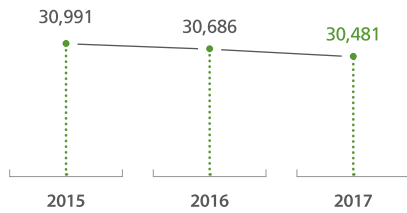
## Discharge of Greenhouse Gas per Energy

(Unit: tCO<sub>2</sub>-eq)

Classification	For Railway Operation		For living			Total
	Power	Diesel	Power	Air conditioning/heater	automobile	
2015	1,069,248	385,431	174,079	21,576	4,479	1,654,813
2016	1,077,553	338,353	184,363	15,138	4,901	1,620,307
2017	1,064,013	328,384	194,870	14,859	5,054	1,607,180

## Energy Consumption

(Unit: TJ)



## Energy use performance

(Unit:TJ, %)

Classification		2015		2016		2017	
		Ratio	Consumption	Ratio	Consumption	Ratio	Consumption
For railway Driving	Diesel	4,956	16.0	4,351	14.2	4,223	13.8
	Electricity	22,016	71.0	22,187	72.3	21,908	71.9
	Sub-Total	26,972	87.0	26,538	86.5	26,131	85.7
For Living	Electricity	3,584	11.6	3,796	12.4	4,012	13.2
	Heating/Air Conditioning	371	1.2	284	0.9	278	0.9
	Automobiles	64	0.2	68	0.2	60	0.2
	Sub-Total	4,019	13.0	4,148	13.5	4,350	14.3
Total		30,991	100.0	30,686	100.0	30,481	100.0

### Energy Management for Living

KORAIL continues to reduce the increase width of using daily energy in contrast to the factor of increase through continuous and systematic management despite the difficulty of reducing energy due to increase of businesses, enlargement of new stations, and due to increase of customer safety and amenities. Through energy diagnosis on the buildings that use a lot of energy, usage of energy is being reduced by replacing efficient equipment such as replacing the fluorescent lights to high-efficient LED and using high-efficient power machines. We are contributing to stabilize the government's energy supply, reduce global GHG emissions, and respond to climate change through the operation of sunlight power equipment, geothermal power, wind power, and solar heat equipment and energy storage (ESS)

## Overview of New and Renewable Energy Equipment Operation

		2015	2016	2017
Photovoltaic Power Plan (KW)	Number of Installed Units (accumulated)	3 (24)	3 (27)	38 (65)
	Annual Power Capacity (accumulated)	73,164 (653,043)	5,548 (658,591)	1,239,511 (1,898,102)
	Number of Installed Units (accumulated)	0 (30)	2 (32)	1 (33)
Solar Heat Equipment (Kcal/h)	Annual Power Capacity (accumulated)	0 (514,366,789)	72,072,886 (586,439,675)	93,440 (586,533,115)
	Number of Installed Units (accumulated)	1 (23)	4 (27)	22 (49)
	Annual Power Capacity (accumulated)	489,246 (8,128,212)	2,054,746 (10,182,958)	1,232,240 (11,415,198)

### Foreign Authentication and Evaluation

KORAIL acquired Environment Product Declaration (Carbon Footprint) on KTX (Seoul-Busan Line) in 2011 for the first time in the railway field. Environment Product Declaration was also achieved on ITX-Saemaedul (Seoul-Busan) in 2015, KTX (Yongsan-Mokpo) in 2016, and Seoul Gangneung KTX (Incheon Airport – Gangneung) in 2017. The Environment Product Declaration (Carbon Footprint) is the official/ public certification that GHG and energy are managed appropriately on all processes of the railway service provided by KORAIL. It is the result of eco-friendliness of the railway in reducing the total GHG discharge amount.

### KTX (Seoul-Busan) Low Carbon Certification

9.60kgCO<sub>2</sub> Person/Line

(One person one-way standard)



### KTX (Yongsan-Mokpo Line)

8.96kgCO<sub>2</sub> Person/Line

(One person one-way standard)



### ITX Saemaedul (Seoul-Busan Line)

12.23kgCO<sub>2</sub> Person/Line

(One person one-way standard)



### Best Practice



### KTX (Seoul-Busan), Acquired Environment Product Declaration Carbon Footprint 'Low-Carbon Certification'

KORAIL received low-carbon product certification for the first time in the KTX (Seoul-Busan) sector in the verification of 'Carbon Footprint' hosted by Korea Environmental Industry and Technology Institute in 2017. Low-carbon product is a level higher than the 'Carbon Discharge' certification that proves environment-friendly product/service. It is given to the products and services that reduced discharge amount in contrast to before by fulfilling the low-carbon standards.



# Achieving Sustainable Performance for Tomorrow

Related Department  
Common

Related Stakeholders  
Government / Employees

Link to SDGs



## Business & Social Context

KORAIL seeks for endless change and challenge in preparation for the upcoming future. We dream about a future where the people and goods of Korea reach out to the world through the railways. By strengthening competition of the railway operation and creating revenue, it is the duty of KORAIL to acknowledge social responsibility and putting effort to protect the social values of the public railway. We will continue to strengthen profitability and efficiency of management to become a railway company that can be sustainable by sharing the created values with the community and the people.

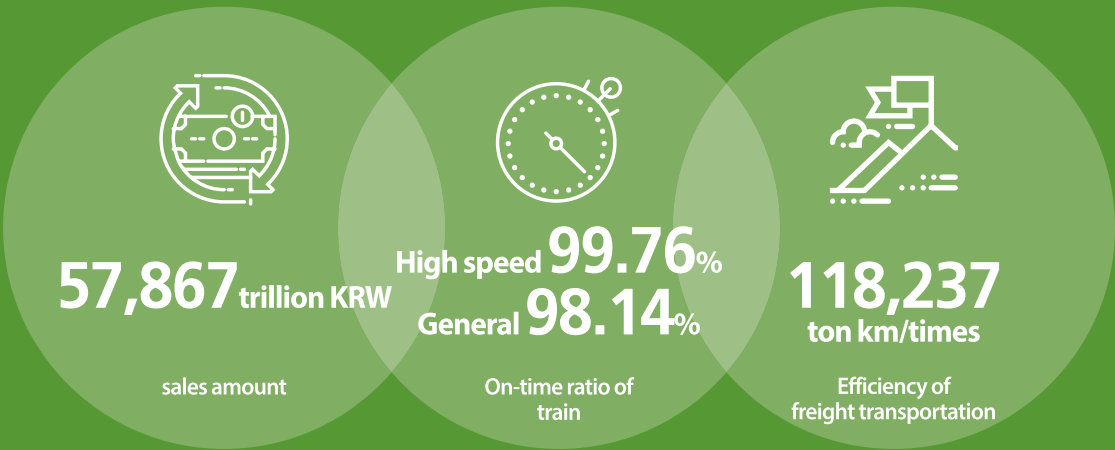
## Progress

- Effort to manage proper operation rate
- Activation of regional economy by expanding operation of tour products and maximizing transportation business revenue
- Effort to maximize efficiency of railway retail business
- Strengthen competition to enter overseas business

## Future Plan

- Establish and operate train operation system optimized to the pattern of consumer
- Efficient operation through optimization of business operation structure
- Acquisition of R&D and advanced technology to lead the 4<sup>th</sup> industrial revolution in the railway field
- Strengthen international cooperation network and continent railway exchange

## 2017 Key Performance



## Creating Economic Value

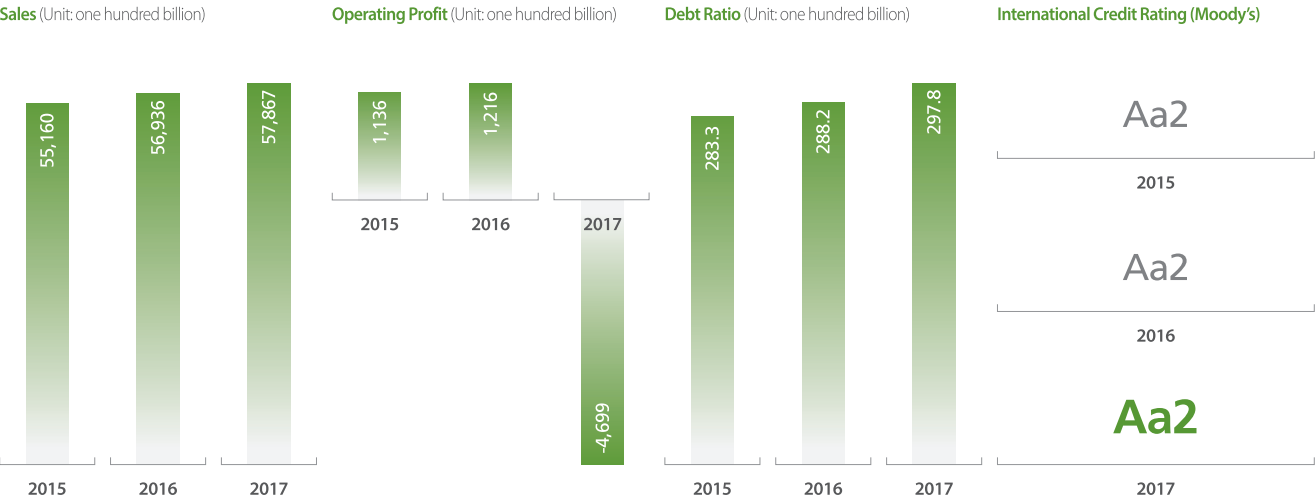
### Economic Value Creation and Distribution

KORAIL creates economic value with its diverse business related to passenger transport, metropolitan railways, logistics, property development, overseas business, and maintenance business. With our company-wide efforts in pursuing new business, we achieved active revenue to induce the use of railway and at the same time increase convenience due to shuttle bus operation and expansion of rapid trains in 2017. However, there was loss of sales due to reduction of sales according to SR opening. On the other hand, we put effort to acquire the motive for sustainable growth such as change in management system and strengthening market capability. Especially, we are doing the best to create values by searching for ways to create revenue in multiple ways such as actively entering the overseas market or executing development in the station area. Furthermore, we will become an institution that takes social responsibility by granting vitality to the national economy by sharing economic values with persons concerned.

Creation and Distribution of Economic Value (Financial Statement Standard)				
(Unit: One hundred million)				
Classification	2015	2016	2017	Remark
Creation of Economic Values (A)	61,470	55,587	52,853	-
Sales	52,207	53,651	50,572	-
Financial Profit, disposal of Assets, and etc.	9,263	1,936	2,281	-
Distributed Economic Value (B)	50,361	52,583	52,535	-
Employees	21,822	22,327	26,499	Salary, Compensations, Welfare expenses, Severance Pay, etc.
Partners	24,813	24,868	24,219	Facility Fees, Consignment Fees, and etc.
Investors	4,802	4,174	3,880	Interest expenses
Government agencies	(1,955)*	203	(2,914)*	National, Corporate, Local taxes
Customers/Local Communities	879	1,011	851	Corporate Social Responsibility, KTX discounts, and etc.
Surplus economic value (A-B)	11,109	3,004	318	-

\* Corporate tax income occurred due to this term's adjustment of corporate tax

### Financial Performance

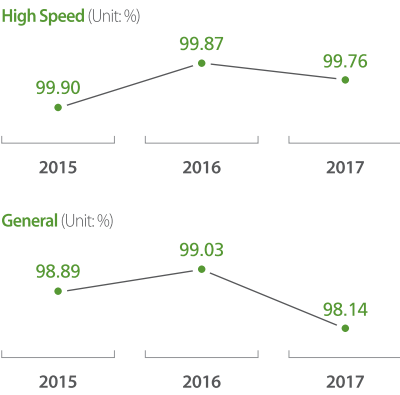




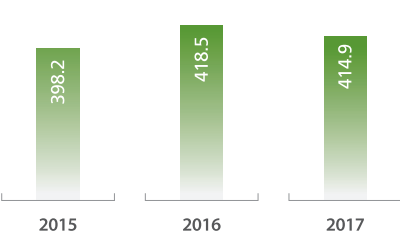
# Achieving Sustainable Performance for Tomorrow

## Efforts to Acquire Future Growth Engines

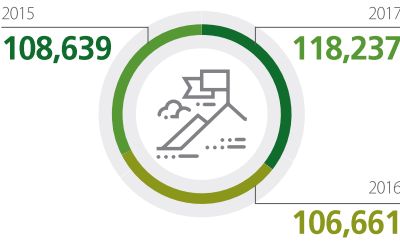
Train On-time Ratio



Transportation Capacity per Train



Freight Transportation Efficiency\* (Unit: Tonkm/times)



\*Transportation TONkm/Number of Freight Train Operation

### Passenger Business

KORAIL Transportation Business was able to support the successful opening of Pyeongchang Winter Olympics by opening the Gyeonggang Line. Around 5,000 people per day was increased by implementing additional cars on the focused sections to increase KTX users. Systems and services were improved to increase the number of seats in the Gyeongbu Line, and this brought satisfaction to the customers. To supplement the weakness of KTX departing from Incheon Airport, Airport Terminal was opened in Gwangmyeong Station to expand transportation system by operating shuttle buses for Gwangmyeong Station-Sadang, Gwangmyeong- Songnae, Woninjae, Bupyeong.

General Railway Transportation Business maintains on-time ratio by easing the crowd by expanding customized supply to the crowded time such as commuting time to and from work and school in the main areas of Seoul-Daejeon. Also, on-time ratio of 98.14% was achieved for general trains by providing methods to resolve delay.

The metrorail expanded operated of the rapid trains to reduce commuting time and the accessibility to the main cities from the suburb areas was improved. Also, the transfer points were reduced between the railway and other transportation methods to continue in improving the convenience for transfer. Total of 1,800m and 26 minutes were reduced.

### Retail Business

KORAIL contributes to the national development by reducing carbon dioxide discharge and boosting role of the environment-friendly railway retail. We strengthen transportation functions of railway retail through policy that is appropriate to the customer needs by flexibly handling the retail environment changes.

The railway freight transportation business recorded 1.29 million tons of transportation capacity through stable transportation support. In the case of general freight, economy change, production, and demand change were actively responded to record 3.39 million tons. Safe transportation process of national strategy and special goods was established to provide transportation at the right time, and the role as national distribution industry was strengthened. Also, the large transportation system was established to execute regular operation of 40 freight cars. Along with the addition of large freight cars, the distribution increased by 78,000 tons and a total of 80 billion KRW increased for the revenue. This kind of technical innovation effort brought the company to receive 'Technical Award' by the Korea Scientific and Technological Society.

On the other hand, the distribution infrastructure was expanded to move forward as an integrated distribution company and activities for improvement were boosted. By operating 'Railway Distribution System Advancement Diagnosis Group (TF)' to prepare for 'Establishment of Masterplan for Advancement of Railway Distribution System'. Moreover, we increased efficiency by acquiring distribution infrastructure through new facility measuring for Okgye Station, Yeongju Station, Ulsan/Pohang Yeongilman Port, and CY expansion of Heungguksa Station, Yeoncheon Station, and Chungju Station.

### New Growth Business

#### Expansion to Comprehensive Transportation Company

KORAIL is implementing service based on 'door to door (from departing place to destination)' by being responsible for all processes from departure to destination of the customer by always having the cognition of being an integrative transportation company apart from just a regular railway transportation company.

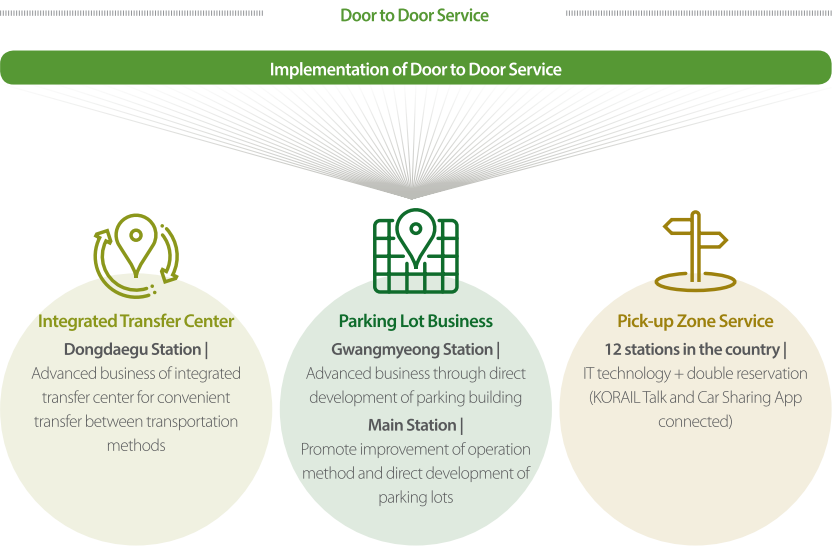
Dongdaegu Station Complex Transfer Center



Public interest stores within the stations (Masterpiece Floor of SMEs)



We contribute to the increase of user convenience, regional economy activation, revenue improvements through car and railway reservation services using IT technology, parking building development business, and integrated transfer center business for transfer convenience. Public interest stores are operated within the stations and the lease method is diversified to increase service. Also, we contribute to the economic development of the local community by activating the city through development of railway idle land and development in main station influenced areas.



### Entering Markets Overseas

KORAIL has secured core capabilities by responding to market changes to advance into the global market. We expanded the existing export business of used vehicles to operation and maintenance (O&M) business and high-value added consulting business to generate stable revenues. We also established standard proposal on the O&M Business to boost competitiveness and provided a foundation for order in the railway operation business by executing and achieving construction consultation and manufacturing of vehicles.

To gain credibility in out technology to expand to the global market, we conducted preliminary design and feasibility study for the construction of a railway in Tanzania while forming international consortiums in Korea and overseas to secure competitiveness. Tanzania Central Like Railway Construction was done with electric cars of 1,129 km from Dar ~ Mwanza District. Our technology skills were acknowledged to be the top in the technical evaluation of the construction audit service. Due to the success of the project, a step to enter the global market was provided. It is expected that overseas job offerings will be created by assigning Korea's technology.

### Adoption and Development of IT

KORAIL is a leading company in advanced/scientific technology of the railway technology such as introducing convergence system between technology and robots by using scientific technology. We have been running real-time monitoring system for high-speed trains and remote monitoring system using intelligent CCTV and drones to identify assignments for innovation and prepare the competition. Moreover, we optimized maintenance cycles with SMART FACTORY, high-efficiency maintenance system based on vehicle technology. Adopting and developing such IT Technology, we strive to secure a new growth engine for the future with the world-class railway operation system.

Remote Observation using Drone







# KORAIL

## Sustainability Management System

Let's  
KORAIL

Governance

Ethical Management

Human Rights Management

Risk Management



Composition of the Board of Directors

Composition of the Board of Directors

The Board of Directors, the highest decision-making authority of KORAIL, is in charge of the decision-making on major strategies and policies, management supervision, and support. The Board of Directors is composed of 15 members including 7 of them standing as directors including CEO, experts in the field of railway, and 8 others that are experts with experience in the fields of traffic, legal, and economic circles.

Summoning and Resolution of the Board of Directors

The Board of Directors hold regular general board of directors meeting once a month. Temporary board of directors meeting is held when more than 1/3 of the directors are required. For fair Board of Directors operation, votes are decided on the majority. Also, directors with special relationship with the case of the Board of Directors cannot participate in the decision of the case.

Process of Composing the Board of Directors

KORAIL has established the groundwork for fair recommendation of executives in compliance with Article 25 of the Law on Operation of Public Organizations (Appointment of the executive of the public enterprise) and regulations of the Internal Executive Recommendation Committee. In order to enhance the appropriateness and representativeness, we have been securing experts in various fields including traffic, management, media, law, and accounting as the pool of external members of the committee.

Process of Composing the Board of Directors

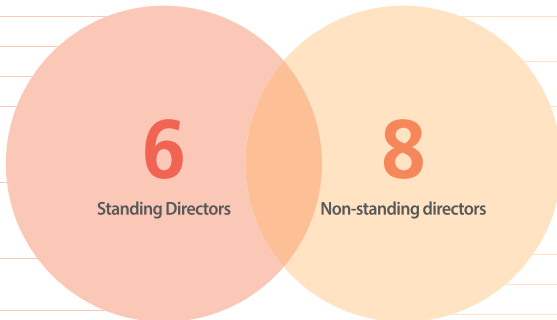


Board of Directors (June 2018 Standard)

Oh, Young-sik	CEO	Kim, Jung-geun*	Senior Executive at World Labor and Movement Research Association
Park, Jong-jun	Standing Auditor	Lee, Young-geun	Vice Chairperson of National Civil Rights Commission
Jung, In-su	Vice President	Ahn, Jin-hong	Accountant at Daesung Accounting Firm
Yang, Dae-kwon	Senior executive of safety innovation headquarters	Hwang, Young-il	Senior Lawyer at Law Firm Yeonwoo
Cho, Hyung-ik	Senior executive of the Passenger Business headquarters	Kim, Mu-hwan	Governor of Chungcheongnamdo
Park, Kyu-han	Senior executive of technology headquarters	Lee, Jong-gook	Vice Director of Land, Infrastructure and Transport, Science and Technology Agency
		Oh, Gun-ho	Chairperson of A Welfare Country that I Make
		Lee, Chung-nam	Vice President of Sankyung Energy News, reporter

\* One standing director spot empty

\* Non-standing director, chairperson



Operation of the Board of Directors

Operation of the Board of Directors

The Board of Directors participates in decision-making and risk-management on issues regarding management of the company, policy of the government and environment. The Board of Directors is held regularly with goals of creating virtuous cycle in management structure by invigorating the Board of Directors and establishing a responsible management system while encouraging active participation and contributions.

Strategy of Operating Board of Directors

Operational objective	To create a virtuous circle in management structure by invigorating the Board of Directors and establishing responsible management system.			
Strategic Directions	Expanding opportunities to participate in management	Reinforcing functions to determine strategic policies	Expanding the use of expertise of non-standing directors	Ensuring fairness of the Director Recommendation Committee
Actions	<ul style="list-style-type: none"><li>Increase opportunities for nonstanding directors to speak out</li><li>Encourage advising on management</li><li>Improve the ratio of resolution after modification</li></ul>	<ul style="list-style-type: none"><li>Reinforce the field-communication management</li><li>Reinforce the preliminary deliberation system</li><li>Strengthen the prior briefing of agenda</li></ul>	<ul style="list-style-type: none"><li>Expand expertise subcommittee meetings</li><li>Operate the management advisor system</li><li>Reflect the management proposal and advice to policy making</li></ul>	<ul style="list-style-type: none"><li>Secure the propriety of composition of the executive recommendation committee</li><li>Securing the transparency of operation of the committee</li><li>Increase the participation of women</li></ul>
Performance Indicators	<ul style="list-style-type: none"><li>Ratio of opinion of the non-standing directors</li><li>Operate preliminary deliberation system</li></ul>		<ul style="list-style-type: none"><li>Result in holding professional subcommittee</li><li>Reflect policy and cases on management system and consultation</li></ul>	

Committee within the Board of Directors

It is stated in the operation regulation that subcommittee can be composed according to the decision of the Board of Directors if necessary, and the audit committee can be installed. The Audit Committee executes auditing about the financial affairs and work. The result is reported to the Board of Directors. The Subcommittee deliberates and decides the matters that were entrusted where resolution was not derived at the Board of Directors Meeting. KORAIL operates business subcommittee and subcommittee for planning and financial affairs. Through the subcommittee, we strive for reasonable decision of the Board of Directors, policy, and management support based on the in-depth discussion.

Committee within the Board of Directors

Classification	Role	Composition
Planning and Financial Affairs Subcommittee	Establish policy such as management goals, organization, budget, and etc.	3 non-standing directors, 1 standing director
Business Subcommittee	Operate business such as new business, sales and transportation policy, safety, and etc.	5 non-standing directors, 1 standing director
Audit Committee	Audit on the work and financial affair	2 non-standing directors, 1 auditor

Strengthened Expertise and Roles of Non-Standing Directors

KORAIL held briefing sessions on current issues, meetings, and visiting sessions for non-standing directors to enhance their understanding of the company's current issues and participate in management while strengthening their expertise and roles. We also advanced the support system by disclosing management information through our online website. Moreover, we encouraged communication between the non-standing directors and employees by holding special lectures for the employees utilizing the expertise of the non-standing directors.



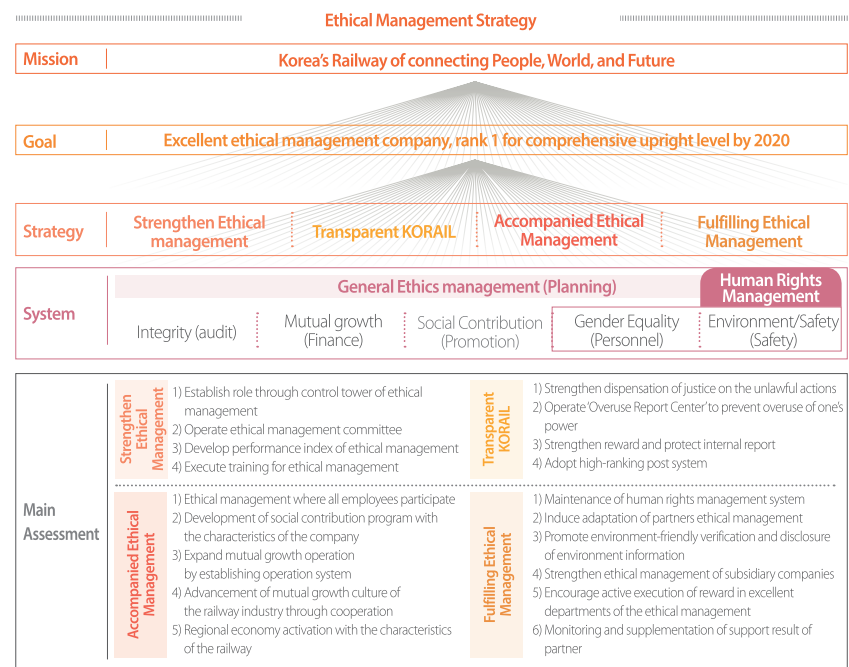
## System for Implementing Ethical Management

### Roadmap by Stage



### Strategy

KORAIL strives to perform work fairly, transparently, and reasonably along with the ethical regulations on the standard of all work and activity by thinking about the management values and ethics as priority. All decisions of management consider social values and the legal values, and we seek sustainable growth by being responsible for the persons related. KORAIL has been advancing and adopting ethical management after releasing construction in 2005. To promote higher quality ethical management, we have announced ethical management advancement strategy om 2018 by supplementing the existing ethical management. KORAIL will strive to be a reliable company to the people by boosting the will of fulfillment through internalization of ethics and strengthening the foundation of fulfilling ethical management.



### Bodies in Charge of Ethical Management Implementation

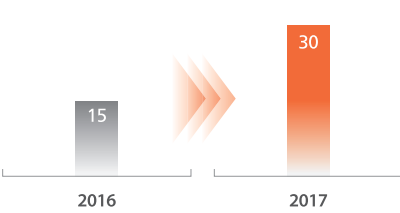
Ethical management of KORAIL promotes cooperation with audit room, financial management room, promotion and culture room, and manpower management room. Furthermore, 'Ethical Management Committee' was released to diagnose and supplement ethical management of the construction by promoting ethical management activity in June of 2018. The Vice President is the chairperson, and the committee is composed of 10 people including chief head, managers, and etc. The committee goes over the ethical management plans and plays the role as the auditing organization to fulfill ethical management.

### Bodies in Charge of Ethical Management Implementation



## Ethical Management Activities and Performance

### In-house Report Case



### Internalizing Ethical Culture

KORAIL established Ethics Code that every employee has to follow to contribute to the development of the country and local communities by removing discrimination in employment and work and ensuring transparency. In 2017, we have executed special lectures on what an individual has to possess to establish organization culture. Also, we have executed training on employees on site for business place and station. By using the KAKAO TALK service, we execute 1:1 integrity communication on Plus Friend. We executed a movement by using personal SNS to fulfill the integrity on employees and partners. Also, 'KORAIL Integrity 1st Street' is operated to promote the main integrity measures where we promoted ethical intention of the employees through campaigns and programs such as Ethics Day and Ethical management quiz. In 2018, ethical management quiz was executed along with campaign where 3,631 people participated in the deliberation and signing through the event.

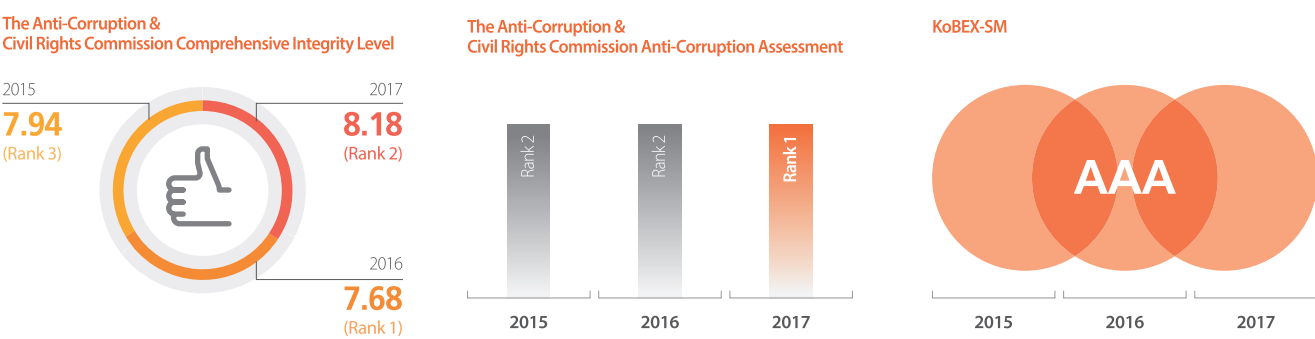
### Improving Vulnerability and Simplifying Report Channel

KORAIL executes improvement activities on the vulnerable parts by using internal/external professional manpower. By operating Integrity Citizen Audit System, we receive consultation and suggestions on the improvement measures and we establish integrity partnership through negotiation with related institutions such as the Ministry of Land and Transportation and Korea Rail Network Authority. We excavate the corruption risks through transparent management committee to settle the integrity culture and we strive to prevent all unlawful actions by deriving assessment in the vulnerable field. On the other hand, we provided source to give disciplinary action on the those that do not report corrupted actions, and we simplified the report system to diversify report process of 'corrupted action' and 'violating actions'. As a result, the in-house report increased by double in contrast to the previous year.

### Internal/External Assessment

With the will and effort of KORAIL on ethics and integrity management, there was a significant outcome of increase in the 2017 external assessment result in contrast to the previous year. The Comprehensive Integrity Level executed by the National Civil Rights Committee went up from Rank 4 to Rank 3, reaching 8 points in 5 years since 2012. Anti-Corruption Assessment reached Rank 1, which was the first time since 2010. KoBEX-SM Index was AAA rank for 9 consecutive years. KORAIL was able to achieve these outcomes due to effort and increase of trust. We will continue to become a company that is trusted and respected by the people by performing improvement activities.

### Ethical Management External/Internal Assessment Result





# Human Rights Management

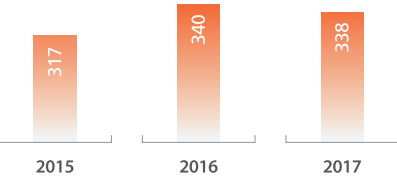
## Management with Respect for Human Rights

### Land Detailed Investigation Situation

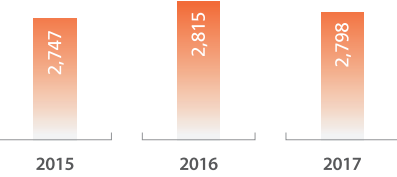
Guideline	Contents
Employment Regulation	Article 5 (Parity of treatment), Article 51 (Gender equality and maternity protection), Article 52 (Disposition and promotion)
Personnel Policy	Article 10 (Principles of recruitment)
Collective Agreement	Article 6 (Parity of treatment), Article 23 (Recruitment of the employee), Article 46 (Collection and protection of personal information), Article 47 (Protection of human rights and prohibition of discrimination), Article 80 (Gender equality and maternity protection),Article 136 (Protection of the temporary position)

### Female Employees

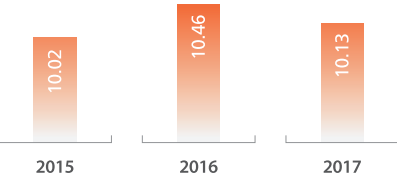
#### Number of Women Managers (Unit: People)



#### Number of Women Employees (Unit: People)



#### Ratio of Women Employees (Unit: %)



KORAIL joined the UN Global Compact in May 2007 to become a trusted company and fulfill its social responsibility by complying with human rights and labor standards. Moreover, we live up to the seven principles of ISO 26000, relevant laws, and regulations of the government on human rights. We do not discriminate on the basis of gender, disability, appearance, educational background, or age in terms of HR and provide employees with human rights training such as sexual harassment and assault through new hire training sessions, self-review, HQ training, and internal broadcasting system. We strive to resolve all difficulties of employees by operating complaint handling system and we investigate on the pessimistic human rights influence through checklist inspection on the human rights every year.

### Human Rights Protection Activity



### Assurance of Association and Group Negotiation

KORAIL assures freedom of association and group negotiation. Currently, 5 labor associations are established and the fair labor activities of the employees are assured and not interfered to the operation of the association. Also, win-win organization culture by providing essential information at the right time is being established.

### Overview of Labor Unions

	National Railway Labor Union	Korea Railroad Corporation Labor Union	KORAIL Labor Union	Democratic Railway Labor Union
Number of Union Members	17,888people	1,965people	11people	160people
Date of establishment	1945.11.01	2017.02.14	2012.12.31	2017.10.19
Upper Grade Class	Korean Confederation of Trade Unions Federation of Public Transportation	Korea Confederation of Trade Unions Korea Railroad Social Industry Union	-	-

### Prohibition of Discrimination

KORAIL prohibits discrimination on the basis of gender, education, or experience for fair personnel management and nurturing talent. We ensure that employees are not discriminated on the grounds of disability, race, or cultural background in terms of recruitment, salary, and welfare benefits. Moreover, we hold every hire to the same standard from high school graduates to university graduates. For non-regular employees, we ensure equality by applying the standard pay scale of regular employees in the line of business to achieve organizational unity.

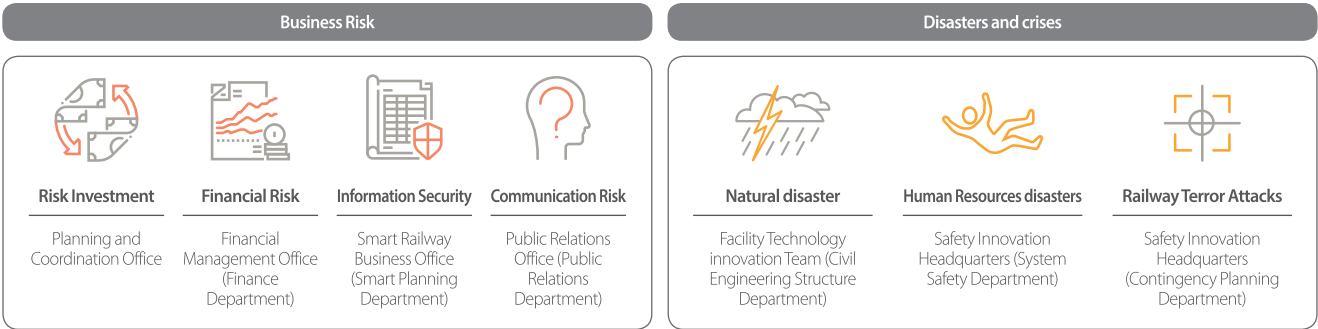
On the other hand, KORAIL strives to increase the presence of women employees by nurturing women managers to support gender equality at work. To overcome the limited recruitment of women due to the nature of the railway industry, we support networking for women in leadership outside the company and run leadership training programs for women while striving to increase the number of women managers.

# Risk Management

## Risk Management System

KORAIL's risk can be classified in to emergency measures and risk management and operation. KORAIL runs a company-wide risk management system to prepare for crisis situations that may affect business operations such as potential business/ financial risk, disaster risk, and facility operation to meet the needs of customers, communication, and security. We have appointed dedicated departments in the HQ to respond to each risk efficiently. We have an emergency measures organization in place that prepares for quick responses to disasters and crises. Also, we improved the risk management system and reinforced liquidity management through budgeting rationally focusing on core businesses to reduce debts and stable funding and redemption.

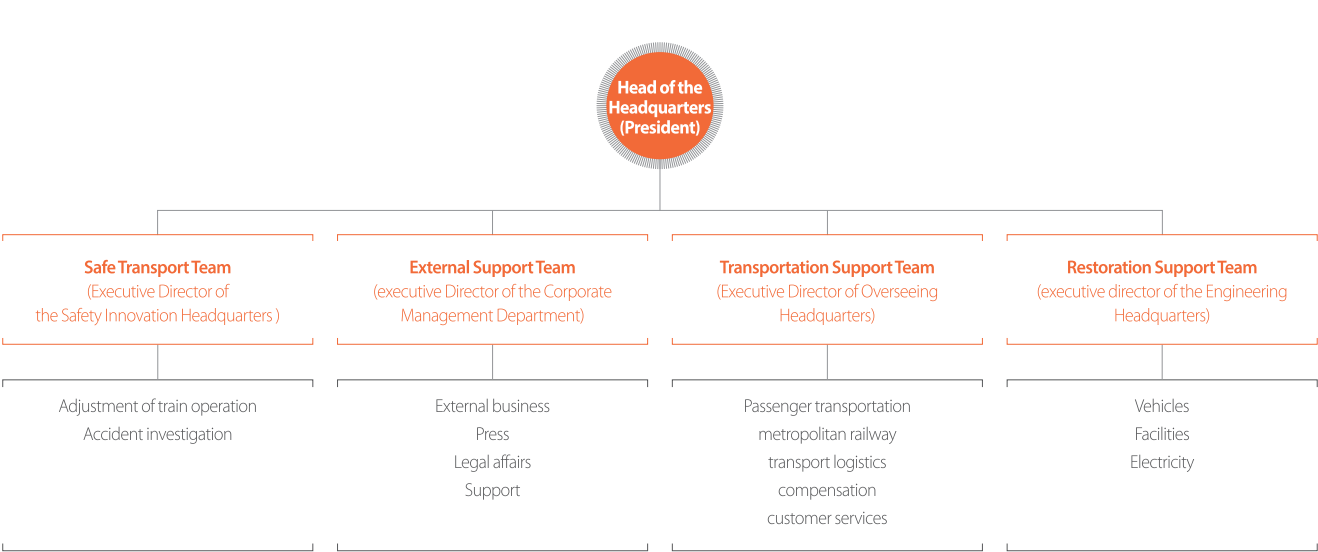
### Risk Classification



### Management/Financial Risk Management System

Type of Risk	Subject to Management	System and Regulation	Management System
Financial Risk	Market Risk	Regulations on Financial Risk Management / Manuals on Responding to Crisis / Regulations on International Accounting management	Operational information system (BS) Corporate resource management system (KOVIS)
	Liquidity Risk		
	Investment Risk	Financial Risk Management Committee / Investment & Project Deliberation Committee / Overseas Business Risk Management Committee	Financial risk management system (FRMS) Internal accounting system (ICAN)
Operational Risk	Operational Risks	Railway Safety Deliberation Committee Contingency Response Manual	Safety management system

### Emergency Measures Organization during Disaster Risk Occurrence





# APPENDIX

Sustainability Performance

UN SDG Implementation

ISO 26000 Performance Assessment Report

GRI Content Index

Independent Third Party Assurance Statement

Key Awards and Memberships

Sustainability Reporting Bodies

## Sustainability Performance

KORAIL  
Sustainability Report 2017-18

### Economic Performances

#### Summary of Consolidated Financial Statements

Classification		Unit	2015	2016	2017
Assets	Current assets	100 million KRW	9,527	10,961	17,134
	Non-current assets	100 million KRW	172,460	174,168	181,649
	Total assets	100 million KRW	181,987	185,129	198,783
Liabilities	Current liabilities	100 million KRW	28,067	29,086	28,545
	Non-current liabilities	100 million KRW	106,435	108,355	120,262
	Total liabilities	100 million KRW	134,502	137,441	148,807
Capital	Paid-in Capital	100 million KRW	99,890	101,039	102,463
	Loss	100 million KRW	(82,830)	(83,877)	(92,279)
	Other Capital Component	100 million KRW	29,507	29,305	38,394
	Parent Company Theory	100 million KRW	918	1,221	1,397
	Total Capital	100 million KRW	47,485	47,688	49,976

#### Income and loss statement regarding overview

Classification		Unit	2015	2016	2017
Sales		100 million KRW	55,160	56,936	57,867
Cost of Sales		100 million KRW	51,089	52,324	59,177
Gross Profit		100 million KRW	4,071	4,612	(1,310)
Sales and administrative expenses		100 million KRW	2,935	3,396	3,389
Operating profit		100 million KRW	1,136	1,216	(4,699)
Other profit		100 million KRW	227	340	146
Other expenses		100 million KRW	337	529	901
Other profit (loss)		100 million KRW	696	563	(1,402)
Financial Revenue		100 million KRW	1,027	455	1,324
Financial Cost		100 million KRW	5,721	4,543	5,285
Profit from Associates and Joint Ventures		100 million KRW	209	178	(811)
Net (loss) on continuing operations before income tax		100 million KRW	(2,763)	(2,320)	(11,628)
Continuing operating tax income		100 million KRW	(2,194)	(55)	(3,073)
Loss on continuing operation		100 million KRW	(569)	(2,265)	(8,555)
Operating profit from discontinued operations		100 million KRW	1,433	-	-
Net income(loss)		100 million KRW	864	(2,265)	(8,555)
Net income attributable to owners of the parent (loss)		100 million KRW	823	(2,058)	(8,744)
Net income attributable to non-controlling interests		100 million KRW	41	(207)	189
Other comprehensive income (after tax)		100 million KRW	757	1,324	9,453
Total comprehensive income (loss)		100 million KRW	1,621	(941)	898
Capital attributable to owners of the parent company		100 million KRW	1,581	(734)	716
Non-controlling interest		100 million KRW	39	(207)	182



Social performance

(\* As of June 30th 2018, Employment / female workforce item )

Classification		Unit	2015	2016	2017
Employees					
Employment	Total no. of employees	Persons	26,498	26,394	26,403
	No. of employees of fixed-term workers (male/female)	Persons	278(27)	186(27)	60(11)
	No of employees by age	Under 25	124	33	114
		25~34	2,334.375	2,163	2,971.375
		25~44	9,519.625	7,645	5,870.875
	No of employees by age	45~54	11,765.625	12,296	12,623.875
		55 or above	2,754.5	4,257	4,822.5
	Employment of the disabled (mandatory employment rate 3.0%)	Persons (%)	887(3.2)	847(3.1)	854(3.1)
	Employment of elderly persons (mandatory employment rate 6.0%)	Persons (%)	2,988(10.9)	4,388(16.3)	4,822(17.5)
	Average years of service	Year	18.6	19.2	18.4
	Safety Workplace implementation rate	No. of disaster victims / no. of workers	0.250	0.205	0.250
Female Employees	No. of female employees	Persons	2,747	2,815	2,798
	Female employment (Compulsory employment rate 7.67%)	%	10.02	10.46	10.13
	No. of female managers (%)	Persons (%)	317(4.05)	340(4.6)	338(9.85)
	No. of newly hired female employees (%)	Persons (%)	55(17.2)	98(16.4)	218(20.6)
Recruitment	Total No. of new recruits	Persons	319	599	1,059
	New Recruitment by age	20 or below	13	0	106
		21~25	123	187	416
		26~40	143	310	436
		31~35	31.5	75	75
		36~40	6	16	18
		41 or above	2.5	11	8
	New recruitment by region	Metropolitan area Seoul, Incheon, Gyeonggi Province	129.5	265	531
		Non-metropolitan area Seoul, Incheon, Gyeonggi	189.5	334	528
Retirement	Retirement rate (%)	%	3.8	1.8	2.8
Education	Education budget	1 million KRW	8,423	8,451	8,051
	Education fee per capita	1,000 KRW	317	320	306
	Regular education personnel	Persons	79,145	75,957	78,094
	Curriculum	Case	424	508	507
Customers					
Customer Satisfaction	Customer Satisfaction on public organizations (PCSI)	Point	Rank A	Rank A	Rank S
Regular time operation rate	KTX-regular time operation rate (UIC basis)	%	99.90	99.87	99.76
Partners					
Support	SME Product Purchase	100 million KRW	6,249	6,310	8,014
	SME purchase rate	%	76.7	76.2	76.0
Local Community					
Fund raising	Love fund	1 million KRW	589	639	603
	Matching Grant	1 million KRW	673	630	589
Service Hours	Service hours per capita	Hours	13.0	11.5	12

Environment Performance

Classification		Unit	2015	2016	2017
Amount of Energy Use	Diesel for railway	TJ	4,956	4,351	4,223
	Electricity for Railway	TJ	22,016	22,187	21,908
	Electricity for living	TJ	3,584	3,796	4,012
	Heating and cooling fuel	TJ	371	284	278
	Business car	TJ	64	68	60
	Total	TJ	30,991	30,686	30,481
Greenhouse Gas emission	Diesel for railway	tCO <sub>2</sub> eq	385,431	338,353	328,384
	Electricity for railway	tCO <sub>2</sub> eq	1,069,248	1,077,553	1,064,013
	Electricity for living	tCO <sub>2</sub> eq	174,079	184,363	194,870
	Heating and cooling fuel	tCO <sub>2</sub> eq	21,576	15,138	14,859
	Business car	tCO <sub>2</sub> eq	4,479	4,901	5,054
	Total	tCO <sub>2</sub> eq	1,654,813	1,620,307	1,607,180
Environment Facility Investment	Water quality	1 million KRW	103	430	278
	Air	1 million KRW	153	150	23
	Soil	1 million KRW	214	134	330
	Waste	1 million KRW	61	99	180
	Total	1 million KRW	531	813	811
Environment Impact Management	Amount of waste treatment	m <sup>3</sup>	230,411	281,911	189,041
	Amount of industrial waste treatment (general)	ton	1,956	1,255	1,496
	Designated waste treatment	ton	1,588	1,487	1,179
Green Product Purchase	Amount of green product purchase	1 million KRW	4,613	2,868	2,589
	Green product purchase rate	%	83.66	98.29	93.74



1

NO  
POVERTY



- KORAIL Village  
(Improve living space of the neglected class)
- Public discount system
- Provide homeless jobs

2

ZERO  
HUNGER



- Operation of love fund
- Happy Train

3

GOOD HEALTH  
AND WELL-BEING



- Activation of flexible working system
- Composition of work/culture at home
- Operate reasonable welfare

7

AFFORDABLE AND  
CLEAN ENERGY



- Adopt new renewable energy
- Reduction of greenhouse gases
- Energy saving activities
- Carbon trading system

8

DECENT WORK AND  
ECONOMIC GROWTH



- Open employment
- Advanced labor and management culture
- Creating work space for private sectors
- Create and distribute economic values

9

INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



- Safety first management

13

CLIMATE  
ACTION



- Build a greenhouse gas inventory
- Operation of Greenhouse Gas Energy Committee
- Obtained 'Low Carbon Certification' for carbon footprint

15

LIFE  
ON LAND



- Sewage and wastewater management
- Ecosystem protection

16

PEACE, JUSTICE  
AND STRONG  
INSTITUTIONS



- Ethical management system
- Anti-corruption system and training
- Personal information protection and information security

4

QUALITY  
EDUCATION



- Training on all employees
- Designate Enterprise Safety Day
- Direct training of KORAIL LEARNING MODE

5

GENDER  
EQUALITY



- Recruitment and personnel with no discrimination
- Execute gender equality system
- Female manager extension target system

6

CLEAN WATER  
AND SANITATION



- Water pollution management
- Reuse of water treatment facility

10

REDUCED  
INEQUALITIES



- Recruitment and personnel with no discrimination
- Execute social balance recruitment

11

SUSTAINABLE CITIES  
AND COMMUNITIES



- Regional social contribution activities
- Activation of local economy

12

RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



- SME product purchase
- Environment-friendly product purchase

17

PARTNERSHIPS  
FOR THE GOALS



- UNGC Registration and support
- UC (International union of railways) registration and support
- OSJD (International Railway Agreement) Partnership company
- Railway Exchange Cooperation Korea-Japan (Japanese Ministry of Land, Infrastructure, Transport, and Tourism, JR Kush, JR East Japan)

  
SUSTAINABLE  
DEVELOPMENT  
GOALS





## Standard

The Korean Standards Association has developed a “Checklist for Assessing Social Responsibility Compliance Levels” in accordance with ISO 26000, the international standard for social responsibility. The ISO 26000 checklist includes performance assessments of seven core themes of social responsibility implementation. The Korean Standards Association assessed KORAIL’s level of social responsibility compliance according to the ISO 26000 checklist.

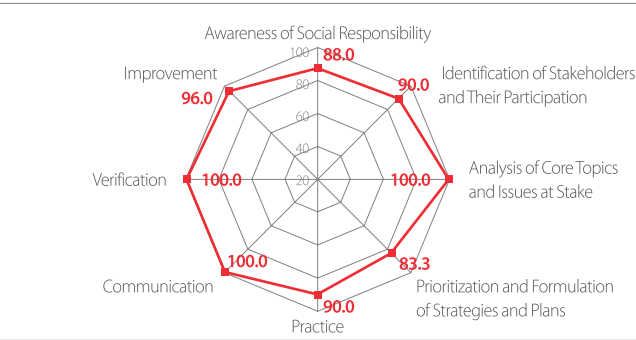
## Scope

The Korea Standards Association assessed KORAIL’s overall internal and external activities, mid- to long-term strategies, social responsibility activities, and the implementation process of sustainability management strategies. The results of the survey included internal documents, performance data and review of calculation system.

## Method

We performed the following activities to collect appropriate data and information based on the assessment criteria of the ISO 26000 Standard.

- Review of KORAIL’s mid- to long-term strategy and management performance reports
- Interviews with KORAIL’S personnel in charge of each corporate social responsibility subject and review of performance documents
- Review of sustainability issues that can impact KORAIL and its stakeholders



Awareness of Social Responsibility	Examination of the current level of awareness organization based on the management’s will
Identification of Stakeholders and Their Participation	Examination of stakeholders’ interests and demands, and, formulation of strategies to promote their participation
Analysis of Core Topics and Issues at Stake	Formulation of a list of core topics through examination of issues and analysis of internal competencies
Prioritization and Formulation of Strategies and Plans	Prioritization of core issues to be improved and formulation of strategies and plans based on the organizational capacities
Practice	Implementation of the strategies, vision, goal and implementation plans, and regular monitoring of social responsibility performance
Communication	Communication with stakeholders through performance reports
Verification	Activities and reporting for enhancing the reliability of the performance
Improvement	Periodical evaluation of performance for continued improvements

## ISO26000 Performance Assessment Result by Process

KORAIL declared new vision with the will of sustainability in May of 2018. We promised to become an institution that implements happy future to the nation and the people. We strive to raise participation of sustainable management of KORAIL by listening to all the opinions of our stakeholders. Each department executes their work sincerely and there it not much interest on the social responsibility management. We take interest in the sustainable activities executed by other department through comprehensive understanding on sustainable management and we have to put effort so that synergy effect can occur. Also, we expect to establish participation strategies for each level of stakeholders s and classify the stakeholders s through analysis matching the global standards (AA1000SES, GRI Standards)

## Seven Key Themes Sectorial Recommendations Result

**Organizational Governance:** KORAIL operates a special subcommittee within the board of directors to support decision-making on key issues, and appoints experts from various fields as non-standing directors strengthening its expertise, and examines policies, direction and major achievements in CSR management. It is recommended that a periodic and systematic subcommittee be established to ensure that decisions on social responsibility take place in top decision-making bodies. Moreover, the main departments and committees regarding sustainability are composed including the CEO to divide roles. In the future, we expect continuous improvements in results where the final decision-making organization discusses the regular monitoring results.

**Human Rights:** KORAIL has registered to UNGC and is expressing will on human rights management. The company has stipulated respect for human rights, equal employment, and inhibition of discrimination in the Personnel Regulations and Code of Ethics. It is recommended that KORAIL expand internal support so that related systems can be activated by enhancing the awareness of human rights of all employees, who will be involved in the railway operation in the future.

**Labor Relation Practices:** KORAIL established safety management system to maintain world’s best safety railways. Also, KORAIL possesses occupational health and safety management system certification to be putting full force in the safety of the employees and partners. In contrast to this, it is recommended to put effort in resolving the train accidents and all breakdowns that occur. We operate flexible working system and time selection system so that our employees can be happy at work and at home. We create improved results in employment for the disabled, elders, regional man power, and women. We hope to expand our good labor practices to our partners as well in the future.

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**Environment:** KORAIL focuses on environment management system by establishing vision, strategies, and operation methods to implement environment-friendly green railway. Also, ISO14001 Certification was acquired to put effort in establishing and maintaining environmental management system that follows the global standards. KORAIL contributes to climate change response and GHG reduction through the operation of railway, an environmentally friendly mean of transportation. In particular, efforts to expand low-carbon, high-efficiency railway vehicles and introduce new and renewable energy are highly evaluated. In the long term, it is necessary to strengthen the environmental management level for soil, waste, noise and vibration beyond just complying with laws, so we recommend strengthening the standards internally.

**Participation and Development of Local Communities:** KORAIL established 3 strategies including sharing talent, sharing happiness, and regional contribution under the goal of ‘Happy World Connected by Rails’. To expand in-house social contribution participation, Matching Grant is operated. Also, there are 50 volunteer groups with the head of the volunteer groups being the CEO. Specialized stations are composed to contribute to the regional economic activation by forming tour culture and universal railway



Organizational Governance	Practices that comply with the principles of social responsibility principles and incorporate those principles to existing systems, policies, and practices
Human Rights	Practices that protect and have respect for human rights within the organization and the area where its influence reaches
Labor Practices	Labor policies and practices that have effects on employees’ labor conditions, within JB Financial Group and its partners
Environment	Comprehensive approach to minimizing environmental impact of the decision and practices of the organization
Fair Operating Practices	Practices that are interested in maintaining transactions among JB Financial Group, its partners and suppliers ethical
Consumer Issues	Activities for protecting consumer rights such as consumer education, disclosure of fair and transparent marketing information and promotion of sustainable consumption
Community Involvement and Development	Recognizing and having respect for communities’ rights and, maximizing the support and opportunities towards ensuring those rights.

service is provided to take consideration for the transportation vulnerable. Also, we strive to strengthen stations in neglected places, which is a very outstanding case of ours.

**Fair Management Practice:** KORAIL has set up a dedicated growth organization to contribute to the growth of mutual growth culture. It has systematically well-established win-win cooperation programs, support for SMEs, and anti-corruption policies and systems in the 4th industrial technology. KORAIL pioneers the market according to the 2017 Investment Development Overseas Business and strives to enter the overseas business as mutual growth. We expect to strengthen environment, labor, and ethical standards to expand the social responsibility management when selecting our partners.

**Consumer Issues:** KORAIL receives request on providing public interest products to strengthen the publicity of the railway along with diversification and upgrade. We established communication system to ease the burden of the people and also improve services. Also, we execute coaching to strengthen personal services and recompose service manuals focusing on the user. Furthermore, we strive to compose safe traveling environment by improving amenities within the station and the train along with the guide service to improve convenience. Customer satisfaction starts from trust. We will become a company that builds reliability by assuring safety and train time.

## Conclusion

KORAIL obtained 332 points out of a total score of 360 points as a result of the diagnosis of ISO26000 level, 603.8 points out of a total score of 640 points in the performance for a total of 913.58 points to be evaluated at the level of SR IV. KORAIL is at a level where a wide range of social responsibility activities are taking place in order to establish a mid- to long-term management strategy for leaps and to respond to stakeholder expectations and demands. The level of implementation was excellent in human rights, labor relation practices, and community participation and development. As a railway operation company, we expect KORAIL to continuously improve the convenience of customers’ use of trains and secure the highest level of train safety so that it can be trusted and appreciated by stakeholders.

August 2018

Sangjin Lee

President of Korea Standards Association



Korea Standard Association (KSA) is a special public corporation founded in 1962 under the Industrial Standardization Act and it is a knowledge service providing organization that promotes and provides industrial standardization, quality management, sustainable management and KS & ISO certifications to industries. KSA contributes to the sustainable development of our society as the official advisory organization in Korea for ISO 26000, GRI-designated educational institution, AA1000 qualification agency, Korean Sustainability Index (KSI)-operating organization, UN CDM operating organization and the organization for certifying Greenhouse Gas Target Management System.



Universal Standards			
Topic	Disclosure Title		Page
Organizational Profile	102-1	Name of the organization	14
	102-2	Activities, brands, products, and services	14
	102-3	Locationof headquarters	14
	102-4	Location of operations	14~15
	102-5	Ownership and legal form	14
	102-6	Markets served	16~19
	102-7	Scale of the organization	15
	102-8	Information on employees and other workers	78,82
	102-9	Supply chain	50~53
	102-10	Significant changes to the organization and its supply chain	50~53
	102-11	Precautionary Principle or approach	79
	102-12	External initiatives	84~85
	101-13	Membershipofassociations	92
Strategy	102-14	Statement from senior decision-maker	5
Ethics and Integrity	102-16	Values,principles,standards,andnormsofbehavior	20~21
Governance	102-18	Governancestructure	74~75
Stakeholder Engagement	102-40	Listofstakeholdergroups	24~27
	102-41	Collective bargaining agreements	78
	102-42	Identifyingandselectingstakeholders	24~25
	102-43	Approach to stakeholder engagement	24~25
	102-44	Key topics and concerns raised	24~27
Report Profile	102-45	Entitiesincludedintheconsolidatedfinancialstatements	15
	102-46	DefiningreportcontentandtopicBoundaries	29
	102-47	Listofmaterialtopics	29
	102-48	Restatements of information	About This Report
	102-49	Changesinreporting	About This Report
	102-50	Changesinreporting	About This Report
	102-51	Dateofmostrecentreport	About This Report
	102-52	Reporting cycle	About This Report
	102-53	Contactpointforquestionsregardingthereport	About This Report
	102-54	Claims of reporting in accordance with the GRI Standards	About This Report
	102-55	GRI content index	88~89
	102-56	Externalassurance	86~87

Topic-specific Standards: Economic Performance

Topic	Disclosure Title		Page
Economic Performance	103	Explanation of the material topic and its Boundary, The management approach and its components	68
	201-1	Direct economic value generated and distributed	69
Indirect economic impacts	103	Explanation of the material topic and its Boundary, The management approach and its components	68
	203-1	Infrastructure investments and services supported	47
	203-2	Significant indirect economic impacts	47

Topic	Disclosure Title		Page
Anti- Corruption	103	Explanation of the material topic and its Boundary, The management approach and its components	76, 77
	205-1	Operations assessed for risks related to corruption	53
	205-2	Communication and training about anti-corruption policies and procedures	77

Topic-specific Standards: Environmental Performance

Topic	Disclosure Title		Page
Energy	103	Explanation of the material topic and its Boundary, The management approach and its components	60
	302-1	Energy consumption within the organization	67, 83
Emissions	103	Explanation of the material topic and its Boundary, The management approach and its components	66
	305-1	Direct (Scope 1) GHG emissions	66
	305-2	Energy indirect (Scope 2) GHG emissions	66
	305-5	Reduction of GHG emissions	66
	305-7	Nitrogenoxides(NO <sub>X</sub> ),sulfuroxides(SO <sub>X</sub> ),andother significantairemissions	66, 83

Topic-specific Standards: Social Performance

Topic	Disclosure Title		Page
Employment	103	Explanation of the material topic and its Boundary, The management approach and its components	39
	401-1	New employee hires and employee turnover	40, 82
	401-3	Parentalleave	42
Labor/Management Relations	103	Explanation of the material topic and its Boundary, The management approach and its components	39, 43
	402-1	Minimumnoticeperiodsregardingoperationalchanges	43
Occupational Health and Safety	103	Explanation of the material topic and its Boundary, The management approach and its components	31
	403-1	Workers representation in formal joint management–worker health and safety committees	32, 43
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	33
Training and Education	103	Explanation of the material topic and its Boundary, The management approach and its components	39,41
	404-1	Average hours of training per year per employee	41
	404-2	Programs for upgrading employee skills and transition assistance programs	41
Diversity and Equal Opportunity	103	Explanation of the material topic and its Boundary, The management approach and its components	39,41
	405-1	Incidents of discrimination and corrective actions taken	40, 74~75
Prohibition of Discrimination	103	Explanation of the material topic and its Boundary, The management approach and its components	48
	406-1	Employee training on human rights policies or procedures	48
Human Rights Assessment	103	Explanation of the material topic and its Boundary, The management approach and its components	☒
	412-2	Employee training on human rights policies or procedures	78
Local Communities	103	Explanation of the material topic and its Boundary, The management approach and its components	54
	413-1	Operations with local community engagement, impact assessments, and development programs	56~58
Supplier Social Assessment	103	Explanation of the material topic and its Boundary, The management approach and its components	50
	414-1	New suppliers that were screened using social criteria	52
	414-2	Negative social impacts in the supply chain and actions taken	53
Customer Health and Safety	103	Explanation of the material topic and its Boundary, The management approach and its components	31
	416-1	Assessmentofthehealthandsafetyimpactsofproduct andservicecategories	32~33
	416-2	Incidentsofnon-complianceconcerningthehealthand safetyimpactsofproductsandservices	
Marketing and Labeling	103	Explanation of the material topic and its Boundary, The management approach and its components	36
	417-1	Requirements for product and service information and labeling	34, 37



# Independent Third Party Assurance Statement

## To the Management of Korea Railroad Corporation

The Institute for Industrial Policy Studies (hereinafter referred to as “Auditor”), hereby presents the following statement of assurance, upon the request for auditing the 2017-18 KORAIL Sustainability Report (hereinafter referred to as “Report”) as a licensed sustainability assurance provider.

### Responsibility & Objective

Korea Railroad Corporation (hereinafter referred to as “KORAIL”) is responsible for the sustainability performance measures and all statements contained in this report. The objective of the assurance is to offer professional counsel for improving the quality of the report by; checking whether there were any errors or bias present in the Report; by assessing whether the data collection system is in appropriate working order; and by examining the process of identifying issues of material importance to sustainability management.

### Assurance Type & Level

The Auditor referred to AA1000APS(2008)<sup>1)</sup>, ISAE3000<sup>2)</sup> and GRI Standards<sup>3)</sup> for the assurance of the Report.

Assurance Scope	Economic, environmental and social dimensions of the report's performance measures and objectives
Assurance Type & Level	Type II - Moderate level
Assurance Criteria	• IPS Assurance Manual <sup>1)</sup> to verify compliance against the three core principles of AA1000AS (2008) • IPS Performance Indicators Assurance Criteria <sup>2)</sup> to assess the reliability of performance indicators based on ISAE3000 • GRI Standards: “Core Option” criteria

1) AA1000 – Accountability Principles Standard 2008: one of the sustainability report assurance standard series established by the non-profit organization AccountAbility based in the UK, in order to audit corporate social responsibility and sustainability development, thus explaining a set of auditing principles. Other standards include AA1000AS(2008) for assurance process standards and AA1000SES(2008) for stakeholder engagement process standards.

2) International Standard on Assurance Engagements 3000: “Assurance Engagements other than Audits or Reviews of Historical Financial Information” established by the International Federation of Accountants (IFAC)

3) The Global Reporting Initiative (GRI) is a non-profit organization established in 1997, by the Coalition for Environmentally Responsible Economies (CERES) the United Nations Environment Programme (UNEP), releasing a sustainability reporting framework in 2000 for multinational organizations. Followed by the revised G4 version developing on areas of supply chain, governance, ethics & integrity, anti-corruption, GHG emissions & energy disclosures, the latest GRI framework released in 2016 has modular structure, making them easier to update and adapt.

### Assurance Process and Activities

The Auditor confirmed ①the inclusivity, materiality, and responsiveness of the reported content; ②the reliability of the reported performance data; and ③the GRI Standards “In accordance” criteria.

- Review of KORAIL's identification process of material issues and following results
- Review of the stakeholder engagement process
- Review of data samples, other than financial statements, used as sources for economic, environmental and social quantitative performance measures
- Review of reference materials underlying economic, environmental and social qualitative performance measures

### Review of the Report's compliance with GRI Standards

In-person interviews with sustainability reporting management and staff, within KORAIL, were not held due to the conditions of the assurance agreement, however, assurance measures were conducted through written correspondence.

### Assurance Findings

The Auditor discussed about the Report's editing with KORAIL though written correspondence and reviewed the final draft of the Report to confirm whether our requests and recommendations for revision were reflected. As a result, the Auditor could not find any inappropriate contents violating the following assurance principles, or any evidence showing major errors or bias in the performance information or claims stated within the assurance scope.

### [Inclusivity] Were KORAIL's stakeholder engagement plans and processes appropriate?

It is the Auditor's view that KORAIL recognizes the importance of stakeholder participation for pursuing sustainability management and has put in place a process for stakeholder engagement to better reflect stakeholder views in its actual management activities. It has been observed that KORAIL is identifying its key stakeholders by different values types and operating differentiated engagement channels according to interest and engagement strategy. In particular, it has been confirmed that there were efforts to listen to stakeholder opinions through surveys and interviews, so as to reflect them in sustainability management activities. The Auditor has not found any important stakeholders left out from this process.

### [Materiality] Does the Report offer substantive information of material importance to KORAIL's economic, environmental and social stakeholders?

The Auditor has confirmed that through a “materiality evaluation process,” KORAIL is identifying together with stakeholders material issues affecting the corporation's management activities, and is appropriately sharing the management status of those issues. In particular, the identification of sustainability issues through “ISO 26000 implementation level diagnosis,” and

the facilitation of methods to prioritize material issues through stakeholder engagement results appears to be KORAIL's core “materiality assessment process.” No omissions were discovered by the Auditor, in terms of sustainability management information important to the corporation.

### [Responsiveness] Does the Report provide an adequate response to stakeholder demands and interests?

The Auditor confirmed that KORAIL is operating diverse engagement channels appropriate for each key stakeholder, and is identifying material reporting issues based on those opinions collected in the process. The introduced themes of “Let's KORAIL,” “People, Connecting Feelings,” “World, Connecting Communication,” and “Future, connecting Value” in the Report were found to be areas of high interest for both internal and external stakeholders. It has been found in this process that the corporation has appropriately reacted to stakeholder demands and interests.

### [GRI “In Accordance” Criteria]

The Auditor has recognized that the Report is in accordance with the “Core Option” of the GRI Standards (GRI 102).

### [Reliability of Performance Indicators]

The Auditor confirms that the performance indicators presented in the Report are free from bias or error that would affect stakeholders' judgement of KORAIL. Following are the key performance indicators the Auditor has recognized.

Category	Issue	Performance Indicator
Business Portfolio	Asset Development Projects Revenue	2017 Revenue on asset development projects: KRW 329.7 billion
People, Connecting Feelings	Safety Investments	2017 Investment on safety: KRW 806.6 billion
World, Connecting Communication	Job Creation	2017 New job created in the private sector: 16,704 jobs
Future, Connecting Value	Environmental Facilities Investment	2017 Improvements on environmental facilities: 23 water related, 7 soil related
	Noise Measurement	2017 Railway noise measurement results: above ground (day/night) 56/54, predicted highest (day/night) 59/57 (unit: Leq dB(A))
KORAIL Sustainability Management	Female Workforce Development	Introducing a goal for expanding female managers: connecting with increasing female employment, cultivating talents, family-friendly management, and promotion/position management

\* 33 Qualitative and 17 quantitative performance indicators on 17 issues were reviewed, but only a few are presented in this assurance report

### Recommendations

The Auditor highly values the Report's endeavor to ①reflect KORAIL's core values distinctive between “management vision & strategy” and “sustainability management vision & strategy,” ②appropriately reflect the key interests of every stakeholder through a stakeholder engagement process;

③transparently open stakeholder opinions regarding airport operations and show the corporation's problem-solving process so that a balance may be achieved.

Recommended in future reports are the following:

- Clarity: synchronizing counting standards and time periods between reporting data when presenting performance indicators so that clarity may be achieved throughout the report with no quantitative error.
- Accuracy: enhancing accuracy by specifying used measuring, counting or calculating methods when presenting performance indicators

### Independence of the Auditor

The Auditor does not have any for-profit or commercial affiliation with KORAIL and did not involve in any of the preparations of the Report, with the exception of this third party assurance statement.

### Qualifications of the Auditor

The Institute for Industrial Policy Studies is a “Third Party Assurance Provider” providing sustainability report assurance for corporations and public organizations nationwide. The auditing team participating in the assurance of this report consists of experts specialized in disciplines of management, accounting, environment and sociology, and also accumulated with years of experience and professional training in areas regarding ethics management, CSR and sustainability.

August 30, 2018

**Tae Hyun Kim**  
Chairman

The Institute for Industrial Policy Studies

*Tae Hyun Kim*



**AA1000**  
Licensed Assurance Provider  
000-24



# Key Awards and Memberships

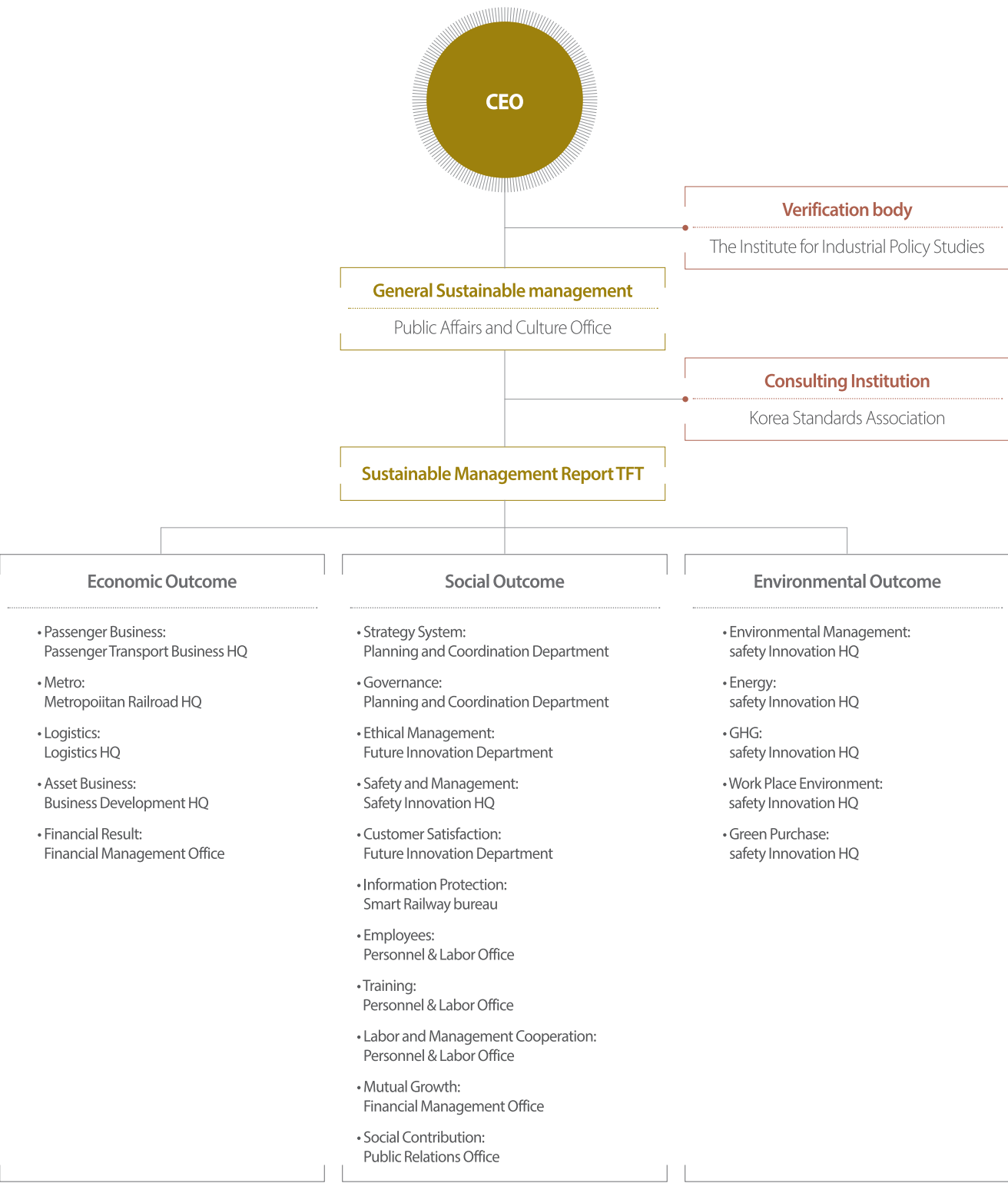
## Award History

Year	Award History	Supervised by
2016	Green Commodities of the Year (S-Train) for five consecutive years	Korea Green Purchasing Network Inc.
	Urban Railroad Excellence Evaluation	Ministry of Land, Infrastructure, and Transport
	Consumer centered Management (CCM) Institution Certification _ 4 consecutive years	Fair Trade Commissions
	Excellent Institution for Public Institution Comprehensive Announcement	Ministry of Economy and Finance
	Korea Tour Star (Buncheon Station)	Korea Tourism Organization
	Minister's Award by Ministry of Government Administration and Home Affairs for Korea's Communication	Korea Business Communication Association
	Most Loved Company Government Award	Ministry of Industry, Commerce, and Resource
	Web Accessibility Quality Certification	Ministry of Science, ICT, and Future Planning
	CDP Climate Change Response Excellent Company Carbon Management Special Award (3 times)	CDP
	Excellent Award in Environmental Dispute Prevention	Korea Environmental Damage Prevention Association
	2016 Korea Invention and Patent Competition Minister's Award	KIPA / Korea Intellectual Property Office
	Selected as Best Institution for Disaster Management Evaluation in Public Sector	Ministry of Public Safety and Security
	Republic of Korea Grand Safety Excellent Industry Award	Ministry of Public Safety and Security
	Eulji Training Outstanding Industry Award	Ministry of Land, Infrastructure, and Transport
	Public Purchase Advancement, President's Award	Small and Medium Business Administration
	Minister's Award for Invention Patent Competition	Korea Intellectual Property Office
	Minister's Award for Invention Promotion Activity	Korea Intellectual Property Office
	Galaxy Awards	MerComm Inc.
	Sustainability Report (KRCA)s	Korea Standards Association
	This Year's Green product (ITX-Saemaeul) for 6 consecutive years	Korea Green Purchasing Network Inc.
2017	Excellent Institution for Public Institution Comprehensive Announcement	Ministry of Economy and Finance
	19 <sup>th</sup> Korea brand Award, Excellent Award	Institute for Industrial Policy Studies
	2017 Bangkok International Intellectual Property, Invention, Innovation and Technology Exposition (IPITEX) Gold Award	National Research Council of Thailand
	Republic of Korea Safety Photo Competition Safety Together Award	Korea Industrial Safety Association
	2017 Bangkok International Intellectual Property, Invention, Innovation and Technology Exposition (IPITEX) Gold Award	National Research Council of Thailand
	Best institution for 'Training for Control System Cyber Attack Response'	National Intelligence Service
	Public Field Cyber Security Competition	Ministry of Trade, Industry, and Energy's Cyber Safety Center
	Minister's award of Ministry of Health and Welfare at 2017 Korea Sharing Award	Ministry of Health and Welfare
	Special Award at Korea Communication Awards (KORAIL Newsletter)	Korea Business Communication Association
	International Business Awards Gold Award (KORAILO-	IBA (International Business Awards)
2018	Grand Prize at Land Transportation Training Contest	Ministry of Land, Infrastructure, and Transport
	CDP Climate Change Response Excellent Company Carbon Management Special Award (4 times)	CDP
	This Year's Green product (V-Train) for 7 consecutive years	Korea Green Purchasing Network Inc.
	2018 Health and Safety UCC Award	Occupational Safety and Health Agency, CBS

## Group Subscription Status

Domestic			Overseas	
• Korea Standards Association	• Korea Electric Railway Technical Cooperation Association	• Korea Logistics Association	• OSJD (National Railway Convention)	• UNGC (United Nations Global Compact)
• UN Global Compact Korean Association	• Audit Association	• Korea Productivity Center	• EURAIL SPEED (International Conference on High-speed Rail	• UIC (International Railway Federation)
• Korean Railway Society	• Korea Knowledge Management Association	• Railway Industry Committee	• CCTT (Siberia Transit Coordination Council)	

# Sustainability Reporting Bodies



“Thank you to all those who helped in this Sustainability Report.



# Upcoming Eurasian Railway Era

## Korea Railroad Corporation and Korea Railroad Authority Get ready together.

Starting from Busan, passing through Pyongyang, China, Russia, Paris,

The road to London will be 'Silk Road of Iron'

Korea Railroad Corporation and Korea Railroad Authority will prepare together.

