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Devoted to the People, the World and the Future

Railroad of the Republic of Korea

KORAIL Sustainability Report 2016

Devoted to the People,
the World and the Future



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About this report

KORAIL has published its Sustainability Report annually since 2008. This will be the ninth year such a report was published. Focusing on KORAIL's mission of "Devoted to the People, the World, and the Future." This report discloses the company's sustainable management activities and performance results by categorizing them into economy, society, and the environment, while detailing its efforts to move forward as "KORAIL, the Happiness of the People."

Reporting Standards

This report has been prepared in compliance with the Core of the GRI (Global Reporting Initiative) G4 guidelines and ISO 26000. Accordingly, this report focuses on the important issues derived through the Materiality Test and reports the public announcement of the management method (DMA) regarding the important issues along with the achievements of KORAIL on SDG issues.

Reporting Period and Scope

This report focuses on the sustainable management activities of KORAIL headquarters and regional head offices including the activities of some affiliate companies from January 1, 2016 to December 31, 2016. This report also includes some of the activities carried out in the first half of 2016 that have been deemed as important. This report identifies and includes relevant information on how the main stakeholders of KORAIL are affected by the key issues derived from the Materiality Test based on the boundary identification method proposed by GRI G4. The transparency of the company has been reinforced by reporting such content in this report.

Report Verification

This report has been third-party assured by an individual institution to improve the accuracy and reliability of the content. The third-party verification institution confirmed that this report is in compliance with the core standards of the G4 guidelines, the results of which can be found in the Third Party Assurance Statement (p.~).

Further Information

There have been no changes in the content related to the size, structure, and ownership of the company in the report compared with the previous year during the reporting period. Sustainable management activities and the reports of the company are being made public in the management announcement section of KORAIL's website. The Sustainability Report is published in both Korean and English and is available for download as a PDF file on the website. Please feel free to make any inquiries if you require further information on this report or if there is anything else you would like to know.

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Reading point

These tips will make reading the KORAIL Sustainability Report more interesting and engaging. There is some terminology useful to know when reading a sustainability report.

A sustainability report is a channel for corporations to communicate with customers about their social responsibility and is designed to share information on sustainability not found in financial statements such as long-term profitability and growth potential with stakeholders.

Reading point

Materiality Test and Key Issues

The final reporting issues are selected by identifying key issues that may affect the sustainable growth and development of KORAIL through benchmarking, media analysis, and surveys with the stakeholders based on the GRI guidelines. In 2016, the key issues of KORAIL included customers' health and safety, industrial safety, labeling of products and services for quality enhancement, customer privacy protection, employment, and labor-management relationships. These issues were taken into consideration when making management decisions in 2016.

Economic, Social, Environmental Performances

KORAIL's statements of its financial position, income statements, and other data that show sales, operating profit, and net profit are disclosed in the "Economic Performance" section. KORAIL's activities related to non-discriminatory employment, improved female workforce, customer satisfaction, and development of local communities are stated in the "Social Performance" section, while the content regarding energy and GHG is described in the "Economic Performance" section. The economic, social, and environmental performances are usually stated in the Appendix. However, some of the content can also be found in the beginning or middle of the report depending on how the report is organized.

SDGs Achievements

This section reviews whether the sustainable management goals, strategies, visions, and actions of KORAIL have been met in terms of the Sustainable Development Goals. It is composed of 17 missions including ending poverty and hunger, employee welfare, equality, environment, and global partnerships.

Check up

UNGC(UN Global Compact)

The UN Global Compact (UNGC) is an initiative to encourage businesses worldwide to adopt its 10 principles in the fields of human rights, labor, the environment, and anti-corruption, while encouraging them to achieve the Sustainable Development Goals (SDGs).

*UN Global Compact's official website: www.unglobalcompact.kr

GRI(Global Reporting Initiative)

The Global Reporting Initiative (GRI) is an international organization that enacts guidelines for sustainability reporting with the support of the United States-based non-profit sustainability advocacy group Ceres, and the United Nations Environment Programme (UNEP). GRI reports encourage companies to measure and report on their economic, environmental, and social performances. KORAIL's report is in compliance with the GRI's G4.

Let's KORAIL INTRO



[CEO Message](#)

[Highlight](#)

[KORAIL story](#)

CEO Message

We will strive to become a global railway corporation
responding to the expectations and trust of our stakeholders

Issuing KORAIL's ninth sustainability report this year which was first published in 2008, we took a backward glance at our efforts and efforts with regard to communication. We have been able to achieve tremendous accomplishments thanks to your advice and feedback while satisfying the increasing expectations of the people in Korea as technology evolves, and responding to changes caused by restructuring the organization with the stakeholders. Although we disappointed and inconvenienced the people of Korea and employees with the longest strike of 74 days in 2016, we implemented company-wide management activities to turn crisis into opportunity. As a result, we saw profits for three consecutive years and achieved the highest level of railway safety. Moreover, we have built a culture of discussing and solving the current issues by collecting creative and innovative ideas through the campaign, "KORAIL Thoughts, Talk Talk!" As we still have tasks to solve to follow up on the changes in the railway industry and competition structure, we are promising three things to ensure competitiveness and become a company that contributes to the national economy.

Firstly, we will build a future-oriented organizational culture

We will reinforce our competency in creativity and risk management to respond to the "fourth industrial revolution" by adding flexibility to our organizational culture. We are going to create a fair and reasonable organizational culture based on scientific, innovative thinking to carry out business activities efficiently with flexibility thinking and creative ideas. With innovation in human resource management by placing the right person in the right job while increasing learning opportunities, we are going to pursue changes and innovation while maintaining our 118 years of tradition.

Secondly, we will seek ways to expand our organization to become a comprehensive transportation service provider

We will utilize the advantages of railway transport by developing a variety of train models such as double-decker KTX trains and freight trains to create new, sustainable businesses. By expanding the connected transportation network and developing life zones as well as affiliated businesses around train stations to create a new railway culture and ensure competitiveness to advance into the global market.

Thirdly, we will practice respect and love

One of our missions is to provide a railroad service to make the people of Korea happy. By achieving the mission and satisfying customers, we will practice respect and love. To do so, we are going to introduce new service products, enhance mobile applications, and improve train punctuality while putting ourselves in the customers' shoes and coming up with new services convenient for customers. We will ensure we are designing railway services for the better.

KORAIL will spare no efforts together with our 26,000 employees to communicate with the people of Korea and stakeholders and meet their expectations.

August 2017

Acting President of Korea Railway Corporation

Yu Jae-yeong

Highlight

In 2016, KORAIL achieved the highest level of safety according to the standards set by the European Railway Agency (*ERA). As expectations of the people of Korea toward safety increased due to rising natural disasters such as earthquakes, and fiercer competition in the railway industry, KORAIL focused on preemptive, scientific safety management. As a result, the ERA-based railroad accident rate decreased from 0.053 in 2014 to 0.046 in 2016, while the industrial accident rate dropped from 0.250% in 2015 to 0.205% in 2016. Moreover, we achieved the world's top level of safety in railway accidents beyond the level of safe operation services of the UK, the top country in the ERA by strengthening the safety organization and building safety information management networks.

* ERA standards: Accidents including collisions, derailments, level-crossings, and fires resulting in at least one killed or seriously injured person, damage that is equivalent to EUR 150,000 or more (approx. KRW 200 million), or suspended train services on a main railway for six hours or more

KORAIL maintained its national facility cyber-attack free by reinforcing the information security system in 2016. Although an attempted cyber-attack was detected on February 18, 2016, it was immediately dealt with and blocked. Moreover, we separated the work network of the major departments from the Internet network to prevent cyber-attacks and malicious codes from the inflow stage, while advancing information protection facilities to prepare for new types of cyber threats. We strengthened the protection of information security of KORAIL members while being certified for an information security management system (ISMS) to reinforce the capacity to respond to cyber-attacks.

KORAIL achieved a surplus for the third consecutive year in 2016. Given the predicted reduction in demand for Korea Train eXpress (KTX), we scheduled trains to make stops at both Seoul and Yongsan stations while improving access to train stations by providing shuttles traveling between Gwangmyeong and Sadang stations. Moreover, we added ICT-based payment methods, operated flexible train schedules, and improved traffic lines for transfer while introducing a KTX mileage system and improving the KORAIL TALK+ UI and its features. This helped us increase customer demand and achieve operating profit of KRW121.6 billion.

Promoting shared-growth with small and medium-sized enterprises (SMEs), KORAIL contributed to a 21% increase in sales by SMEs in 2016. KORAIL developed business models suitable for SMEs and helped them expand sales channels using the railway network. With support for creating themed train stations, developing specialty products, expanding the number of local gourmet restaurants, and opening specialty stores, and operating 29 small-sized travel agencies — saw revenues of KRW 14.4 billion, while newly launched train mockups created reviews of KRW 53 million. As a result, the sales of the SMEs increased from KRW 55.5 billion in 2015 to 67.3 billion in 2016. Furthermore, the Santa Village at Bunccheon Station created together with the local community was selected as a "Rising Star" by Korean Tourism in 2016, which drew 172% more tourists to the station than the previous year.

Highest Level of Railway Safety Achieved

ZERO Cyber Attacks on the National Rail System

Customer-oriented Service Management

Revitalizing Shared Growth with SMEs

Balanced Development with ITX Youth to Chuncheon

Created 30,776 Private Sector Jobs

Online/Offline Communication Channels

Accomplishments with KORAIL's Thoughts Talk! Talk!

Wage Bargaining Agreement and Withdrawal of the Strike

KORAIL contributed to the country's balanced economic development by operating semi-express trains ITX from Yongsan, Seoul to Chuncheon, Gangwon in 2016. As the trains reduced the physical distance between the Seoul metropolitan area and Gangwon-do, KORAIL saw a daily average of 17,000 passengers who commute to work on weekdays and travel on weekends by train. Thanks to the transportation, Namiseom Island welcomed twice more visitors while Chuncheon saw more than 10 million visitors. We will continue our efforts toward stimulating the local economy with a variety of innovative travel products.

In 2016, KORAIL created 30,766 jobs in the private sector as a result of job creation and employment support campaigns carried out to fulfill its social responsibility and increase national happiness. We helped many young adults open their businesses with our young adult chef program, while offering job training programs for university students with the work-learning dual system. We were active in participating in one of the national tasks, equality in open employment, and hired 336 local talents, 50 high school graduates, and 694 interns, complying with the government-recommended goals. As a result we created 30,766 jobs in the private sector, with an increase of 6% from 29,037 jobs in 2015, contributing to the national economy.

KORAIL advanced the internal communication system by promoting online and offline communication channels to better communicate with the internal and external stakeholders in 2016. We developed a one-on-one response system using the online Q&A platform and providing a Kakao ID of an SNS labor counselor, while dealing with employee grievances by operating the labor-management committee, report center, workshops, and on the spot communication system held twice a month. We successfully communicated with 120,000 employees and answered their questions while maintaining healthy dialogue.

Since July 2016, KORAIL replaced its monthly meeting with "KORAIL's Thoughts, Talk! Talk!", a creative, innovative idea contest held internally. This is where employees present best practices, feedback, and opinions regarding their work and select the best ideas to practice by voting. Having been held five times already, the contest selected 32 brilliant ideas out of the 141 ideas received. Out of the selected proposals, 15 have been implemented in various field sites, which created an economic value of KRW 8.15 billion. As all employees participated in the event, two-way communication was carried out while work efficiency improved.

KORAIL established a performance-based wage system and new policies to improve the competencies of all employees in 2016. To instill the policy and the wage system, we supported active communication and activities between labor and management. Moreover, we dispatched workforce speedily to minimize inconvenience caused by the strike, achieving 100% operation of KTX, 89% operation of subway, and 99.87% of punctuality of train services. We fortunately secured a peaceful agreement with the union through brief and intense negotiations after the union decided to halt the strike.

KORAIL story

About KORAIL

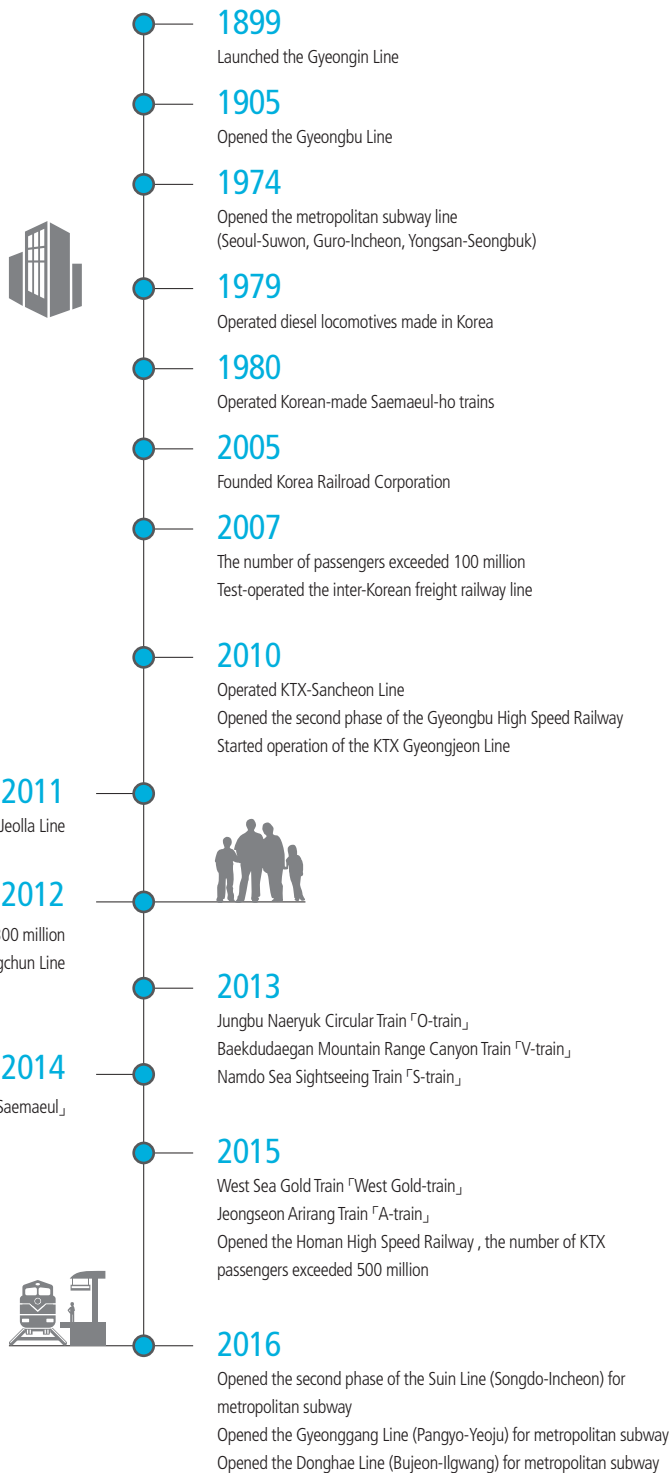
Since its launch of the Gyeongin Line (33.2km from Noryangjin to Jemulpo) way back in 1899, KORAIL has accumulated the expertise in railway operation over the past 118 years and strived to provide the people of Korea with better lives and valuable future by delivering safe transportation services.

General Information

Company name	Korean Railroad Corporation KORAIL
Date of foundation	September 18, 1899 (Korean Railroad Corporation founded on January 1, 2005)
Purpose of foundation	To contribute to the railroad industry and the development of the national economy by enhancing professionalism and efficiency of railroad operation (No. 7052 of the Korea Railroad Corporation Act, 2003.12.31.)
Competent authority	Ministry of Land, Infrastructure and Transport
Location of the head office	240 Jungang-ro, Dong-gu, Daejeon-si
President & CEO	Yu Jae-yeong (acting president)
Organization	Headquarters 7 head offices, 7 offices, 5 groups, 60 divisions Affiliates 12 regional head offices, 24 affiliates
Total assets	KRW 18,512.9 billion
Gross sales	KRW 5,693.6 billion
Operating profit / net profit	KRW 121.6 billion / -226.5 billion

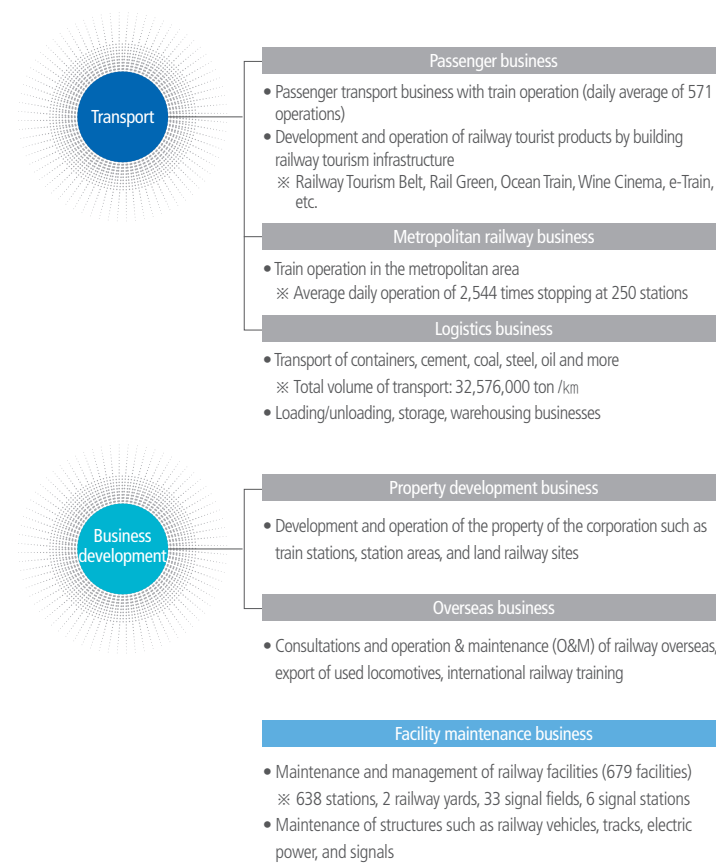
*Organizational information: as of June 30, 2017 / financial information: as of December 31, 2016 (connected to K-IFRS)

History



Major Businesses

Under the vision of “KORAIL, the Happiness of the People,” KORAIL has diversified the businesses and provided advanced services to improve the happiness of the nation. We improve customer convenience with transport business, contribute to the local economy with development of train station areas, and ensure safety with facility maintenance business. KORAIL will continue implementing sustainable businesses for the people of Korea, the future, and the environment.

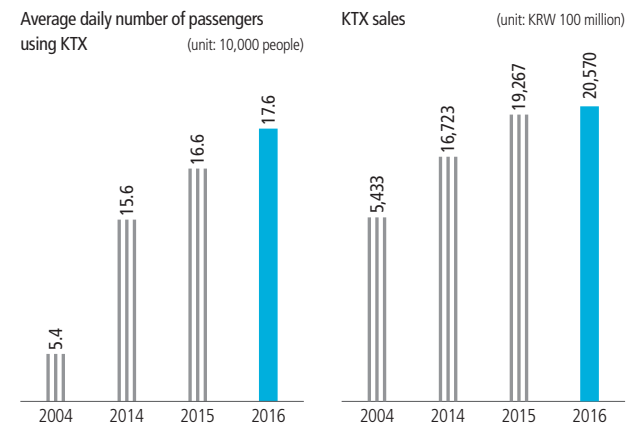


Passenger Business

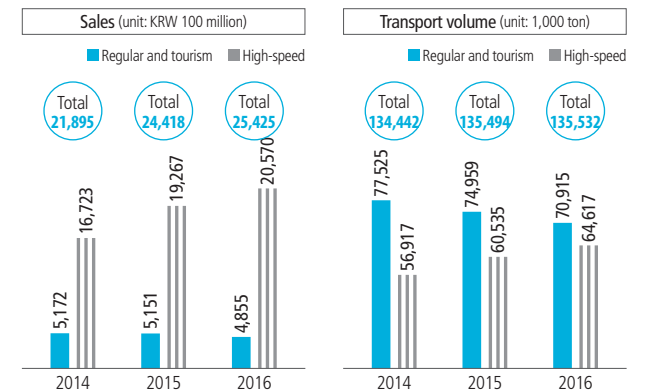
KORAIL generates revenue through train operations, passenger transportation, tourism, and infrastructure & product development operating express trains (KTX) and regular trains (ITX-Saemaeul, Saemaeul, Mugunghwa, Nuriro, and commuting trains). We successfully launched the world's fifth bullet train on April 1, 2004 that runs at 300km per hour, making the entire nation into a half-day travel zone. The number of daily passengers of 54,000 at the beginning exceeded 580 million in 2017. Moreover, we have completed the Five Railway Tourism Belts (Jungbu Naeryuk Belt, Namdo Haeyang Belt, Pyeonghwa Saengmyeong Belt, Gangwon Cheongjeong Belt, and Seohae Gold Belt) by developing products to meet the customers' needs and revitalize the local communities. Offering a variety of train tour packages such as Rail Green, Ocean Train, Wine Cinema, and e-Train, we have increased our competitiveness and diversified our product lines.

Business		
Express train(KTX)	Conventional train (Saemaeul-ho, Mugunghwa-ho, Nuriro, commuting trains, ITX-Saemaeul)	Tourism

Key achievements in 2016		
Distance traveled by passenger trains (km)	High-speed: 594.5	Conventional: 3,103.4
Distanced traveled by trains (1,000km)	High-speed: 35,740	Conventional: 35,275
Number of daily train operation on weekdays (time)	High-speed: 231	Conventional: 340
Average number of daily passengers (10,000 people)	High-speed: 17.6	Conventional: 19.4
Average daily sales (KRW 1 million)	High-speed: 5,656	Conventional: 1,328

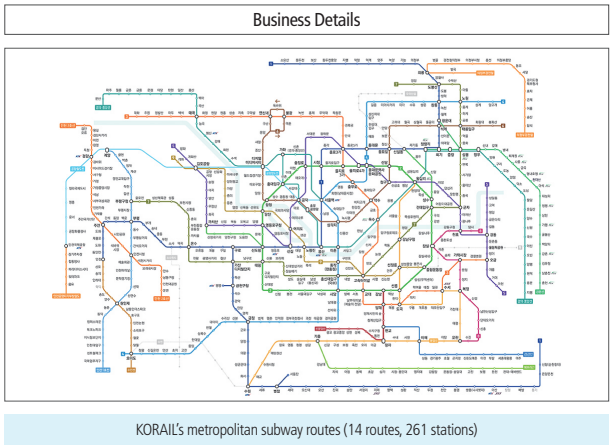


Key Performances



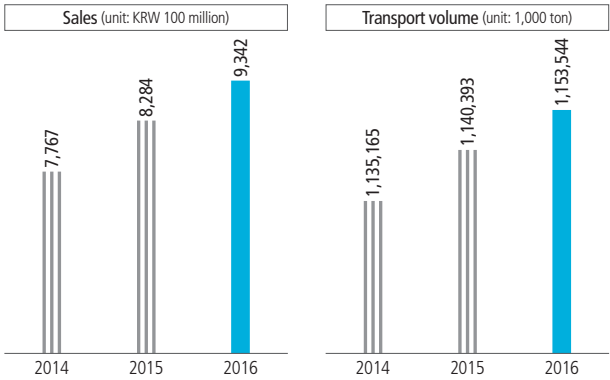
Metropolitan Railway Business

KORAIL services more than one million passengers annually, carrying three million passengers per day. For the convenience of customers, we increased the number of express trains, rebuilt the traffic movement system, and improved the time value by expanding the metropolitan railway network and increasing speed. Since the launch of the Gyeongbu Line, Gyeongin Line, and Gyeongwon Line of 74.1km in August 1974, we have built 623.2km of railway lines. The average number of daily passengers has increased by 15.8 times from 200,000 to 3160,000 with the average time of trains operated per day being 2,544. As demand for the metropolitan trains and passenger satisfaction increases, we have improved the convenience of train rides by adding the metropolitan railway infrastructure. We launched the Gyeonggang Line (Pangyo-Yeouju) and Donghae Line (Bujeon-Ilgwang) in 2016 with 28 new stations that drew 14 million more passengers.



Key Accomplishments in 2016	
•Distanced traveled on metropolitan railway (km)	623.2
•Number of trains operated per day (time)	2,544
•Transported volume (1 million people)	1,154
•Sales (KRW 100million)	9,342

Key Performances



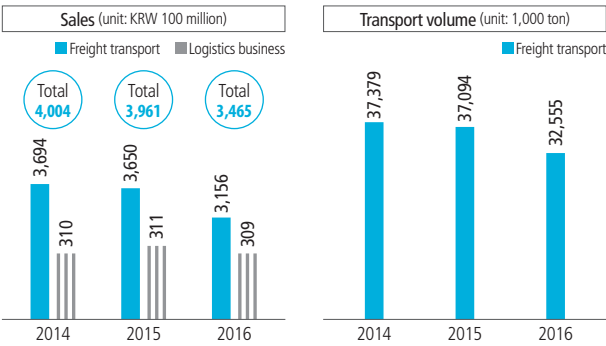
Logistics Business

Taking a leading role in the logistics of Northeast Asia by reducing national logistics costs and eco-friendly rail freight transport, KORAIL offers integrated logistics services including warehousing, loading and unloading services. We strive to provide customers with efficient services through nurturing products suitable for rail transport and adjusting crew business depending on demands in different seasons. KORAIL's rail freight transport produces low-carbon emission for its cargo volume,so it is eco-friendly. Playing an important role in raw material transport, which is the foundation for the national infrastructure industry, KORAIL aims to increase its share in the national freight transport to 15% to reduce the national logistics cost. We have strengthened competitive by diversifying our businesses to transport the key items such as containers and steel following the changes in the industry including investments in roads, diversified types and smaller sizes of freight. We will reinforce our key competence based on our accumulated know-how to become the center of logistics in Northeast Asia.



Key Accomplishments in 2016	
• Distance travelled of freight (km)	3,065
• Distance travelled by trains (million km)	8,414
• No. of trains operated per day (time)	200
• Average daily volume of freight (10,000 ton)	8.9
• Average daily sales (KRW 1 million)	1,303

Key Performances



Property Development Business

KORAIL strives to develop space that creates value and contributes to revitalizing the local economy through developing train and subway station areas. We improve railway convenience of passengers and their lives in general with modernized, advanced, and cultural train stations while creating a sustainable force for growth. We have focused on complex development such as creating areas for local restaurants and themed shops, offering the unused space within the stations for local specialty vendors, and renting conference rooms. Some of the achievements of such effort include a support facility in a transfer center within the unused land of Dongdaegu Station completed in December 2016 and the Korean Hollywood culture town built in July 2017 in Yongsan Station Private Building.

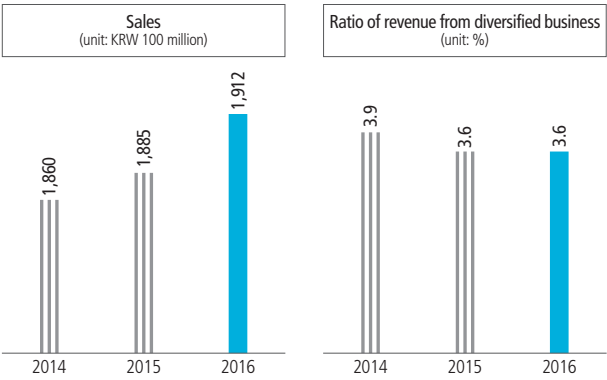


Key Accomplishments in 2016	
	(unit: KRW 100 million)
• Lease business	546
• Retail	651
• Advertising	234
• Parking lots	100
• Station development	39
• Real estate development	6
• Overseas business	27
• Others	306

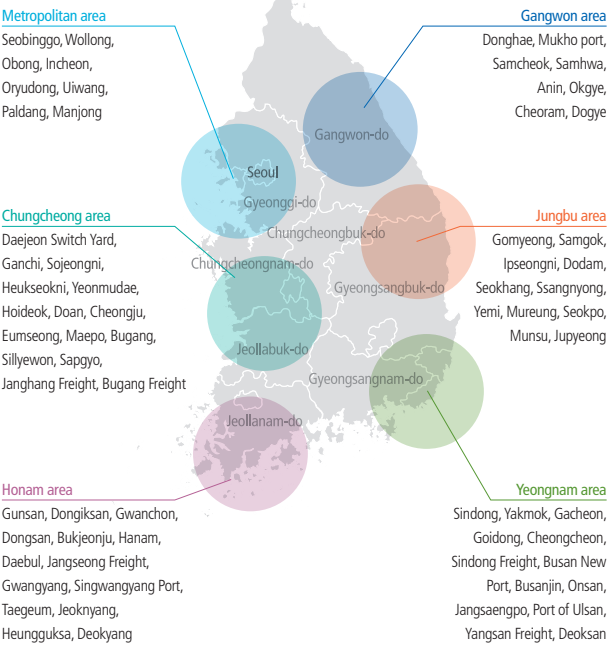
Details of Sales from Property Development

Rent Lease of the Korea Railroad Corporation's property	Retail revenues Sales commissions on the premises received by KORAIL Retail
Advertisement revenues Revenues from outdoor advertisements at Korea Railroad Corporation and commercials within KTX	Parking lot Revenues from parking lots attached to the train stations and constructed on the unused properties
Revenues from development of station buildings Usage fees for the ownership shares of the commercial facilities from the construction and operation of private/complex station buildings	Revenues from real estate development Revenues from development of railway station influenced areas and unused lands
Overseas business Consultations on operation and maintenance of used locomotives, export of used locomotives parts, international railway training, etc.	Other revenues Fees for recharging transportation cards, fees for issuing cash receipts, fees for using employee training centers, revenues from in-house venture firms

Key Performances



Key Freight-handling Stations



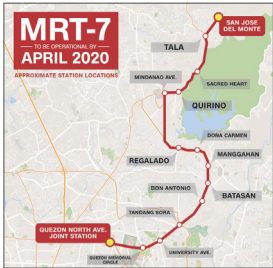

Local Restaurants

Busan Station	Busan fishcake, Yangsan soup with rice, fried tofu stew at Ggangtong Alley, Seunggi's Korean pancake stuffed with seeds
Daejeon Station	Seongsimdang, noodles, Bongi Korean pancake, Gujeuk rice with buckwheat jelly
Seoul Station	Seoul Yeonin
Ulsan Station	Eonyang bulgogi
Iksan Station	PNB Pyungnyeon Bakery
Dongdaegu Station	Banwoldang croquette
Jeonju Station	PNB Pungnyeon Bakery
Jecheon Station	Sunuri medicinal herb
Singyeongju Station	Byeolchaeban
Gumi Station	Banwoldang croquette

Overseas Business

We run overseas business with our know-how on railway operation and technology accumulated over decades. Starting with the technological cooperation on electric multiple units (EMUs) with Malaysia and consultations (repairs of 50 trains) in 2007, we have expanded the overseas business to O&M on railways overseas, technology consulting, utilization of used trains, and projects involved with official development assistance (ODA). We won a construction supervision project for the central line in Tanzania (1,219 km, from Dar es Salaam to Mwanza) in 2016, securing sales of KRW 14.1 billion. KORAIL's technological know-how was recognized worldwide while seeing sales of KRW 800 million from providing consulting services on designing the Manila Metro Rail Transit System Line 7 in the Philippines and sales of KRW 730 million from maintenance consulting on ten diesel locomotives exported to Pakistan.

Business Details

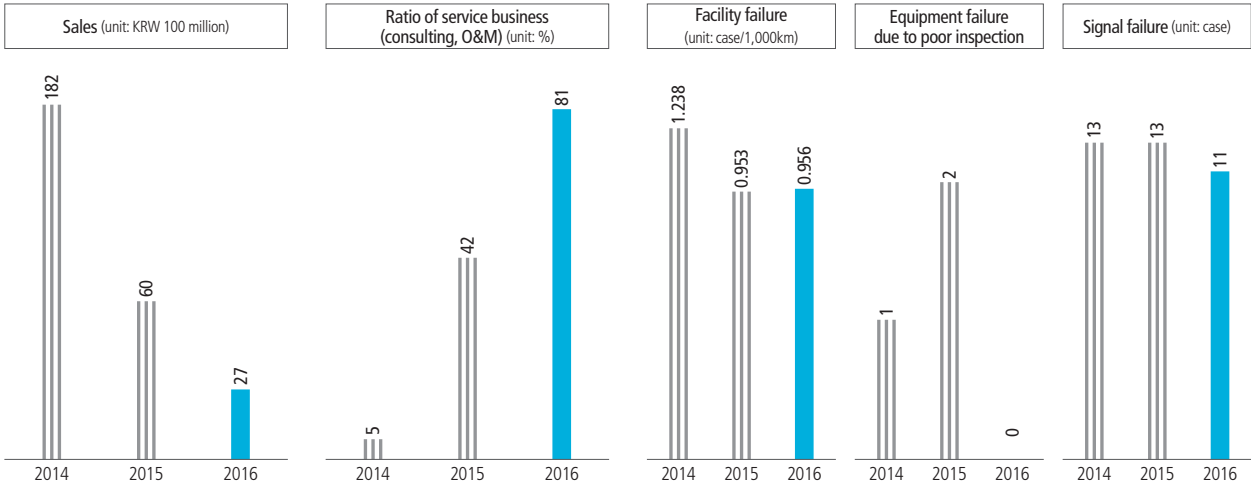


Won a construction supervision project for the central line in Tanzania

Provided consulting on designing the Manila Metro Rail Transit System Line 7 in the Philippines

Key Achievements in 2016	
• Sales	KRW 2.7 billion
	Consulting business: 12
	O&M: 8
	Others: 7



Key Performances



Facility Maintenance Business

KORAIL ensures the best condition of railways for safe operation of trains by preventing broken rails, electrical problems, and real-time monitoring of railway facilities. With our facility management system that takes seasonal and disaster factors into account such as falling rocks during the thawing period, heat waves and heavy rains in summer, and rail breakages in winter, facility failure rates have dropped steadily. Moreover, we advanced the facility management process by applying cutting-edge, scientific technology to improve efficiency and reliability. As a result of the advancement of the core technology and improvement of the facilities, signal failures were reduced by 15.4% while having zero equipment failures in maintenance, thereby resulting in stability in the facility maintenance business.

Business Details

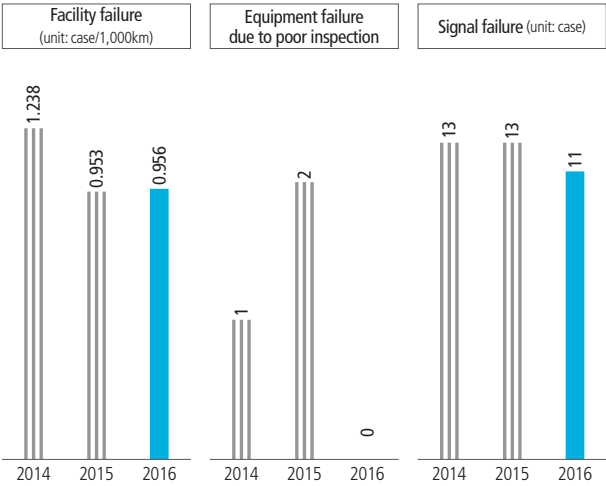


Deployed and expanded remote-monitoring in areas vulnerable to natural disasters

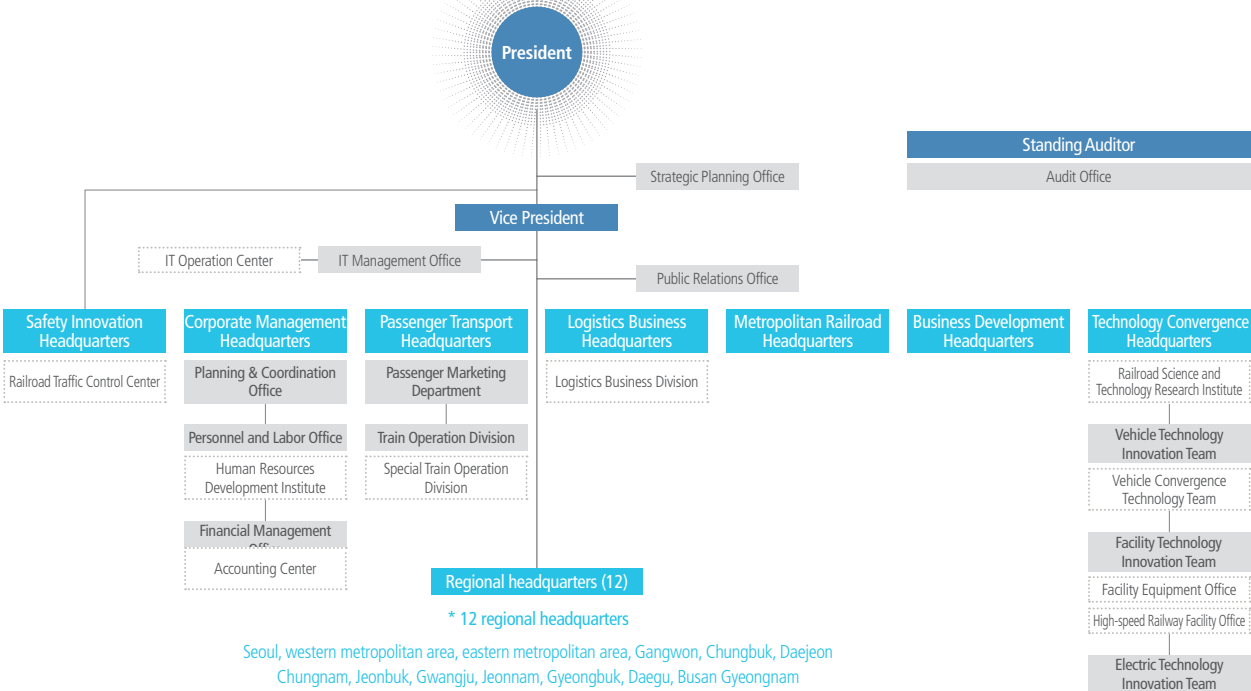
Utilized monitoring with drones

Key Achievements in 2016	
• Real-time monitoring of and quick responses to disasters	
• Reduced inspection time by 67% and secured safety of inspectors by utilizing drones	
• Took preemptive measures to prevent failures by expanding remote-motoring and diagnosis system (No. of signal failures reduced from 13 to 11 cases)	

Key Performances



Organizational Chart



Shareholders

KORAIL is a market-type public corporation 100% owned by the government. It was founded with the goals of providing transportation (passengers, railway, and logistics) and supplying facility maintenance services. All management activities of KORAIL are carried out in accordance with the regulations and commercials laws regarding the management of public institutions. KORAIL's legal capital as of 2016 is KRW 22 trillion (Article 4 of the Korea Railroad Corporation Act) and paid-in capital is KRW 10.1089 trillion.

Affiliates

KORAIL has strengthened competitiveness and led innovative changes by establishing affiliated companies for internal competition. We believe that competition and comparison allows us to have transparency in management, improve operation, and provide professional services in each business. We have five affiliated companies including KORAIL Tourism Development, KORAIL Networks, KORAIL Logis, KORAIL Retail, and KORAIL Tech that create synergy and reinforce our revenue base.

Company name	CEO	Business	No. of employees	Capital (KRW 100 million)	Sales (KRW 100 million)	Stake (%)
KORAIL Tourism Development	Bang Chang-hun	Tourism & leisure, retail/crew business	984	40	603	51.0
KORAIL Networks	Gwak No-sang	Subcontracting labor management and customer center, parking lot operation	1,286	72	814	89.5
KORAIL Logis	Kim Myeong-yeol	Railway logistics business	82	77	507	92.1
KORAIL Retail	Yu Je-bok	Commercial facility operation, advertising media operation	377	60	2,705	100
KORAIL Tech	Baek Jong-chan	Management of tracks, electricity facilities, train maintenance	58	19	473	97.3

Offices Overseas

Being recognized for the high technical skills, KORAIL operates overseas branches to share policies and operational know-how with advanced railway companies overseas. The branch in Paris, France, engages with the state-run SNCF in technology exchange and education consultations while supporting efficient procurement of KTX components. The branch in China is working with Chinese railway corporations to build networks and attract Chinese tourists.

Key Tasks of Branches Overseas

France

China

- To build networks with railway operators and affiliated institutes
- To research, collect, and analyze railway policies, services, and business strategies
- To support efficient procurement overseas
- To support technical/training exchange with SNCF

- Chinese and Northeastern railway
- To research, collect, and analyze operational information
- To build networks to connect the Eurasia railway
- To attract inbound Chinese tourists with marketing campaigns

Structure of Management Value

Vision and Strategy

With the mission of “Korean railway, devoted to the people, the world, and the future,” KORAIL is committed to improving people’s happiness and fulfilling its social responsibly by providing safe and convenient rail services.

Mission	Korean railway, devoted to the people, the world, and the future Contribute to creating a new future for the country by improving the happiness of the people and fulfilling its social responsibility through providing safe and convenient rail services, connecting the continent via railroad, and nurturing railway-centered businesses				
Vision	KORAIL, for the happiness of all To increase people's happiness by establishing a sustainable management system through realizing creative customer value and innovative organizational constitution				
Core Values	Safety first	Customer satisfaction	Challenges and changes		
	Safety is the best service provided to the people and we are committed to realizing a defect-free railroad safety management that the people can trust by building a perfect safety management system with the latest technologies.	Customer satisfaction is our highest priority and we provide rail services that exceed their satisfaction and that make people happy.	We challenge ourselves and make changes for a better future of Korea while making dreams come true.		
Management policy	<div><div>We strive to become a competitive public corporation by maintaining and operating surpluses and reducing debt with multi-directional efforts in improvement of management.</div><div>Absolute safety</div><div>Maintaining surplus</div><div>KORAIL</div><div>Creative management</div><div>Organization innovation</div><div>We lead Korea with a corporate culture of cooperation and passion through organizational innovation</div></div> <div>Building advanced safety systems and safety-first management with cutting-edge technology</div> <div>Improving the happiness of people and national competitiveness by creating a living culture focusing on station areas and KORAIL's creative economy</div>				
Management objectives by 2020	Safety operation and services	Operating profit	Customer satisfaction	Debt ratio	Sales from diversified business
	1.165 case/1 million km	KRW 6,720 billion	Grade A	174.3 %	KRW 713.8 billion
Strategic directions	Establishing an absolute safety system	Building optimal transport system	Realizing creative customer value	Improving organizational structure innovatively	Broadening future growth engines
Strategic tasks	① Establishing a comprehensive safety management system ② Securing advanced technological prowess ③ Establishing scientific maintenance system	④ Optimizing demand-oriented train operation ⑤ Expanding profit from strategic transportation ⑥ Making business operation system efficient	⑦ Reinforcing heartwarming customer services ⑧ Strengthening activities with empathy ⑨ Innovating the brand image	⑩ Innovating future-oriented organizational culture ⑪ Enhancing business management system ⑫ Habituating performance-oriented responsibility management	⑬ Extending infrastructure-based diversified businesses ⑭ Expanding the business of subsidiaries centered on core competency ⑮ Carrying forward continental and overseas railway business

Sustainability Management Structure

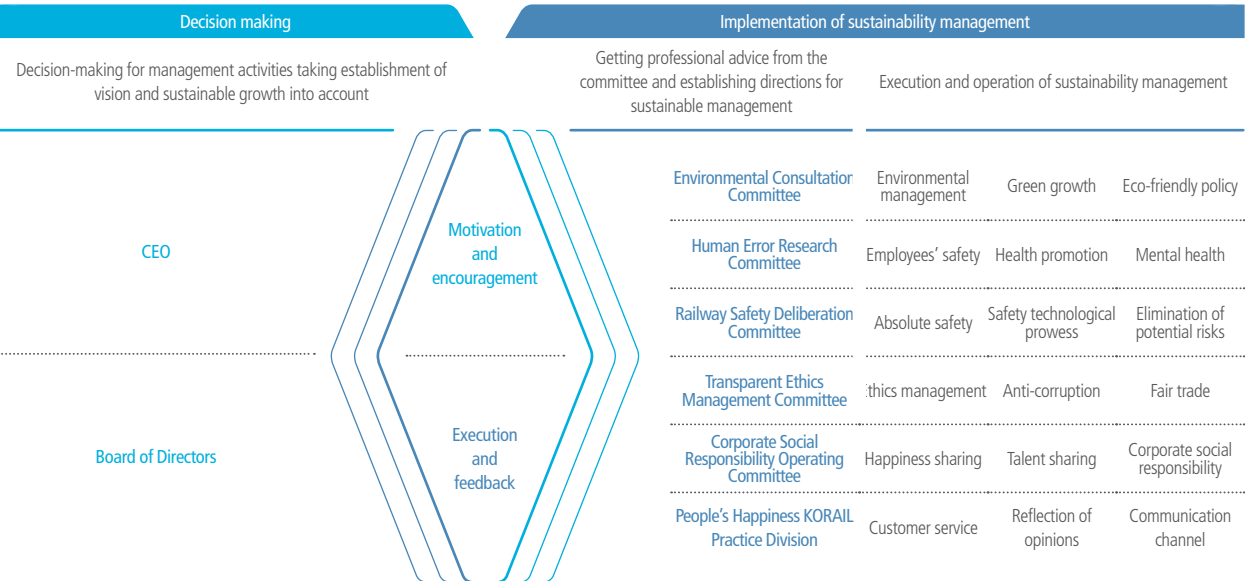
KORAIL has built and operated an integrated management system to create sustainable value for the future of the railway industry while strengthening communication channels with the stakeholders.

Sustainability Management Vision and Strategy



Sustainability Management System

KORAIL organizes 10 subcommittees with the Cultural Promotion Department as the center to strengthen the competence of sustainable management. We actively respond to social demands by continuously undertaking improvement measures.



Materiality Test and Issues

Key Issues Identified with Stakeholders

KORAIL identified key issues by understanding the interests of the internal and external stakeholders and pinpointing key issues. First, we reviewed the trends in the railway industry in Korea, overseas and issues in the relevant companies to identify the material issues of KORAIL. We then created a pool of issues by gathering news articles about KORAIL. In order to take into account opinions from value purchasing, influencing, delivering, and producing customers, we conducted interviews and surveys with the stakeholders while evaluating monitoring channels. We ensured the process of continuous, transparent, and objective procedures with various survey methods and third-party assurance.

Significant Issues of the Sustainability Management

As a result of the materiality test, some key issues have been identified which can affect KORAIL's main customers and projects. Especially, as, with people's increase of interest and and emergence of SR, the competitive system of the railroad industry started and issues on the differentiated services and customer satisfaction were drawn to the upper rank, we have decided that the growth potential which can meet people's expectation about people's safety and service was reflected materially.

STEP 1

Identification of Sustainability Issues

Benchmarking

Identified key issues discussed among companies by analyzing sustainability reports of domestic and overseas railway-related companies (ERA members)

Media analysis

Identified keywords and relevant issues by analyzing the articles from January to December 2016 to analyze the external recognition of KORAIL in the media

Trend & impact analysis

Conducted surveys and interviews with the internal and external stakeholders including employees to identify sustainability issues including issues related to external impact on and influence of KORAIL

Implementation of ISO26000

Measured the level of sustainability management of KORAIL based on ISO26000 to identify relevant issues where the company could improve

STEP 2

Selection of Material IssuesV

Relevance assessment

Identified relevant issues by assessing the relevance of the issues identified through internal/ external environmental analysis, level measurement, and stakeholder engagement

Significance assessment

Conducted online surveys with KORAIL's stakeholders to prioritize the relevant issues and select material issues

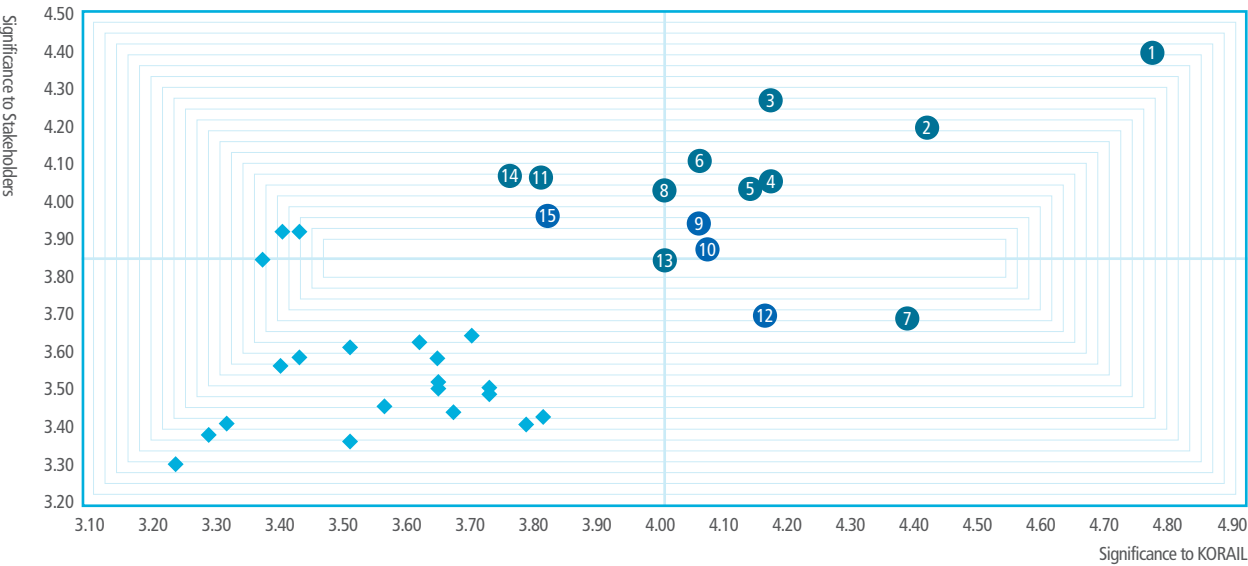
STEP 3

Validation of Completeness

Validation and third-party assurance

Reviewed the materiality of the issues selected with the internal TFT and briefing sessions with the management along with a third-party assurance to ensure objectivity and reliability
Established a plan to generate a report by determining the level of reporting such as the scope, boundary, and period

Materiality Test in 2016



	2014	2015	2016
1	Strengthening customer safety and health activities	Customers' health and safety (safe railway operation)	Customer safety and health
2	Contribution to local communities	Increased demands from customers that are diversified and intensified	Building amicable labor-management relationship
3	Strengthening employee health and safety activities	Increased importance of securing talents	Improving customer satisfaction on products and services
4	Building reasonable labor-management relationship	Customer satisfaction and provision of product/service information	Workplace safety and health
5	Mutual growth with SMEs	Increased demands from employees for welfare benefits and rights (work-life balance)	Improvement of the treatment of irregular workers
6	Strengthening technical competence	Increased importance of the mutual growth with affiliated companies	Creation and distribution of economic value
7	Compliance	Intensified competition	Indirect economic effect (investment in infrastructure)
8	Open organizational culture	Increased demand for the safety of services and products	Information security and customer privacy protection
9	Provision of eco-friendly services	Prevention of corruption	Mutual growth with subcontractors
10	Expanding customer satisfaction management	Increased demand for fair trade	Securing a new driving force for growth
11	Fair and efficient employment	Labor-management relationship	Evaluation of labor practice of subcontractors
12	Creation of economic outcome	Contribution to local communities (education, culture, outreach work, etc.)	Outreach work for local communities
13	Securing a driving force for growth	Employee education and competence development	Nondiscrimination (eradication of human right violation)
14	Energy reduction	Protection and security of customer privacy	Fair contact and procurement
15	Effort to establish fair trade order	Creation of wealth and income for local communities (job/income creation, invigoration of tourism)	Reinforcing anti-corruption and transparent management

Results of Responses to the Material Issues of KORAIL in 2016

KORAIL responded to the five key issues identified in 2016 and improved safety and customer satisfaction as a result, which is the core value of the company.

Material issues in 2015	Results of responses to the issues in 2016
Customers' health and safety (safe railway operation)	Achieved the global highest level of safety in the ERA's standards (based on railway accident rates)
Increased demands from customers that are diversified and intensified	Improved passenger bathroom environments reflecting the customers' needs and installed automated machines for station works customized for moving paths
Increased importance of securing talents	Recruited 12 talented experts in four different fields
Customer satisfaction and provision of product/service information	Improved the mileage system, expanded membership services, and KORAIL Talk services
Increased demands from employees for welfare benefits and rights (work-life balance)	Expanded non-monetary welfare services and created added value by assigning the right job

Governance

Composition of the Board of Directors

Structure of the Board of Directors

The Board of Directors, the highest decision making authority in KORAIL, is in charge of decision-making on major strategies and polices, management supervision, and support. It is composed of fifteen members. Seven of them are standing directors including CEO that are experts in the field of railway while eight of them are experts with experience in the fields of traffic, legal, and economic circles. We appoint women as non-standing directors maintaining the ratio of women in the Board of Directors at 13.3% in 2014 and 2015 and 7.14% in 2016. In addition, in order to professionally discuss and solve the core issues in each field, we have organized three subcommittees within the Board of Directors.

Board of Directors

(As of August 15 2017)



-	President & CEO
Yu Jae-yeong	Vice president (acting president)
Park Jong-jun	Standing auditor
Ra Min-chan	Senior executive of the Safety Innovation Headquarters
Gwon Tae-myeong	Senior executive of the Metropolitan Railway Headquarters
Jeong In-su	Senior executive of the Technology Convergence Headquarters
-	Vacant



Jo Seok-hong	(Present) professor at Ulsan University (executive non-standing director)
Son Bong-gyun	(Former) advisor at Yulchon LLC
Kim Yeong-ja	(Former) joint representative of the Federation of Civil Society Organization
Ju Yeong-eun	(Former) dean of the College of Government and Business at Yonsei University
Lee Yeong-geun	(Former) vice chairman at the Civil Rights Commission
Ahn Jin-hong	(Present) accountant at Daesung Accounting Corporation
Hwang Yeong-il	(Present) executive attorney at Yeon Woo Legal Professional Association
Kim Mu-hwan	(Former) Governor at Buyeo, Chungcheongnam-do

Board of Directors (Decision-making, management supervision and support)

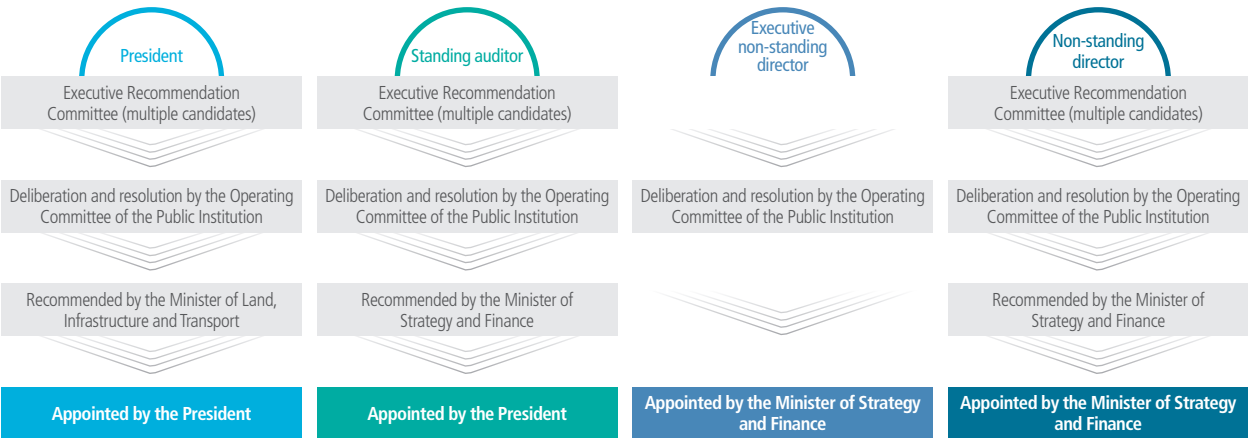
Chairman: senior non-standing director/ composition: seven standing directors, eight non-standing directors / holding: 18 times / resolved agenda: 33 items

Planning and Finance Subcommittee (Issues related to the policy making, such as management objectives, organization, budget, etc.)	Business Subcommittee (Issues related to the business operation, such as new projects, operating and transport policy, safety, etc.)	Audit Committee (Auditing on business and accounting)
• Composition four non-standing directors (Son Bong-gyun, Ju Yeong-eun, Lee Yeong-geun, Ahn Jin-hong), standing director	• Composition four non-standing directors (Jo Seok-hong, Kim Yeong-ja, Hwang Yeong-il, Kim Mu-hwan), standing director	• Composition two non-standing directors (Ju Yeong-eun, Ahn Jin-hong), standing director

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, such as traffic, management, media, law and

accounting as the pool of external members of the committee while increasing the ratio of women directors with the talented candidates recommended by the Ministry of Gender Equality and Family. We have made it a principle to publicly recruit candidates for the executive by 100%, exclude candidates recommended by the stakeholders, and make the minutes public, thereby securing the transparency and fairness of the system for selection of the executives.



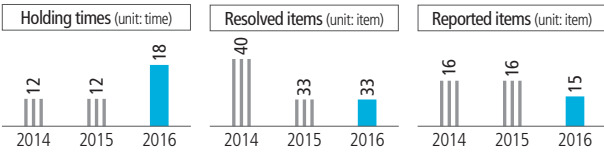
Operation of the Board of Directors

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 a virtuous circle in management structure by invigorating the Board of Directors and establishing a responsibility management system while encouraging active participation and contributions.

Operational objective	To create a virtuous cycle in management structure by invigorating the Board of Directors and establishing responsibility management system			
Strategic directions	Expanding opportunities to participate in management	Reinforcing functions to determine strategic policies	Expanding the use expertise of non-standing directors	Ensuring fairness of the Director Recommendation Committee
Actions	<ul style="list-style-type: none">• Increase opportunities for non-standing directors to speak out• Encourage advising on management• Improve the ratio of resolution after modification	<ul style="list-style-type: none">• Reinforce the field-communication management• Reinforce the preliminary deliberation system• Strengthen the prior briefing of agenda	<ul style="list-style-type: none">• Expand expertise subcommittee meetings• Operate the management advisor system• Reflect the management proposal and advice to policy making	<ul style="list-style-type: none">• Secure the propriety of composition of the executive recommendation committee• Securing the transparency of operation of the committee• Increase the participation of women
Performance indicators	Strengthening of information security management system		Reinforcing the prevention of and response to infringement accidents	

Operation of the Board of Directors

Item	2014	2015	2016
Rate of preliminary deliberation (%)	100	100	100
Rate of items modified after resolution (%)	2(5.0)	8(24.2)	3(9.1)
Attendance rate (%)	94.1	93.3	93.7
Attendance rate of non-standing directors (%)	93.5	94.8	95.8
Rate of comments made by non-standing directors (%)	69.0	70.1	69.55



Revitalizing the Operation of the Board of Directors

KORAIL has expanded site management activities to reinforce communication with the site operation and revitalize the operation of the Board of Directors. We have especially visited development project sites, railway tourism infrastructure, control, vehicle, and logistics facilities to receive strategic advice and resolve business risks preemptively, which later we applied to policy making. We ensured that all of the directors had a chance to express their opinions by announcing key agenda of meetings in advance while making sure we get an objective view of the opinions received from everyone when making important decisions. Strengthening the communication channels, we held 12 meetings in 2014 and 2015 respectively, and 18 meetings in 2016.

Item	Key agenda of the Board of Directors	Result and outcome
Agenda	Purchase of power-dispersed high-speed train (EMU-300) (proposal)	Conditionally resolved
	Plan to purchase maintenance equipment (proposal)	Resolved
	Purchase of trains for Donghae Line (Ilgwang-Taehwagang) (proposal)	Resolved
	Adoption of an appeal statement regarding the strike by the Korean Railway Workers' Union (proposal)	Modified after resolution
	Purchase of high-speed train (EMU-250) (proposal)	Resolved

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. We reinforced the policy making procedure and management support related to the fields where the non-standing directors are specialized in by operating the management advisory system with the non-standing directors and appointing them to the relevant departments. By holding subcommittee meetings specialized in the railway industry, we contributed to resolving major management issues such as assessing validity of purchase of trains and restructuring the operation for reinforcing the overall functions of the company. Moreover, we played a leading role for advancing into the Eurasia continental railway and promoting the excellence of Korean railway with active outside activities such as attending global forums and seminars on railway and holding meetings with former and present non-standing directors.

	2014	2015	2016
Management advice by standing directors (time)	22	23	21
Management suggestions by non-standing directors (case)	22	22	20
No. of suggestions adopted (case)	22	22	20

Let's KORAIL SUSTAINABILITY



Ethical Management

Human Rights Management

Risk Management

Engagement
and Communication
with Stakeholders

Ethical Management

Advancement of the Ethical Management System

Practice of Ethical Management

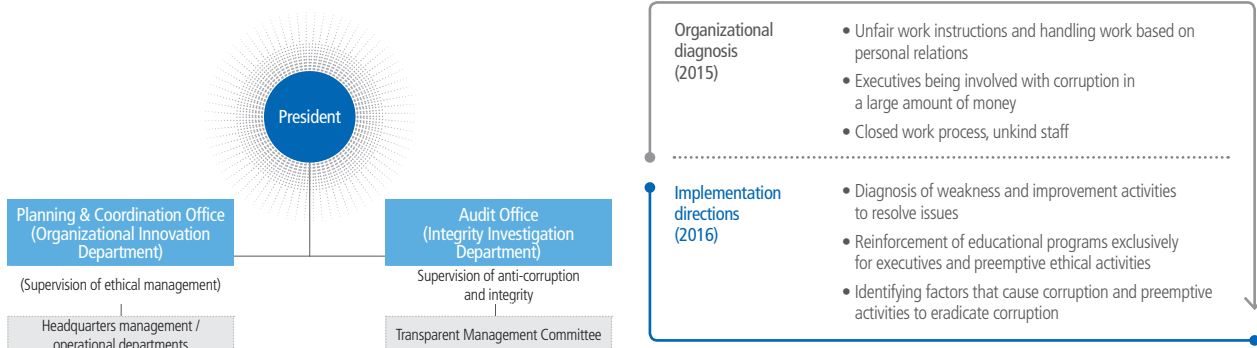
With the vision of 'KORAIL, the Happiness of the People', KORAIL strives to create an anti-corruption culture with ethical management activities of sharing and participation based on strong commitment of the employees to ethical management. KRAIL sets up and implements key strategies continually with the strategic goal of "Creating KORAIL WAY growing with and trusted by the Republic of Korea" to improve performance management and power of execution. Moreover, we encourage employees to have ethical awareness and strengthen hands-on ethical management programs to create a world-class anti-corruption culture.

Setting Ethical Management Assignments

KORAIL assigns departments dedicated to ethical management including Planning & Coordination Office, Public Relations Office, and Audit Office. We established the Ethics Charter and Code in 2015 and are practicing it by following the Employee Code of Conduct. Moreover, we analyze the organization and draw tasks of the year for improvement to fulfill our responsibility as a national company through advancement of ethical management. We identified issues regarding unfair work instructions and closed work process through organizational diagnosis in 2015. We came up with and implemented improvement measures including reinforcement of preemptive ethical activities and eradication of corruption by identifying the causes in 2016.

Vision	KORAIL, the Happiness of the People			
Strategic objective	Creating KORAIL WAY growing with and trusted by the Republic of Korea			
Key strategies	Promoting anti-corruption awareness	Organizing ethical management system	Analysis and evaluation of operational outcome	
	Integrity education for all employees Internal/external integrity campaign	Revision and reinforcement of ethical standards Improvement of the system vulnerable to corruption	Evaluation of ethics and integrity by department Feedback on the internal/external evaluation on anti-corruption	
Implementation system	Standards	Ethics Charter	Ethics Code	Employee Code of Conduct
	Dedicated departments	Planning & Coordination Office (Organizational Innovation Department) Public Relations Office (Cultural Promotion Department) Audit Office (Integrity Investigation Department)	Establishment of system to practice ethical management/ establishment and revision of the ethical standards Corporate social responsibility (CSR) /sustainability management Integrated implementation of anti-corruption and integrity activities	
Evaluation and feedback	Internal	Self-external integrity	Integrity of the management	Evaluation of the endeavor for anti-corruption and integrity
	External	Comprehensive integrity	Evaluation of policy for corruption prevention	KoBEX-SM index

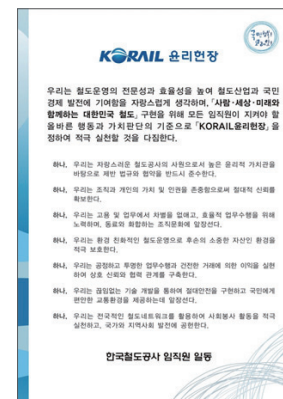
Departments Dedicated to Ethical Management



Ethical Management Activities and Outcomes

Establishment and Practice of Ethics Charter

KORAIL established the 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. We also established the Ethics Code (7 chapters, 27 articles) based on the Ethics Charter to use it as guidelines to make correct, ethical decisions.



Activities to Solidify Ethical Culture

KORAIL generates and utilizes programs and contents for ethics education to raise ethical awareness of the employees and share action plans. We trained 48 experts in integrity with programs for ethics education and ensured all 507 executives completed the integrity course 'In-Joy' by the Civil Rights Committee through the executive integrity educational program. Moreover, we strived to strengthen integrity and ethical awareness of the internal and external stakeholders through integrity concert, contents competition, and joint campaign with the affiliated institutes.

ethics education	Education on the anti-graft law	Education on the anti-graft law for all employees (August to October 2016), Distributed education booklets (15,000 booklets, November 2016)
	Trained integrity experts	Conducted ethical activities utilizing the internal experts in integrity for each department (48 people)
	Integrity education for the executives	Completed the integrity course 'In-Joy' for the executives by the Civil Rights Committee (507 executives, five sessions from 2015 to 2016)
Programs	Concerts	Performed educational musical concerts on integrity with the employees talented in acting to intrigue other employees (four times)
	Contents contest and webtoon	Nine employees won prizes at the integrity content contest by the Civil Rights Committee/ produced and spread webtoon about the anti graft law (twice a month)
	Joint campaign with relevant institutions	Conducted joint campaigns on integrity and promoting the policy (eight major stations nationwide with 400 people/year)

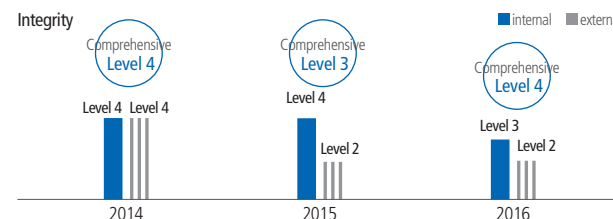
Culture of Integrity Promoted with Internal/External Ombudsmen Systems

KORAIL has internal/external ombudsmen systems in place to practice transparent, ethical management and solidify a culture of integrity. We ensure independence and expertise in auditing to strengthen our internal checks system and invest in human resources for the field of IT and accounting. This increased our expertise indicator by 1.05% from the previous year. Moreover, we promoted the internal/external ombudsmen systems by operating an anonymous reporting system, known as the "Bareumi Reporting Room" and encouraged employees to utilize it as a center to report unjustifiable conciliation and blackmailing. Such efforts in eradicating corruption and strengthening internal control resulted in a significant drop in unjustified coercion.

Accomplishments

KORAIL has conducted various activities such as organizational diagnosis, drawing implementation directions, educational programs, and diagnosis of weaknesses to encourage the employees to be engaged in ethical management actively. As a result, the grade of our external integrity increased from 4 to 3 while maintaining our internal integrity at 2. The overall integrity dropped from 3 to 4 due to the worsened reputation resulted from incidents such as strikes and corruption cases. We will continue to strive to earn trust as a national company by including measures to improve our integrity in our overall business plan in 2017.

Evaluation of the policy on anti-corruption



Grade 3

Grade 2

Grade 2

Human Rights Management

Management with Respect for Human Rights

Protection of the Rights of Employees

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. In May 2016, we attended a meeting with the UN Working Group on Business and Human Rights under the UN Human Rights Committee to review the potential and actual impact of human rights on business activities and find ways to protect human rights of the employees. 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.

Management's meeting with the UN Human Rights Committee	Company-wide training by experts in human rights	Reinforced security system
The management of KORAIL attended a meeting with multinational companies to review the impact of corporate activities on human rights	KORAIL held training sessions on human rights violation including prostitution and domestic violence	KORAIL reinforced the security system to protect the customers' privacy along with activities to prevent the leakage of personal data

Labor-Management Relationship of Respect

KORAIL has created a labor-management culture of trust and respect to realize the mission and vision of the company for smoother communication among the employees. In 2017, four trade unions were formed without interference of the management, which ensures fair trade union activities. We resolved the conflict with the trade unions on adopting performance-based pay and strived to have continuous dialogue and discussions. The representatives of the unions were given the information required for their activities at the right time which helped us create a win-win labor-management culture of respect.

(As of March 2017)

Trade Union	Korean Railway Workers' Union	Korean Railway Industry Trade Union	KORAIL Trade Union`	High-speed Railway Workers' Union
No. of members	17,391	1,803	11	4
Date of establishment	1945.11.01	2004.01.19	2012.12.31	2014.4.14
Upper-tier organization	Korean Confederation of Trade Unions	Federation of Korean Trade Unions	-	-

KORAIL's Human Rights Guidelines

Guidelines	Descriptions
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)

Fair Personnel Management System

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.

Increased Number of Women Managers

KORAIL strives to increase the presence of women employees by nurturing women managers to support gender equality at work. In 2016, the number of women managers of higher rank than team leader increased by 0.55% to 240 from the previous year while the number of women employees increased by 0.44% to 2,815. 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 Structure

Risk Management Departments

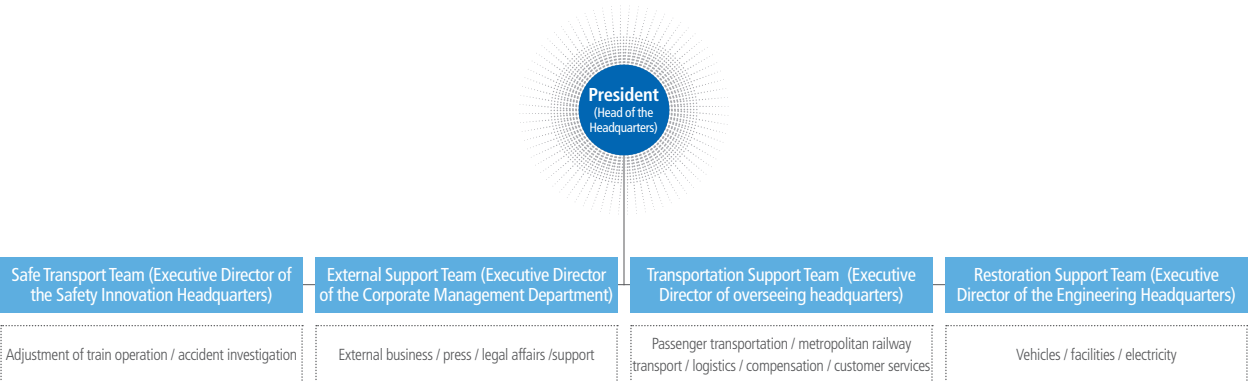
KORAIL runs a company-wide risk management system to prepare for crisis situations that may affect business operations such as potential business/financial risk, disaster risk, and facility operation to meet the needs of customers, communication, and security. We separate business risk from disaster risk while dividing business risk into investment, financial, information security, and communication risk; and disaster risk into natural/human resources disaster and railway terror attack risk. We have appointed dedicated departments in the HQ to respond to each risk efficiently.

Risk Management System and Emergency Measures Organization

KORAIL has set systems and regulations to remove financial/non-financial risk factors in railway operation and manage investments efficiently. We have an emergency measures organization in place that prepares for quick responses to disasters and crises. As management agenda priorities in 2016, we selected responding to financial risk and improvement of profitability and safety in fund management. By doing so, 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.



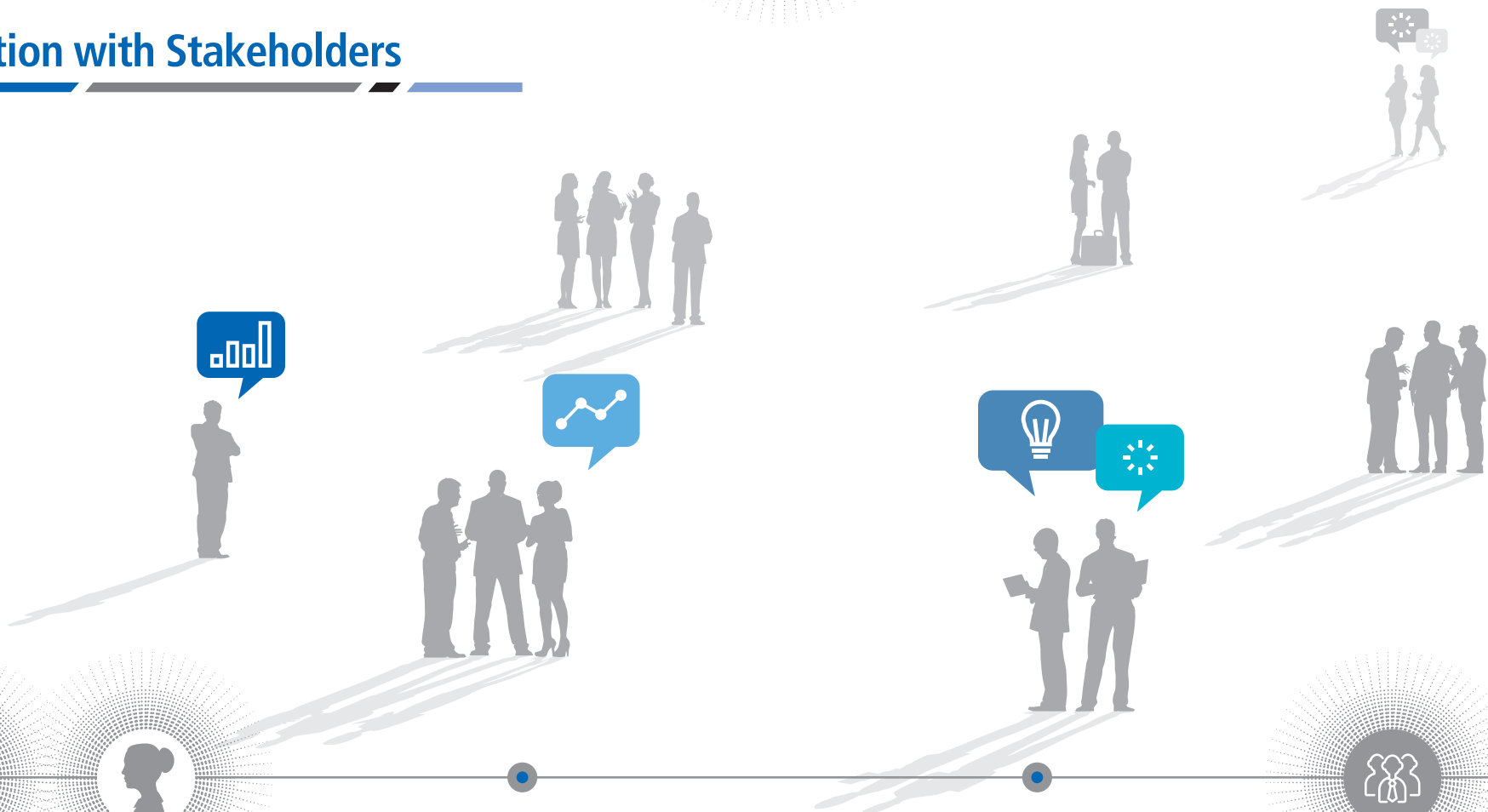
Types of risk	Subject to management	Systems and regulations	Management systems
Financial risks	Market risks	Regulations on Financial Risk Management / Manuals on Responding to Crisis / Regulations on Internal Accounting Management	Operational information system (BS) Corporate resource management system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



Engagement and Communication with Stakeholders

Integrated Communication with Stakeholders

KORAIL strives to become one of the best national companies by communicating and cooperating with our stakeholders through various channels. We ensure we receive feedback and opinions from stakeholders via two-way communication and apply them to operations. Moreover, we divide our stakeholders into value-producing, influencing, delivering, and purchasing customers to ensure we create value shared by all the stakeholders. KORAIL will continue materializing people’s happiness with continuous communication and accepting different opinions.



Stakeholder Communication Outcomes

KORAIL implements social responsibility management by sharing opinions with the internal and external stakeholders and applying them to operations to find common ground and strengthen cooperation with them. We conducted a communication campaign titled “KORAIL’s Thoughts, Talk! Talk!” to strengthen communication with the internal stakeholders, employees, and received 141 ideas that were later applied to new businesses and industrial reinvigoration.

Value-purchasing customers	Value-influencing customers	Value-delivering customers	Value-producing customers	
Customers ultimately consuming the value of the railroad service produced by KORAIL	Customer influencing either directly or indirectly KORAIL’s value creation	Customers participating in the process of providing the produced value to the customers	Customers participating in the value production activities for the external customers in the company	Definition
Customers (railway passengers) / railway institutes overseas, etc. People of Korea	Policy-making body (government agencies, National Assembly) / Principal agents of public opinion (people of Korea, press) Ministry of Land, Infrastructure and Transport	Subcontractors / partner companies	Employees, railway workers’ unions, etc. Internal employees	Stakeholders
KORAIL Talk, homepage / VOC / International railway conferences, etc.	Press conferences / fam tour / Briefing sessions on current issues, etc.	Mutual Growth Center / Project contract system / Briefing sessions, presentations, etc.	Joint Committee of Labor and Management / Junior Board / Briefing sessions and internal training / Executives on-site management activities	Communication channels
CS Planning Department / Passenger Transport Strategy Department / International Cooperation Department, etc.	Business Planning Department / Budget Department / Public Relations Department	Contract Department / Material Management Department / Station Area Development Department, etc.	Brand Management Department / Labor-Management Cooperation Department / Organizational Innovation Department, etc.	Dedicated departments

	Stakeholders	Key issues	Outcomes
Value-producing customers/ Value-influencing customers	Employees/trade unions / government	Management efficiency and profitability improvement	Held in-depth discussions, management policy shared by CEO, / conducted KORAIL’s Thoughts Talk!Talk! / discussed on improving work process / Maintained the government’s cooperation at each stage of policymaking
Value-influencing customers	Local governments, business owners	Sales of assets	Pre-negotiations on changing plans and getting license for reasonable sales
Value-producing customers	Trade unions		Built and sold offices after labor-management negotiations
Value-influencing institutes	Bond rating agencies	Reduction of financial debts	Promoted points for improvement to increase credit ratings and reduce interest costs
Value-purchasing customers	People of Korea		Disclosed debt management status via Alio and KORAIL’s website at all times

Interviews with Stakeholders

Value-influencing customer

Na Gi-cheon
Journalist at Segye Ilbo



“
KORAIL’s first responsibility: improving the convenience of the people and securing national competitiveness
”

Korea Railroad Corporation is an organization that runs the most widely used subway and trains in Korea; thus one of its most important responsibilities is to improve the convenience of the services for the people and ensure national competitiveness. Therefore, KORAIL needs to build railway infrastructure and make the organization and its functions more efficient to increase profitability with continuous innovation and development of operational know-how. As a giant public corporation, it needs to continuously practice innovation and create new ideas to realize economies of scale and become a driving force for the railway industry.

Value-producing customer

Bang Hyeong-seok
Chair of the KORAIL Trade Union



“
KORAIL should grow as a company that leads development by strengthening competitiveness
”

The recent issues within Korea Railroad Corporation include wage peak system, employment stability, development of amicable labor-management relationships and pay equity problems between new hires and high paid salary employees. I believe that we need to improve the work environment, promote wage recovery, and overcome salary discrepancies with the government’s policies while allowing transfer among jobs to resolve such issues. We need to become a company that leads long-term growth by improving competitiveness through expanding eco-friendly transportation.

Value-purchasing institute

Hwang Eun-yeong
Member of the People’s Happiness
KORAIL Practice Division



“
KORAIL needs to materialize ideas to improve the convenience of the people and operate the company to secure national competitiveness
”

Korea Railroad Corporation will need to reinforce its operation system suitable for public transportation to focus on the fact that it serves the entire nation rather than specific customers. It certainly has outstanding environments around and inside the train stations compared to other countries. However, even though its convenient facilities for customers, customized services, and applications are well-developed, there is still room for improvement regarding systems for the general public. If Korea Railroad Corporation comes up with new ideas for increasing national benefit and manages the operation aiming to secure national competitiveness, it will be able to grow with the people of Korea and improve customer satisfaction.

Value-delivering customer

Son Gang-ho
CEO of InterCon Systems



“
KORAIL needs to strive to strengthen customer satisfaction with its the products and services
”

Korea Railroad Corporation has expanded technological development and R&D to secure new driving forces for growth, while striving to improve customer satisfaction with its products and services. It has always been interested in and supported the growth of the railway industry and relevant industries with continuous endeavors to expand technological development and R&D. This includes the development of technology for high-capacity freight train operation, a remote control shunting system, an integrated protection system for alternating current railway, electric locomotive dampers, 250km/h rigid bar, and automated safety management for railway stations. Therefore, it is important for KORAIL to improve long-term organizational value and fulfill its social responsibility with absolute safety, while maintaining surplus, creative economy, and organizational innovation to grow as a sustainable company.

03

CREATE OUR FUTURE



Customer-Focused Safety

Customer-Focused
Operation and Services

Creating Economic Value

Customer-Focused Safety

Business & Social Context

KORAIL has organized an emergency response system to improve the value of the organization and fulfill its social responsibility. With the system, we strive to respond to unexpected disasters quickly and enhance the safety of the railway operation system. We have especially strengthened the safety management system to prevent accidents caused by negligence while ensuring safe railway operation with the 24-hour safety response system.

Progress

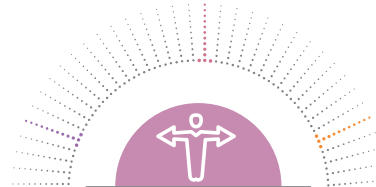
- Reinforcing scientific safety management with the newly established Safety Analysis Team
- Establishing the 2020 Safety Innovation Master Plan
- Maintaining the highest level of safety in history
- Striving for the world's highest level of safety
- Reinforcing information security



Future Plan

To allocate workforce focusing on the safety of the people

To develop a preemptive safety management system



To implement a safety management system geared for the fourth industrial revolution

Performance

- Won an excellent company award at the Korea Safety Awards
- Won the grand prize at the Safety Culture Contents (UCC)
- Contributed to raising awareness of safety culture with voluntary participation
- Acquired space certifications for major operations (since 2017)
- Selected as the 'Best Organization' in the Disaster Management Assessment
- Achieved the global top level of safety in the ERA standard
- Reduced human errors for three consecutive years



SDGs implementation status



11 Make cities and human settlements inclusive, safe, resilient and sustainable.



Customer-Focused Safety

Ensuring Safety

Safety Innovation Headquarters

With increasing expectations and demands to ensure the safety of the people in Korea, KORAIL has established an integrated safety management system focusing on improvement of safety. The Safety Office established in 2011 was upgraded to Safety Headquarters in 2013 and again to Safety and Innovation Headquarters in 2016 to be directly supervised by the KORAIL president, thereby strengthening the organization's position. The Safety and Innovation Headquarters composed of 89 people inspect the safety at train stations and offices to supervise and manage the operations while continuously training railway safety and scientific safety management professionals. With the effort put into safety and reorganized structure of the dedicated team, the industrial accident rate decreased by 18.8% in 2016 from the previous year, achieving the lowest industrial accident rate against the national disaster rate.



Advancement of Safety Management System

As safety is the first priority for KORAIL, we operate a systemic safety management system along with the emergency response system. Moreover, we have established an integrated control tower to advance the safety management system and practice scientific, preemptive management. We applied the safety standards of the International Civil Aviation Organization to our railway system and used IT-based big data to build a centralized analysis system while analyzing and managing 21,130 risk factors. Moreover, we achieved the highest level of safety including 10.8% reduction in safe operation service and 11.6% reduction in human errors by establishing a safety policy for preemptive management, advancing the crisis response system, and securing the ability to react within the so-called golden hour.

Applied the safety standard of the International Civil Aviation Organization (ICAO) to the railway system

Scientific safety management

Preemptive safety management by identifying issues related to safety and innovation

Building an integrated safety information system to utilize IT-based big data

Development and coordination of preemptive safety policy in each field

Total management of safety information in different fields utilizing conference calls

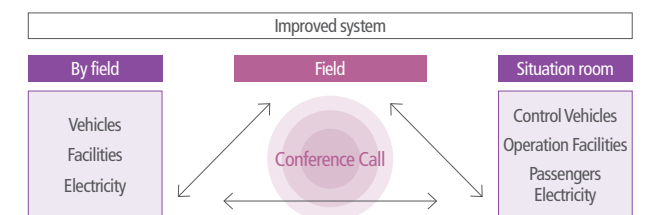
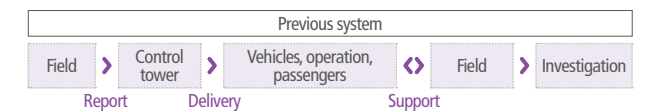
Preemptive management by making future-oriented safety policy

Conference Call Setup and Operation

KORAIL has set up and operated a conference-call system to respond to emergencies quickly and provide technical support efficiently. We built a real time response system that includes multi-party calling and simultaneous recognition of situations by the technical support team to improve the existing one-on-one calls between the field and control tower. We successfully responded to 665 abnormal situations while preventing secondary accidents and failures in a timely manner in 2016.

Preemptive Control of Risk Factors

We built a data-based risk management and analysis system to control risk factors preemptively for safety reasons. When launching new routes, we analyze potential risk factors and causes of previous accidents during the initial stage to prepare measures to prevent recurrence of the same accidents while setting a train replacement cycle through maintenance planning. Moreover, we monitored unsafe behaviors at work with high risk and reduced the daily average number of accidents from 2.8 to 0.5.



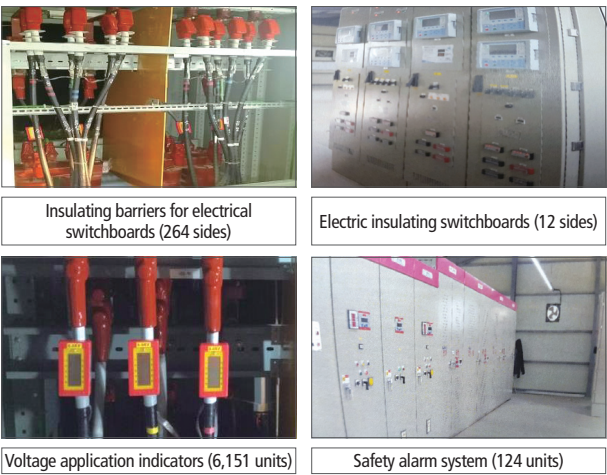
Advanced Safety Management System

	2015	2016	Increase / decrease
Safe operation service (cases/ 1 million km)	1.757	1.567	Decreased by 10.8%
Human errors (cases /1 million km)	0.611	0.540	Decreased by 11.6%
Industrial accident rate (No. of accidents /no. of employees)	0.250	0.205	Decreased by 18.0%
Investment in safety (KRW 100 million)	5,830	6,941	Increased by KRW 111.1 billion

Improvement of Facilities for ‘Safety First’

KORAIL has secured safety and invested in quality facilities as the country’s top railway operator. We adopted intelligent video analysis to respond to natural disasters such as heavy rain quickly and implemented a rail rupture prevention system to reduce railway breakdown due to rail rupture while replacing and improving electrical facilities including insulating barriers for electrical switchboards, electric insulating switchboards, voltage application indicators, and safety alarm systems. Moreover, we expanded the remote management system to 319 stations to detect failure and accidents preemptively and utilized drones to inspect safety of facilities located in areas that are difficult to access such as elevated bridges and areas of highest rock-fall hazard. We were able to ensure safety with such endeavors that allowed us to monitor disasters in real time and respond to them quickly.

Increased Number of Remote Control Systems



Embodying Safety Culture

Dedicated Team to Prevent Industrial Accidents

KORAIL formed teams dedicated to prevention of industrial accidents to raise awareness of safety and improve the work environment. Moreover, we have organized safety teams in the head office, regional headquarters, and on-site and expanded workforce for each team. We mitigated risk factors by increasing safety equipment for workers and analyzing industrial accident cases over the past 11 years. This allowed us to prevent accidents such as electric shock and falls. As a result of the scientific and systemic industrial safety operation, we were able to reduce the number of injuries caused by industrial accidents from 69 cases in 2015 to 56 in 2016, thus achieving the lowest industrial accident rate of 0.205% against the national industrial accident rate of 0.500%.

Safety of the People

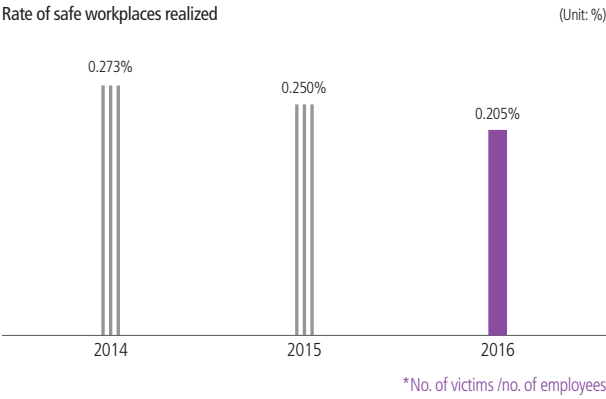
KORAIL focused on preemptive activities to ensure national safety with having responsibility to handle safety accidents. We clearly defined drill and response procedures for each department to respond to natural disasters systemically and conducted our own autonomous drill, going beyond the formal Eulji Drill led by the government to ensure our responsibility and commitment to national security. Furthermore, we visited the site to provide the employees with practical training for disaster response. As a result of these endeavors, we were selected as the best public corporation for disaster management assessment and received a citation for practicing the Eulji Drill and establishing an emergency preparedness plan.

Raising Safety Awareness of Employees at All Levels

KORAIL runs training sessions and educational programs to raise safety awareness of employees at all levels not only for the company but also the safety of the country. We designate a monthly safety day to raise awareness of safety and provide the employees with educational programs. For the employees to practice safety culture in their daily lives, we created and handed out video clips on safety culture. Moreover, we installed a hotline directly connecting to Gangwon-do Office, allowing the field to establish measures to rescue injured passengers from accidents and build efficient response system with supplying goods while disaster data can be shared for better cooperation internally, thereby creating a cooperative system to raise safety awareness for the safety of the people.

Establishment of Master Plan on Safety Innovation

KORAIL established the Master Plan on Safety Innovation 2020 to realize a safe railway trusted by the people of Korea and respond to the increasing demand for safety. We reviewed the existing safety strategy and benchmarked the safety culture of advanced railway corporations overseas to seek measures to innovate the safety management system. Moreover, we upgraded the existing post-control safety management system to an IT data based



Item	Previous operation (until 2015)	Improved operation (2016 to 2020)	Effects
Changes in strategy	<ul style="list-style-type: none">Formal, post-control safety managementSelective, passive management focusing on casesLabor-centered passive maintenance	<ul style="list-style-type: none">Building data based preemptive safety systemTotal management that is systemic and scientificCutting-edge maintenance utilizing scientific technology	<ul style="list-style-type: none">Proactive response to changes in the safety environmentFoundation for safety innovation by identifying smart safety management tasks
Budget assigned	Investing a total of KRW 5,824.2 billion for railway safety management by 2020		

preemptive safety system to have proactive response measures while replacing labor-centered passive maintenance with cutting-edge maintenance that utilizes scientific technology to ensure an efficient and innovative safety strategy.

Advancement of Disaster Response System

KORAIL shaped its disaster response system based on 117 years of know-how in railway operation and scientific analysis to quickly respond to disasters and exceptional situations. With our manuals for integrated crisis management we operate a regular operation monitoring room and hotline between KORAIL and the Ministry of Public Safety and Security for direct reporting of accidents and securing the golden hour.

Prevention Measures for Symbiotic Safety

To ensure symbiotic safety together with partner companies, KORAIL has formed a Symbiotic Safety Committee and provide its partners with consulting services on the prevention of industrial accidents. We held 1,304 briefing sessions for construction companies and educated them with 762 accident cases while providing 157 consultations and 693 sessions of training on industrial safety and health. Moreover, we handed out safety vests to reduce safety accidents of workers working on railroads and developed a train proximity alert system to reinforce the safety management and supervision system. Such efforts have helped the contractors improve their safety management.

Safety vests



Safety Competitive Edge

Shifting Paradigm of Railway Safety

KORAIL has shifted the paradigm of railway safety to prioritize and perform scientific safety management and identify tasks for safety innovation. We held the first railway safety innovation committee in July 2016 to shift the existing paradigm and establish future-oriented safety measures. The committee is composed of experts in five fields including safety, operation, vehicles, facilities, and electricity. It established systematic safety management measures with real-time risk factor analysis and paradigm measures for innovative railway safety system to eradicate train accidents. Moreover, we developed a preemptive safety management system by establishing the Safety Policy Coordination Office to set up a framework for coordination functions for safety policy

Support for Complete SRT Opening

We have introduced and deployed our own know-how in safety management as the national railway network was expanded, railway facilities increased, and maintenance technology became complicated with the opening of the SRT. We prescribed maintenance procedures for all trains, reinforced the competence of the operators, and advanced the control tower operation by identifying risk factors derived from the introduction of new high-speed trains of SR, binary maintenance, and system changes. To minimize failures and stabilize train operation during the initial stages of the operation, we established control standards for safety, control, and maintenance along with special safety measures. This contributed to stable train operations with a low monthly accident rate of 1.67 cases.

Data-based Risk Management

KORAIL established a data-based risk management and analysis system to prevent safety accidents by applying cutting-edge IT technology to railway operation. We developed a safety management system by linking crisis response manuals with the company-wide resource management system KOVIS and established measures to manage risk factors preemptively. Moreover, we analyzed accidents to prevent similar accidents or failures from occurring with maintenance in advance and reduced unsafe activities in areas with high risks of repetitive safety accidents by studying high-speed line CCTV. Through such efforts, our accident and failure rate was the lowest in history last year.

The Highest Level of Safety Achieved in Company History

KORAIL prioritizes safety management to handle unsafe factors such as aging facilities and human errors. We built a control tower and established safety policy to disperse the inspection and supervision functions while reinforcing safety management in each field. Utilizing IT-based big data, we operated centralized analysis system that promoted the company as a safety-centered organization. Accordingly, we successfully improved safe operation service rate by 10.8% and reduced human errors by 11.6%, thereby realizing a safe work environment. We will continue striving to put company-wide efforts into scientific safety management to improve competitiveness.

Personal Information Management System (PIMS) Certification

Certification scope	Train ticket reservation and issuance services
Certification period	December 2016 -December 2019 Annual post-examination for the certification
Certification items	• 104 items in 18 sectors (Management process) 12 items in 5 sectors: policymaking, risk management, protection measures, etc. (Protection measures) 92 items in 13 sectors: security against outsiders, asset clarification, password control, etc.
Certification institute	Korea Internet & Security Agency (KISA)

Objectives of the systematic information security management system and action plans

Establishment of response system to cyber crisis	Expansion of the national security infrastructure	Prevention of the invasion of national core facilities	Reinforcement of user protection and supervision
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Objective	Achieve the highest level of information security for public corporations			
Strategic assignments	Improving the information security management system	Advancing the information security infrastructure	Reinforcing invasion accidents and response to the accidents	Reinforcing activities to protect personal data
Action plans	• Strengthen the functions of the information security organization • Increase the budget for information security • Acquire the information security management system (ISMS) certification	• Separate the work network from the internet network • Deploy information protection equipment against new types of cyber threats • Reinforce autonomous security control	• Prevent cyber intrusion accidents • Identify risk factors at major infrastructure • Prevent the leakage of internal data	• Maintain the PIMS certification • Improve the result from the diagnostic assessment of management level • Provide consultations to affiliated companies

Reinforcement of Customer Information Security

Reinforcement of Information Security Management System

To achieve the highest level of information security among public corporations, KORAIL reinforced measures to prevent and respond to infringements by bolstering the management system and advancing the infrastructure. We strengthened the functions of the information security organization, increased the number of professionals, and merged the security operation work into the headquarters to improve the power of execution for information security. We assigned staff dedicated to privacy protection, recruited experienced security controllers, and acquired ISMS certification for information protection management in 104 items in 18 fields including policymaking, risk management, and protection measures to protect the personal data of KORAIL customers.

Securing Personal Information Management Capabilities

KORAIL prohibits the collection and use of resident registration numbers in order to prevent the leakage of personal data. As we use i-Pin and mobile phone numbers as means of identification, we destroyed 1.75 million cases of personal data. Moreover, we removed the three unused systems after reviewing the necessity of such systems and are currently use eight systems to process personal data. To raise awareness of personal data protection of our employees, we designate a Personal Data Clean Day to destroy unnecessarily stored personal data and hand out promotional materials about privacy protection practices. As a result, we received a score of 95.79 from the diagnostic assessment of privacy protection management conducted by the Ministry of Government Administration and Home Affairs, marking the highest level among the public corporations.

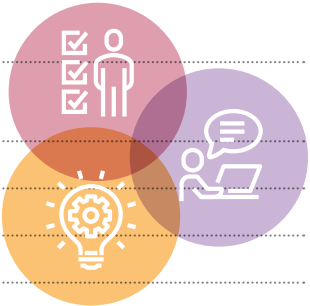
Customer-Focused Operations and Services

Business & Social Context

KORAIL strives to satisfy customers and provide them with convenient, quality services by placing the customers at the center of the operation. Starting and ending our day with the people of Korea, we are committed to meet the requirements of the customers by not only playing our role as a transportation provider but also building infrastructure for transport and logistics to ensure we provide them with the best services.

Progress

- Redesigned the aging stations to improve the quality of services
- Improved convenient facilities for the transportation of vulnerable sectors of the population
- Provided differentiated services to satisfy the needs of the customers
- Opened the CRM department to promote marketing
- Focused on passenger service capabilities



Future Plan



Performance

- Won a bronze prize in the 18th Beautiful Bathroom Award
- Received a plaque for the Happy Train Bound for Forest from the Minster of Education
- Won the best national prize in the local government administration service sector
- Promoted the excellence of Hangeul with King Sejong- and Hangeul- themed marketing
- Achieved an outstanding grade in customer satisfaction with consistent customer care



SDGs implementation status



- 9 Construct resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- 11 Make cities and human settlements inclusive, safe, resilient and sustainable

Customer-Focused Operations and Services

Customer-Focused Operations

Customer Needs Driven Products

KORAIL develops products and executes promotional activities to provide customers with pleasant travel services and improve convenience by offering customer-needs-driven services. We have introduced a loyalty program to fulfill customer needs and demands, implemented tiered services and ticket reservation system for teenagers while developing customized, discounted products to encourage people to use trains. With the improved services such as ‘Cheer Up, Youth’ and ‘Happiness for KTX Family with Multiple Children’ and other Internet deals, 4.3 million passengers benefited from discounts and deals in the past year.

Customized Discount Benefits

Product name	Purpose	Target	Benefit	No. of passengers benefited	Discount amount
KTX for Moms	To encourage pregnancy	Pregnant women	First class at regular class fair	22,000	KRW 340 million
Cheer Up Youth	To support young adult employment	Job seekers	Up to 40% discount on KTX tickets	261,000	KRW 2.57 billion
Youth Dream	To support teenagers’ travel	Teenagers and young adults aged between 13 and 24	Up to 30% discount on KTX tickets	360,000	KRW 315 million
Love Trip KTX	To encourage domestic travel	All persons	Up to 30% discount on KTX tickets	In progress in 2017	

Strengthened Communication with Voice of Customer (VOC)

KORAIL collects feedback from customers to provide them with gratifying railway services. We listen to customers through various channels both online and offline such as homepage, customer center, visits, and letters to resolve any of their inconveniences. By analyzing their feedback, we preemptively take measures to prevent any inconvenience that may recur, improve and develop new products. By doing so, we will strive to drop the ratio of complaints in the VOC and ultimately, make it zero.

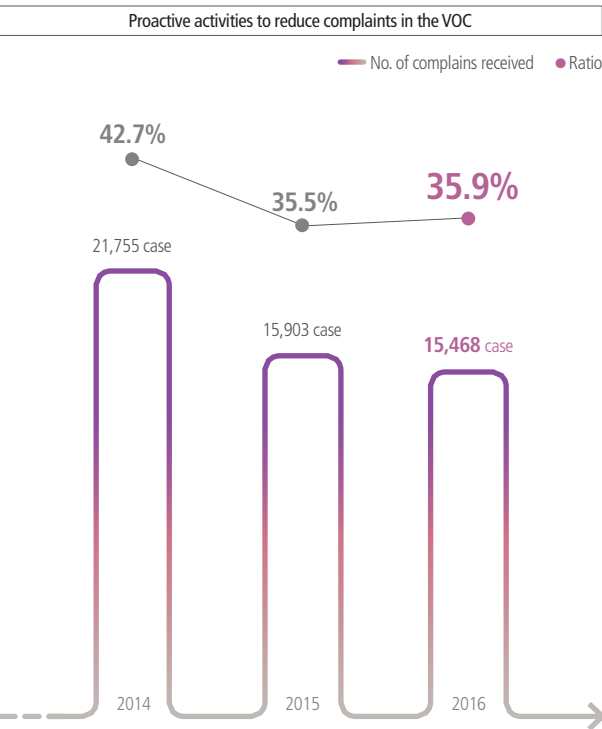
Activities to prevent complaints in the VOC

Proactive measures for VOC	Analyzes the VOC data of the past three years when railway operation is to be affected by adverse weather conditions such as cold weather, heat wave, rainy season, heavy rain or snow and the number of passengers is expected to increase significantly due to holidays such as Chuseok, Seolnal, college exams, vacation seasons, autumn trips, spring trips, and other holidays to prepare and implement proactive measures.
HOT-VOC improvement meeting	When repetitive VOC is received or measures to improve the customer convenience requires more than one department’s work, relevant departments together prepare and implement solutions.
CS supporter system	Prevents customer inconvenience by listing complaints from daily train users and employees who commute with trains for improvement.

Grade A in Customer Satisfaction for Four Consecutive Years

KORAIL received the highest score from the customer satisfaction survey of public institutions, maintaining grade A for four consecutive years. Although KORAIL is in a strong position to accomplish such results since it serves an average of 3.5 million customers daily, which is a significantly higher number compared to other public institutions, we have strived to improve customer convenience and innovate services focusing on the KORAIL Customer Service Charter. Moreover, we introduced the customer experience management system to improve customer satisfaction by changing the paradigm of customer satisfaction management. This led us to achieve grade A in the customer satisfaction survey of public institutions in 2016.

Ratio of complaints in the VOC



Improvement of Convenient Facilities for the Transport Vulnerable

KORAIL strives to improve convenient facilities for the transport vulnerable sectors of the population in order to deliver the core values of the company, and customer satisfaction. For people with mobility obstacles such as seniors, pregnant women, passengers with children, and children, we have opened nursing rooms in five stations and remodeled two stations to install wheelchair lifts. Moreover, we continuously work on expanding convenient facilities to help the transport vulnerable use transportation and operate railway transportation in rural areas for non-profit purposes.

Tailored Customer Loyalty Program

KORAIL introduced a tailored customer loyalty program with various benefits to satisfy all customers. With surveys and consultations, we created a tiered-benefit program and membership services from which customers can benefit. Moreover, we upgraded discount coupon schemes to KTX mileage accumulation system, extending the period of validity from three months to five years. Customers are now able to use discount coupons at stores in train stations which, together with the tiered mileage system, helped us increase sales by KRW 254.2 billion.

Mileage Program

Classification	Previous policy	New policy
Benefit	Discount coupons	KTX membership point (mileage)
Eligibility	Frequent rail users	All members
When to redeem	When the coupons are provided	Points accumulated and redeemed anytime
Period of validity	Within three months	Within five years
Where to redeem	When purchasing train tickets (at the ticket booth)	At the ticket booth and stores in train stations

Maximizing Customer-Focused Services

Reinforcement of Service Competitiveness

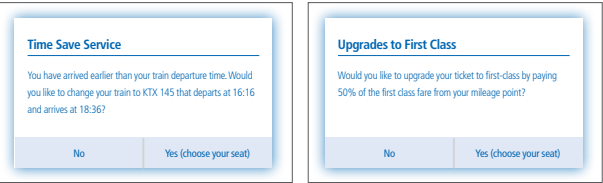
KORAIL will provide ICT-based differentiated services, improve station buildings, and introduce a mileage system by 2017 to improve our service competitiveness. To manage the construction of railway and maintain information systemically, we are planning to build an integrated information system on history management of railway facilities, apply ICT to location based services to improve management efficiency of facilities, and reinforce services for the national safety. In October 2016, we introduced a double-mileage point system on top of the basic 5% mileage point for the total payment as there had been demand from the customers for discounts for using KTX trains.

ICT Based Payment Method

KORAIL has introduced the upgraded KORAIL Talk Plus designed to provide ticket purchasing and other services to improve customer-focused services.

Using GPS, the system sends helpful notifications on train schedules to passengers if they arrive earlier than their reserved train so that they can take an earlier train. The system also provides simple reservation menu and purchase of personal goods using QR codes. Moreover, we provide ticket reservation services via phone calls along with “customized prestige reservation services” for those who are unable to book online to ensure ticket reservation process is customer centered.

Push Notifications



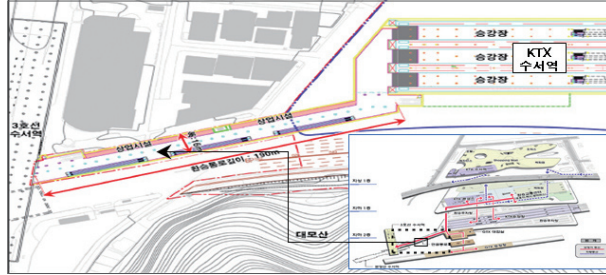
Flexible Train Operation

KORAIL increases the number of trains operated during rush hours and hours where the demand is high to increase customer satisfaction. We analyze the demand for each line, route, and time frame and prepare measures for improvement to increase the number of trains operated during peak hours or busy routes on weekends. With our effort in revitalizing the local economy with flexibility in operating trains, we increased customer convenience by increasing ten-fold the number of Mugunghwa trains operated between Seoul and Busan and the number of Saemaeul trains.

Improved Flow of Human Traffic for Transfer

KORAIL minimized the flow of human traffic in major stations for transfer to provide customer-centered services and increase customer satisfaction while responding to the competition in railway operation. We especially improved the flow of human traffic for transfer in stations where the number of passengers was significantly increased by appointing the Station Service System Department as the dedicated team to centralize relevant work. As a result, we successfully reduced the transfer time in Seoul Station, one of the busiest and complicated stations for transfer due to multiple lines operated including subway Line 1, Line 3, Airport Railway, Gyeongui, Jungang Line, and KTX, to 2 minutes 25 seconds. Moreover, we improved the time value for the passengers of regular trains by reducing transfer waiting time by up to 15 minutes through increasing the number of trains where passengers are allowed to transfer between KTX and regular trains to 42 times.





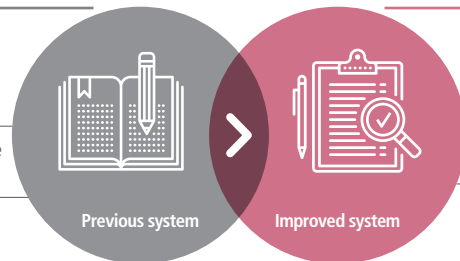
Improved transfer path at Suseo Station with launch of SRT

Seven Differentiated Service Strategies

KORAIL plans to upgrade customer convenience with the seven strategies for differentiating services. We established the seven strategies through the marketing mix including trains, systems, facilities, and promotion to draw up 31 action plans focusing on the high visibility services. We improved the convenience and competitiveness with the seven strategies that included optimization of train operation, convenient use of trains, balanced fare policy, improvement of passenger system, convenient use of stations, expansion of membership benefits, and enhancement of IT services.

Ten improvement points for passenger operation system

- Standing seats are only issued at train stations and ticket purchasing process for foreigners is complicated/restricted due to payment methods
- The period to claim a refund is too short/complicated while the available refund methods are limited
- Limited compensation methods (cash, coupons)



- Standing seats are available online (mobile) and waiting time has been reduced
More payment methods are available for foreigners
- Refund methods have been diversified and the period has been extended
- Compensation methods have been diversified (mileage points added)

Improving Value to Meet the Needs and Demands of Customers

National Project of Happy-House Construction Program

KORAIL sponsors the Happy-House Construction Program, a national project designed to support stable housing for low-income families. With trial projects, we built 890 houses near Oryudong Station and 362 houses near Gajwa Station and are planning to construct more houses near Dongnae, Gwangju, and Dongjiksang Stations. The project contributed to improvement of financial projects and the local economy by adding value to the unused land and stable housing for low-income families by providing 3,405 houses.

Expanded Train Route to the Outskirts Areas

KORAIL expanded railway operation after identifying the needs for the convenience of transportation by the residents outside the metropolitan area. After expanding the route of the Gwacheon-Ansan Line as the Songdo-Incheon route was launched, we saw 467 users of the extended line. We expanded the Jungang Line for the residents in the eastern side of Gyeonggi-do could be benefited from the metropolitan railway. Moreover, we extended the route of the Gyeongchun Line from Sangbong Station to Cheongnyangni Station to improve customer convenience.

Increased Number of Shuttle Buses

KORAIL increased the number of shuttle buses operated for KTX passengers at Gwangmyeong Station. During the rush hours in the morning and evening, we now operate the shuttle bus 40 times, increased from 20 times, to improve accessibility of the residents in the southwestern region to Gwangmyeong

Station and mitigate the burden of fares for the high-speed trains. In the first month of the shuttle bus service in January 2017, there were 810 passengers who enjoyed the service, 1,202 in February, 1,423 in March, 1,550 in April, doubling the number of passengers in five months.

Services Reflecting Customers' Needs

KORAIL installed convenient facilities in the right place and at the right time to reflect the needs of the customers. Some of the convenient facilities we started providing last year include the shuttle bus service at Gwangmyeong Station, UX-centered KORAIL Talk +, and USB & recharging stands at stations. Such efforts paid off with the Korea Communication Grand Prize 2016 and an award at the Loved Companies in Korea.



Shuttle bus



USB · charging stations



UX centered KORAIL Talk+



Business zone

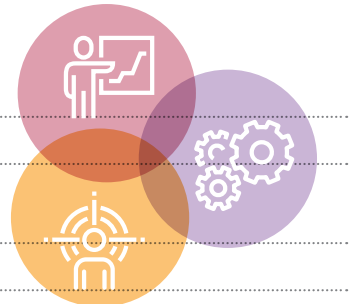
Creating Economic Value

Business & Social Context

KORAIL strives to revitalize recessed areas and create jobs by developing tourism belts connected with the railway infrastructure nationwide. We launched "miracle trains" that invigorated the local economy through the five railway tourism belts that allow tourists to experience the unique local culture. Building a virtuous circle of the tour program operation from technology development to purchasing, we put continuous efforts into strengthening competitiveness into expanding our business globally.

Progress

- Developing new businesses and generating revenues by diversifying businesses
- Providing Door- to-Door services
- Utilizing the unused space that satisfies the customer needs and generates revenue
- Providing core-technology-based consulting services

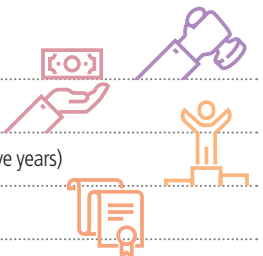


Future Plan



Performance

- Received credit rating of AAA
- Achieved sales of KRW 5,693.6 billion (highest in history)
- Achieved operating profit of KRW 121.6 billion (surplus for three consecutive years)
- Maintained Moody's rating of Aa2



SDGs implementation status

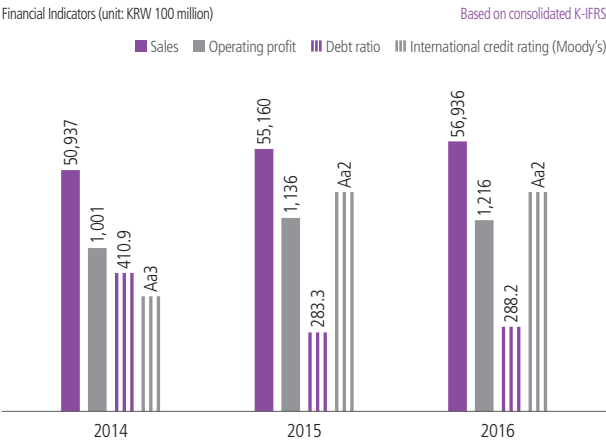
Creating Economic Value

Economic Value Creation, Distribution, and Management

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 a surplus for a third consecutive year in 2016. We saw sales of KRW 5,693.6 billion in 2016, which showed an increase by KRW 177.65 billion from KRW 5,516 billion in 2015. The value earned from the operation of the business is distributed among operating costs, supply purchase, and taxes which are then again distributed to other companies or local communities, thereby affecting the community both directly and indirectly.

Category	2014	2015	2016	Remarks
Creation of economic value (A)	51,196	61,470	55,587	
Sales	48,076	52,207	53,651	
Financial profit, disposal of assets, etc.	3,120	9,263	1,936	
Distributed economic value (B)	50,497	51,948	53,877	
Employees	19,681	21,929	22,407	Salary, compensations, welfare expenses, severance pay, etc.
Partner companies	24,867	26,682	26,503	Facility fees, consignment fees, etc.
Investors	5,389	4,802	4,174	Interest expenses
Government agencies	131	(1,920)	225	National, corporate, local taxes
Customers/local communities	429	455	568	Corporate social responsibility, KTX discounts, etc.
Surplus economic value (A-B)	699	9,522	1,710	



Enhancing Financial Soundness and Corporate Responsibility

In 2016, KORAIL handled a normal wage lawsuit of KORAIL Tourism Development, which increased the ratio of the operating cost. We also saw a decreased net profit during the term due to the debt incurred from the delayed lawsuit on the Yongsan development project and increased investment in new businesses. Improving management accountability, we contributed to revitalizing the local economy by operating new businesses utilizing our assets in the station neighborhoods while improving our financial soundness with efficient train operation. As a result of launching new routes and improving transport businesses, we saw an increase of KRW 175.5billion in sales, reduced KRW 57.9billion in costs, thereby overachieving the goal of interest coverage ratio. Furthermore, we maintained the highest domestic credit rating of AAA and international credit rating of Aa2.

Financial goal in 2016	Debt of KRW 13.9 trillion / debt ratio of 217.1%		
Measures to achieve the goal	Maintaining surplus in sales	Optimizing asset operation	Maintaining appropriate amount of investment
Effort to improve the financial structure	Maintaining surplus in sales	Management efficiency	Labor efficiency / established and operated transport system reflecting changes in railway environment
		Profitability improvement	Increased in sales by KRW 177.5 billion by reinforcing the key transport business
		Cost reduction	Decreased costs of KRW 57.9 billion
	Optimizing asset operation	Disposed assets worth KRW 95.8 billion through reinforced cooperation with local governments / Operated and strengthened manpower for the department dedicated to lawsuits	
	Maintaining appropriate amount of investment	Saved KRW 9.9 billion in investments by prioritizing and selecting businesses for investment	
Task carried out	An increase of KRW 177.5 billion in sales		

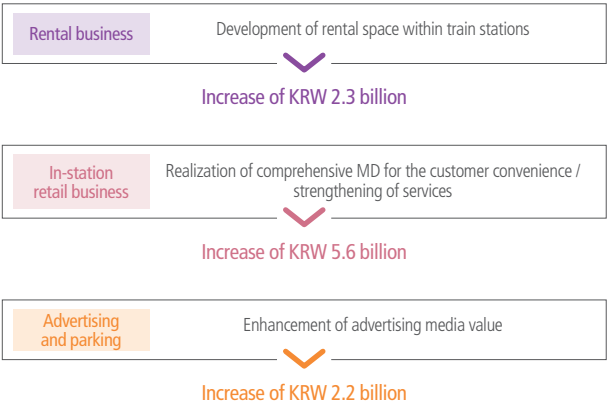
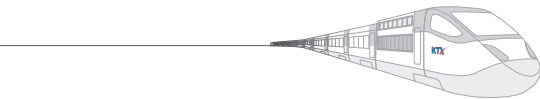
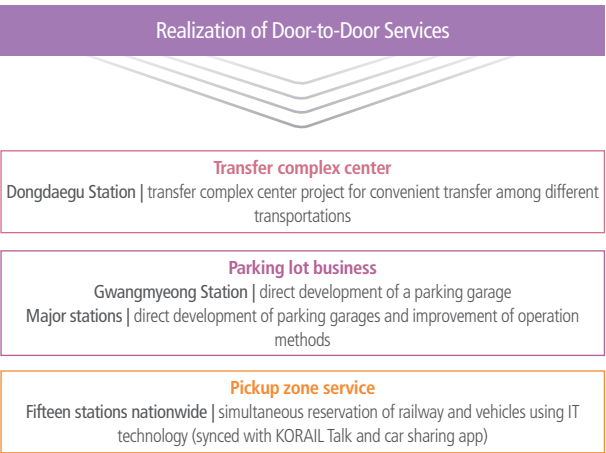
Securing New Growth Engine

New Business Development and Business Diversification

In order for us to become an organization optimized for securing a new force for growth and developing new business, KORAIL restructured the organization in large measure. We established the Strategic Planning Office and promoted a culture of discussion to secure competitiveness with creative and innovative ideas while strengthening communication with the new communication platform, KORAIL's Talk! Talk! Moreover, we formed a control tower, the highest decision-making authority within the company composed of many different departments including the Strategic Planning Office, the IT Management Office, the Design Center, and the Legal Department under the CEO's direct supervision to facilitate quick decision-making. We hired experienced professionals in core technology who contributed to diversifying our operation to rental business, in-station sales, advertising, and parking business as well as improvement of productivity with the development of railway technology for the future.

Becoming a Comprehensive Transportation Company

To become a comprehensive transportation provider, going beyond providing railway transport services, for sustainable growth, KORAIL realizes door-to-door based services that take care of the entire process of customers' journey from their departure to arrival. For example, we are in the process of building a transfer center for the convenience of transfer in Dongdaegu Station, developing a parking garage in Gwangmyeong Station, and IT-based simultaneous reservation system of both railway and vehicles. These projects are expected to improve profitability, revitalize the local economy, and improve user convenience. Moreover, we strive for future growth by generating revenue through creating cultural space near train stations.

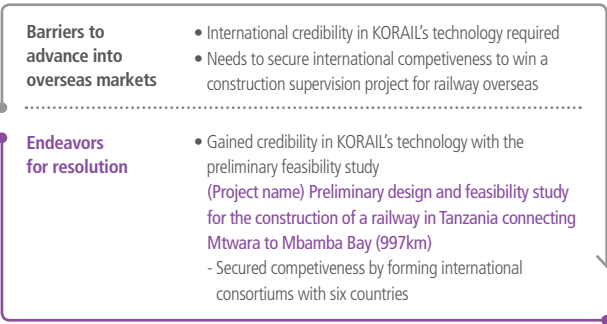


Adoption and Development of IT

Adopting systems where technology and robots are converged utilizing scientific technology, KORAIL is leading the advancement of railway technology. We have been running a 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.

Overseas Markets

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 & maintenance (O&M) business and high-value added consulting business to generate stable revenues. To gain credibility in our technology to expand to the global market, we conducted preliminary design and feasibility study for the construction of a railway in Tanzania connecting Mtwara to Mbamba Bay while forming international consortiums in Korea and overseas to secure competitiveness. As a result, we successfully expanded our business and won a construction supervision project for the central line in Tanzania worth KRW 54.6 billion.



04

COMMON BENEFIT WITH SOCIETY



 Mutual Growth

 Open Employment

 Constructive Workplace

 Social Contribution

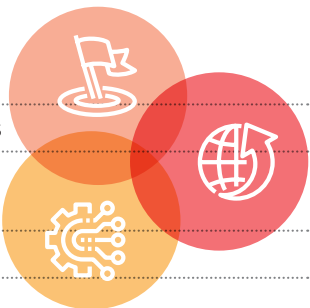
Mutual Growth

Business & Social Context

KORAIL strives to become a foundation for growth for other companies as we recognize the importance of mutual growth in fulfilling our social role. We develop our own business models for mutual growth by reinforcing technological cooperation with SMEs and expanding services to provide information to them. Moreover, we are building a cooperative structure for mutual growth by signing MOUs with relevant institutes.

Progress

- Boosting the local economy in rural areas with development of tourism products
- Creating themed stations and linked them with the five tourism belts
- Developing new products using KORAIL brands and CI and expanding to overseas markets
- Strengthening technological cooperation with SMEs
- Supporting SMEs for their sales and channel expansion



Future Plan

To promote technological cooperating by discovering technology development companies

To give more opportunities to SMEs to compete in the market

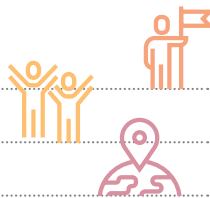
To pioneer new sales channels overseas

To expand O&M businesses to overseas together with SMEs

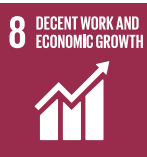


Performance

- Received a presidential plaque for promoting public purchases
- Received a government award in the Beloved Companies in Korea Awards
- Helped local businesses increase revenue by promoting small stations



SDGs implementation status



8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

12 Ensure sustainable consumption and production patterns



Mutual Growth

Plans for Shared Growth

Mutual Growth System

KORAIL has pursued mutual growth by sharing technical know-how with partner companies including social enterprises while striving to develop the railway industry and create a corporate culture of win-win. Moreover, we established a mutual growth goal of “KORAIL for the Happiness of the People Together with SMEs” and strategies including establishing the companywide SME support system, reinforcing the executive power for promoting the mutual growth, and developing the business model for mutual growth and win-win. We increased the number of employees at the Mutual Growth Center by five from 2015 to 2016.

Organization	No. of employees in 2015	No. of employees in 2016 (+/- from the previous year)	Duty
Overall Support Team	4	4	Overall support for mutual growth
Fair Trade Support Team	6	9 (increased by 3)	Relaxing regulations and improving the system
Business and Market Support Team	6	8 (increased by 2)	Mutual growth by linking with tourism products /Renting space within stations when expanding to overseas markets
Safety Engineering Support Team	5	5	Technical and environmental consulting and support/safety and health consulting and support
Fair Trade Support Team	2	2	Joint R&D
Public Purchase Support Team	28	28	Expanding public purchases including purchasing goods recommended by the government
Total	51	56	

Goal	KORAIL for the Happiness of the People Together with SMEs		
Strategic assignments	Advancing the system to pursue mutual growth	Forming foundation to establish a fair global trade order	Developing business models for mutual growth
Key assignments	<ul style="list-style-type: none">• Reinforcing the capabilities of the organization in charge• Improving communication for mutual growth	<ul style="list-style-type: none">• Supporting the base for mutual growth• Expanding the purchase of government-recommended supplies	<ul style="list-style-type: none">• Supporting the market for SMEs• Strengthening technical cooperation with SMEs• Promoting and advancing performance sharing system
Detailed action	Establish and execute detailed action plans for each business		
Review and feedback	Monitoring system	Evaluation and incentives	Annual feedback
	<ul style="list-style-type: none">• Committees, conferences, workshops• Collecting opinions from partner companies	<ul style="list-style-type: none">• Evaluating departments and executive directors• Awarding employees with outstanding performance	<ul style="list-style-type: none">• Analyzing the outcome and concerns• Reflecting the result to the action plan for mutual growth

Advancement of the Framework for Mutual Growth

KORAIL is advancing the framework for mutual growth to secure the competitiveness of the railway industry and promote cooperation with SMEs. To strengthen our capability to carry out mutual growth, we expanded the dedicated department, clarified performance indicators for different teams, and set KPIs. Adopting the performance sharing system as our internal management evaluation indicators, we identified 13 cases of performance

sharing models 2016 as opposed to 12 cases in 2015. Moreover, we benchmarked other companies with outstanding performance and held workshops to nurture key talents for mutual growth and improve incentives, which granted 29 cases of compensations inside and outside the company. We launched a communication channel for cooperation called Alimi that notifies information on contracts and provided information on 2,226 contracts in 2016.

Action	Description	Outcome
Strengthening execution capability	<ul style="list-style-type: none">• Expanded the dedicated department and clarified performance indicators for each team• Used the performance sharing system as an internal management evaluation to encourage the heads of departments to execute the action plan• Nurtured key talents for mutual growth with generous incentives	<ul style="list-style-type: none">• Developed and expanded the performance sharing model• Benchmarked outstanding companies• Granted 29 cases of compensations inside/outside the company
Expanding communication channel for mutual cooperation	<ul style="list-style-type: none">• Launched a new service that notifies contract information• Disclosed necessary technology with opening a technology announcement room within the Mutual Growth Center	<ul style="list-style-type: none">• Provided real-time information on 2,226 cases of contract• Discovered and expanded assignments

Expanding and Strengthening of the Scope of Mutual Growth

KORAIL supports socially disadvantaged businesses to fulfill its role as a public corporation. On June 24, 2016, we held a demonstration session with our partner companies that are in charge of cleaning trains to share standardized cleaning procedures with them and improve customer services by offering a clean and pleasant train environment. We demonstrated the cleaning guidelines, how to use cleaning tools we developed, and cleaning work that includes customized training and assigning of cleaners to share our skills and know-how in improving the quality of cleaning work.



Plan on contracting cleaning work



Cleaning demonstration

Signing MOUs with Related Institutes for Mutual Growth

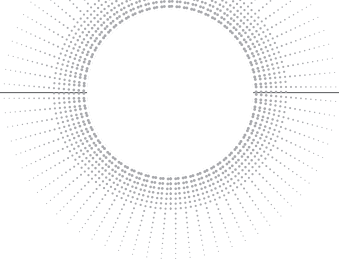
KORAIL has signed MOUs with the Korea Water Resources Corporation, Sejong City, and Daegwallyeong Sky ranch to increase synergy in mutual growth of public corporations and SMEs and strengthen the competitiveness in the global market. With the MOUs we signed in 2016 with 25 institutions, we created a foundation for mutual growth by working on a variety of projects such as revitalizing traditional markets, local economy development, and co-development of tour products.

Month	Contracting institutions	Description	Organizing departments
February	Small Enterprise And Market Service (SEMAS) / Korea Gas Technology Corporation Korea Water Resources Corporation / Korea Minting, Security Printing & ID Card Operating Corp (KOMSCO) Korea Rail Network Authority / KEPCO Nuclear Fuel	Joint project for revitalizing the local economy such as promoting traditional markets and social contribution activities (Publico Daejeon)	Public Relations Office
	Korea Sunbi Culture Training Center	Boosting the local economy with traditional culture program and train tours	Gyeongbuk Headquarters
March	Daejeon Metropolitan City / Korea Tourism Organization Daejeon Marketing Corporation / Daejeon Culture and Arts Foundation Daejeon Tourism Association / Korea Foodservice Industry Association Yuseong Tourism Conference	Revitalizing tourism and enhancing competitiveness in Daejeon	Daejeon Chungnam Headquarters
	Sejong City	Invigorating agriculture and farming villages by co-developing hands-on experience tour programs	Daejeon Chungnam Headquarters
April	Gangwon-do Rural and Fishing Villages Guesthouse Association	Promoting railway tourism and developing the local economy	Chungbuk Headquarters
	365 Safe Town	Developing the local economy with themed train tour products	Gangwon Headquarters
May	Gwangju Jeonnam Regional Small and Medium Business Administration	Promoting and invigorating traditional markets with specialty	Gwangju Headquarters
July	Ulsin-gun	Co-developing of tour products to boost the local economy	Daegu Headquarters
	Yeongcheon Agricultural Technology Center	Providing measures to increase revenue through mutual growth and creating programs to develop the local community	Daegu Headquarters
August	Jeongeup-si /Gochang-gun Buan-gun /Sindonga Tour	Promoting mutual growth by boosting the local economy through revitalizing tourism in the Seonam region	Daegu Headquarters
December	Daegwallyeong Sky ranch	Creating demand for tourism to boost the local economy	Gangwon Headquarters

Supporting the Expansion of Sales and Market for SMEs

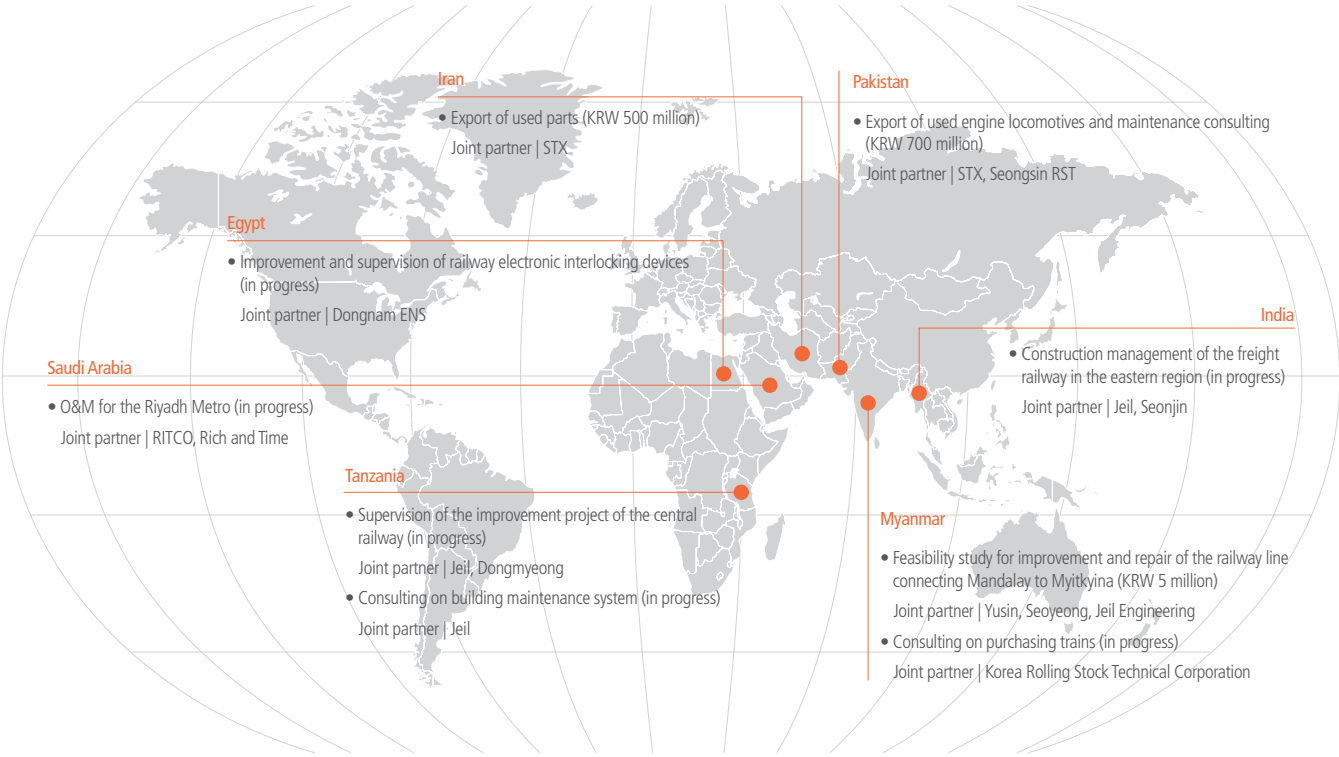
Ensuring Stable Business Activities of SMEs

KORAIL establishes a fair trade order to ensure business activities of SMEs and partner companies. We helped the SMEs ensure stable production by financing KRW 5.6 billion for 122 cases of the public procurement loans by enhancing business environments, reinforcing the supervision on the payment to partner companies, improving the relevant systems, and strengthening the supervision on work conditions. Moreover, we paid 100% of the payment to the subcontractors that were 86 cases totaling KRW 24.7billion, protecting the second and third subcontractors and supporting the business activities of small-sized contractors. We encouraged SMEs to participate in bidding for construction projects by revising the existing system, which resulted in an increase in their participation rate from 99.2% in 2015 to 99.7% in 2016. Establishing a foundation for fair trade by inspecting the work conditions for subcontract workers, we were selected as the best organization in the public procurement for five consecutive years.



Strengthening of Competitiveness of SMEs and their Overseas Expansion

KORAIL has strived to resolve the polarization between large enterprises and SMEs while contributing to strengthening the competitiveness of the SMEs. We were not as active as we were regarding expanding business overseas with SMEs in 2016 compared with the previous year due to the business delays in the target countries and reduced market size. However, we still saw KRW 1.7 billion in sales by expanding ten businesses together with eleven SMEs utilizing the KORAIL brand. KORAIL has always been and will be supporting SMEs to expand their businesses by looking to access new markets and diversifying the markets albeit the challenges presented by the constant changes in the market.

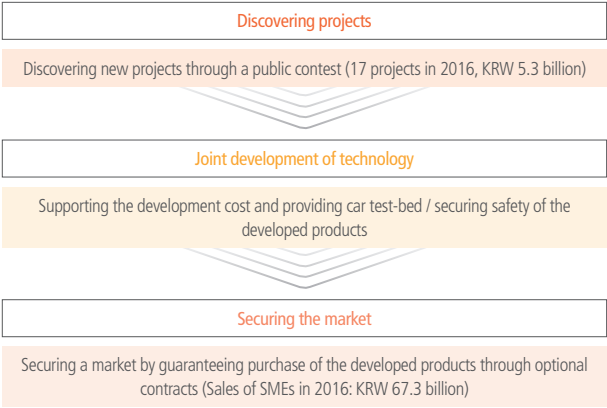


Technological Cooperation between SMEs and KORAIL

KORAIL supports the development of technology by SMEs. We encourage their commitment to technology development by participating from the development stage to securing markets, thereby contributing to increasing sales, business stability, and development of new products. We financed KRW 4 billion to 25 R&D projects undertaken with 57 SMEs and another 5.3 billion for the technology development for 17 projects drawn from a conditional purchase program undertook with 15 SMEs in 2016. As a result of the projects, axle bearings and exchange type gate drives were developed and made in Korea which reduced costs by KRW 500 million and brought sales of KRW 1.3 billion. Moreover, the active technological cooperation led to an increase in sales of SMEs by 21% from KRW 55.5 billion in 2015 to 67.3 billion in 2016.

Development of Business Models for Mutual Growth

KORAIL goes all out to grow with SMEs by developing realizable business models for mutual growth such as performance sharing system and support for market expansion. We expanded the beneficiaries of the multilateral performance sharing system to the second and third subcontractors which resulted in an increase in the number of successful cases from 12 in 2015 to 13 in 2016. We helped SMEs see revenues of KRW 15million through the Sunbi Village Stay, new products developed utilizing KORAIL's CI, and supporting in-station restaurants by young chefs. We also helped youth-driven startups which saw sales of KRW 431million and created nine jobs. Furthermore, with our support in expanding markets by running railway tour programs, creating themed train stations, and increasing the number of local restaurants near train stations, local restaurants saw an increase of 23% in their sales from KRW 30.8 billion in 2015 to 38 billion in 2016.



Cooperation with Local Communities

Supporting Small Travel Agencies and Local Businesses

KORAIL has developed and operated railway tour products such as the O/V/S/ DMZ/A/G-TRAIN, marketplace tour train and ocean train packages while creating themed train stations at Buncheon, Deungnyang, Dorasan, Jeongdongjin, and Yeosan Stations to facilitate the business of small tour agencies and local companies. Our support helped 29 small tour agencies generate sales of KRW 14.4 billion and attracted 1280,000 visitors to the forgotten small train stations after we transformed them into themed train stations which generated economic value worth KRW 117.7 billion for the local community.



DMZ Train



A Train



S Train



Ocean Train

Opening Local Eateries

As a means to boost the local economy, KORAIL opened branches of some famous local restaurants in train stations to create jobs and generate revenue. Some of the local eateries that opened their branches inside train stations include Samsung Bakery in Dongdaegu Station, Damsogomtang in Cheonan-Asan Station, and PNB Pungnyeong Bakery in Jeonju Station. These in-station eateries saw KRW 38 billion in sales and created 208 jobs. In 2016, we opened 24 more eateries including BNC Bakery and Namcheonhalmæ Tteokbokki in Busan Station, Mimi Jjambbong and Palgongsan Sundubu in Dongdaegu Station, and Dasom in Cheonan-Asan Station.



Seongsimdang Bakery (Daejeon Station)



Mimi Jjambbong (Dongdaegu Station)



Samsung Bakery (Dongdaegu Station)

Agriculture-Industry-Commerce Convergence Cooperative Structure

We opened the second shop of Chandeulmaru, KORAIL's own business model designed to nurture special industry and contribute to the economic growth of farming villages by featuring regional agricultural specialties for sales. Developed by cooperating with KORAIL Retail and Korea Agro-Fisheries & Food Trade Corporation, we opened the first shop in Yongsan Station in December 2015 and the second shop in Moran Station in December 2016. It is a venue to promote and sell regional specialties at lower prices than department stores or home shopping. We invited more SMEs with regional products to the shop and saw KRW 282million in sales in 2016.



Chandeulmaru's first branch (Yongsan Station)



Myeongpummaru for SMEs

Business Responsibility by Company

	KORAIL Store development Operation management Store approval
코레일유통	KORAIL Retail Merchandising and sales in stores
한국농수산식품유통공사 Korea Agro-Fisheries & Food Trade Corporation	Ministry of Agriculture, Food and Rural Affairs, and Korea Agro-Fisheries Trade Corp Recommendation, construction, and marketing of stores

Boosting the Local Economy

KORAIL seeks to redesign forgotten small train stations to bring tourists and boost the local economy. As a result of our effort in revitalizing branch railway through running a variety of programs together with the local governments such as the Andong Seonbi Village Stay, Railway Culture Festival at Mongtan Station, Summer and Winter Santa Village at Buncheon Station, Haedoji (Sunrise) Gallery at Jeongdongjin Station, and Cosplay Festival at Deungnyang Station, we successfully created 3,605 new jobs. Moreover, the Buncheon Santa Village in Bonghwa-gun benefited from the balanced regional development with the railway tourism belt was selected as a "Star of Korean Tourism" in 2016, being recognized for reviving the characteristics of the regional culture.



Railway Culture Festival



Opening ceremony of Buncheon Santa Village

Fair Trade

Purchasing and Supporting Fair Trade Products

KORAIL's priority in mutual growth is the "Establishment of a foundation for fair trade and preferred purchase of government recommended products." Therefore, we support SMEs by creating a win-win basis with them. We expanded direct purchase of construction materials from SMEs from KRW 14.6 billion in 2015 to 20.6 billion in 2016, facilitating their stable financing for production. We financed KRW 5.6 billion for 122 cases of the public procurement loan, which led us to be selected as the best organization in the public procurement loan program for five consecutive years. Our commitment to fair trade was recognized and rewarded to us as the Presidential Citation for promoting the public procurement in 2016.

Establishment of Fair Trade Order

KORAIL has organized the Transparent Ethics Management Committee to respond to tenth important material issue in 2015, "Increasing demand for fair trade." With the committee, we improved the existing system and established a fair trade order by collecting opinions from SMEs through meetings and consultations, protecting the rights of the SMEs, and communicating fairness and transparency. Moreover, we monitored the status of payment to our second and third subcontractors while running a report center to prevent illegal subcontracting, thereby achieving 100% payment to the subcontractors.

Classification	Record of payment to subcontractors				Normal payment rate
	Total cases	Total amount (KRW 100 million)	Cases paid	Amount paid (KRW 100million)	
Total	86	247	86	247	100%
Direct payment to subcontractors	81	242	81	242	100%
Payment confirmation by subcontractors	5	5	5	5	100%

Fair Contracting

KORAIL signs MOUs to ensure fair contracting and improve professionalism while striving to understand the overall contracting situation through e-procurement system. We notify information on procurement 100% through the EBID system and receive reports on corruption through the anti-corruption center while disclosing our integrity policy to reinforce transparency in contracting. Moreover, we apply standardized contracts for each business that are disclosed at all times and help promote the fair trade order. When fulfilling the contract, we monitor each work with the fair trade compliance program to identify and correct unfair factors.

Strategies for Fair Trade

KORAIL priorities include the establishment of a foundation for fair trade with SMEs and sets action strategies accordingly. We have increased the number of employees on the Fair Trade Support Team from six to nine while seeking to develop fair trade strategies through R&D and striving to relax the relevant regulations and system. Moreover, we supervise and manage if our action strategies for fair trade are well- implemented while monitoring fair trade practices.



Disclosure of the status of payment to subcontractors



Illegal subcontractor reporting center

Key tasks

- Establishment of foundation for fair trade
- Increase preferred purchase of government's recommended supplies

Actions to take

- Guaranteeing the appropriate level of wage for employees of subcontractors
- Enhancement of financial support for sustainable management
- Support for basic education for stable corporate activities

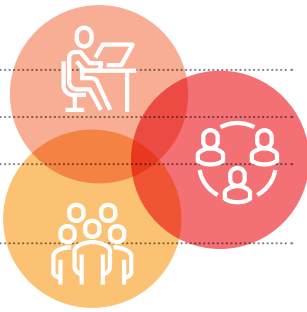
Open Employment

Business & Social Context

KORAIL, an avant-garde employer in terms of open employment, is building a systematic and transparent recruitment process according to the National Competency Standard (NCS). Based on the NCS classification system, we linked our (KORAIL's) job duties, derived the required skills and competency models for each job to develop our Job Description. In addition, actively utilizing it for our open employment, we are hiring full-time employees through document screening, NCS, interview, railroad aptitude test, and internship

Progress

- Regulations on Hiring Employees Article 9 (Method of Open Competitive Employment)
- Compliance of Article 10 (Method Of Open Competitive Employment)
- Expanding open employment culture centering on job skills
- Securing personalized talent through open employment beyond specification
- Expanding the employment of high school graduates and women with career discontinuation



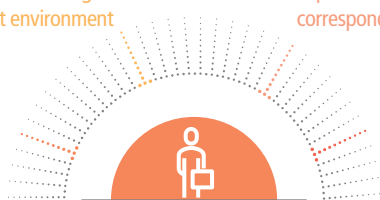
Future Plan

Drawing required labor pool according to the change in management environment

Expansion of open employment corresponding to social equity

Realization of strategic new recruitment to meet internal and external needs

Efforts to eliminate a sharp drop in youth employment

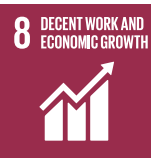


Performance

- Achieved over 160% of the government target for the region's best talent
- Expansion of open employment corresponding to social equity
- Expansion of flexible working arrangement



SDGs implementation status



- 4 Create a city that is generous, safe, resilient and sustainable
- 8 Continuous, inclusive and sustainable economic growth for all, full and productive employment and increasing quality jobs
- 10 Relieving inequalities within and between countries



Open Employment

Open Employment Promotion System

Promoting Open Employment Based on National Competence Standards (NCS)

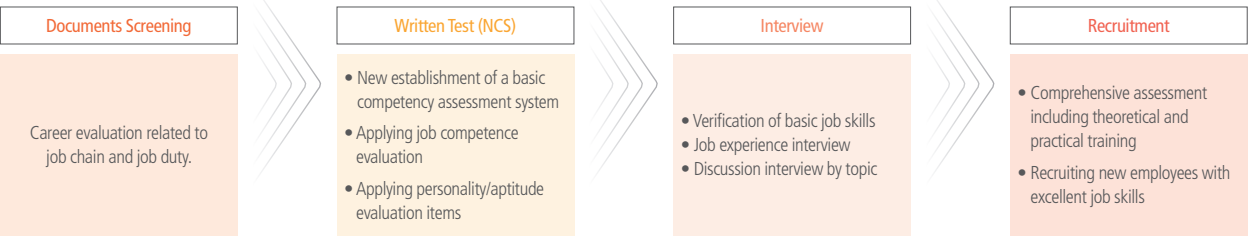
KORAIL recruits new employees through open competitive employment by utilizing the National Competence Standard (NCS) in order to promote customized NCS-based employment according to customized employment welfare, which is a national task. We process recruiting in a total of seven steps. In 2016, we introduced a fitness verification system that reflects the characteristics of the railway industry sites in order to refine the evaluation for job competency by recruitment stage. Besides, we led to the recruitment of job competency-centered employment reducing the proportion of academic records, official language test result etc. In the future, KORAIL intends to keep on strengthening the competitiveness of the railway through the recruitment system centered on job competency according to business characteristics.

Recruitment field	Major services
Office work	General affairs, passenger transportation and sales and train allocation related services etc.
Logistics	General affairs, freight transportation and sales and train allocation related services etc.
Driving	Driving motive power unit related services etc.
Vehicles	Railway vehicle maintenance and related services
Civil engineering	Maintenance of track and related services
Construction	Maintenance of building, facilities etc.
Electric communication	Maintenance of electric communication facilities and signal control equipment etc.



Improving Recruitment Process

KORAIL contributes to reliving unemployment through continuous employment expansion and continues to improve the recruitment process under the supervision of the HRD for transparent and fair open employment based on job competency. In particular, we have reduced the proportion of academic records, official language test results, etc. in application document screening. We have also introduced career evaluation related to job chain and job duty. We are improving the recruitment process through newly establishing a basic competency assessment system and applying job competence.



* Since 2017, completely blind recruitment adopted, excluding photos, age, and academic background

Expanding Open Employment

Transparent Recruitment Plan

In an effort to relieve the anxiety of job applicants, KORAIL is conducting open employment, which is relatively friendly to local university students, low-income college students, and high-school graduates through the screening with lesser stress on specification. This is to contribute to resolving the unemployment crisis through continuous employment expansion as well as to reducing the private institution-based training only to meet the requirements for simple document screening, and to enhance fairness and transparency. To this end, we are introducing a new recruitment process based on the National Competence Standard (NCS) and are pursuing transparent and fair recruitment based on job capability by job chain.

Performance of Open Employment

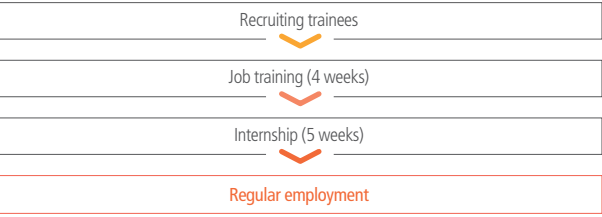
KORAIL conducts public recruitment in compliance with Article 9 (Method of Open Competitive Employment) and Article 10 (Method Of Open Competitive Employment) of Chapter 2 of the Bylaw Enforcement Personnel Policy. We pursue equal and fair recruitment without discrimination based on education, gender, age, barracks, and religious discrimination according to open employment, respect human rights, and continue striving for preventing child labor and illegal labor. As a result, the recruitment ratio of local talent, high school graduates, and handicapped exceeded the government’s target in 2016, and the number of social equity employment increased by 206 compared to that of the previous year, which was 559.

Classification		2014	2015	2016
Quota		27,981	27,981	27,874
No. of current employees		27,461	26,498	26,394
Full-time retirement / honorary retirement		710/102	757/83	6/291
Full-time new recruitment	women	149	55	98
	disabled persons	6	2	11
	local talents (non-metropolitan areas)	230	189	336
	high school graduate	66	84	50
	specialized high schools	12	17	5
	natural sciences and engineering	205	207	323
	employment support targets	45	23	64
	total	500	319	599
Part-time employment	intern	682	382	694
Out of total current employees (ratio)	women (ratio)	2,712(9.7%)	2,747(10.0%)	2,815(10.46%)
	female officer (ratio)	316(3.77%)	317(4.05%)	340(4.6%)
	disabled (ratio)	938(3.3)	887(3.2)	847(3.1)

IPP: Industry Professional Practice

Long-term on-the-job training system that is in conjunction of university academic semester and systematic industrial field training

Employment stepping stone program



Achievement higher than government-recommended goals



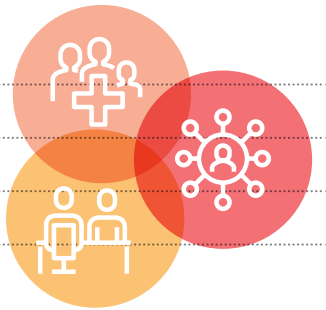
Constructive Workplace

Business & Social Context

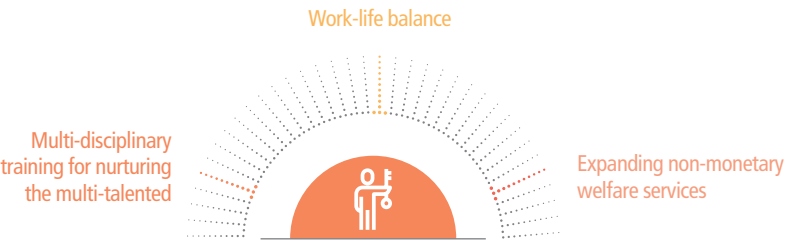
KORAIL has become a public corporation with top employment preference, where college students prefer to work after graduation. We are striving constantly to create work environment where all 27,000 employees work happily and stably, to provide the HR development strategy, which is directly linked to railway safety and customer service, and the environment where work and life are in balance for employment stabilization and employee happiness.

Progress

- Creating healthy and safe workplace
- Activation of flexible working arrangement
- Creating a work-family balance culture
- Family friendly management



Future Plan



Performance

- Secure workplace implemented
- Parental leave improved (parental leave is 31.7% higher than last year)
- Family-friendly company certification acquired (Ministry of Gender Equality and Family)



SDGs implementation status



- 3 Achieving gender equality and advancing the rights of all women and girls
- 4 Continuous, inclusive and sustainable economic growth for all, full and productive employment and increasing high-quality jobs

Constructive Workplace

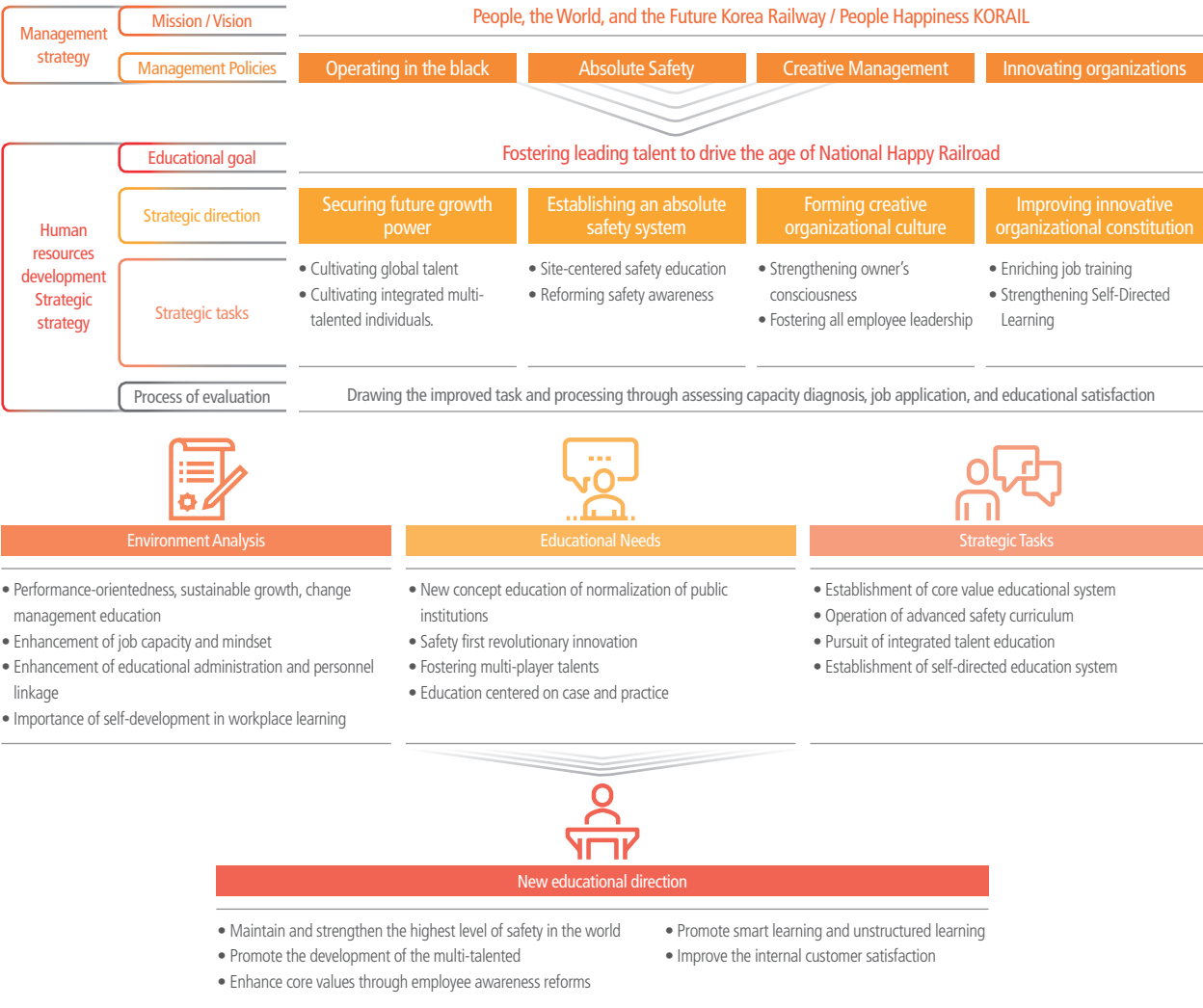
Capacity Development

Establishing Human Resources Development Strategy

After linking management strategy and human resource development strategy in order to focus on developing employee competency so that innovation and change within can be achieved, KORAIL is planning and implementing a plan under four strategies after setting up the goal of "Cultivating talent to lead the railroad era for people's happiness." Through continuous capacity development, we will secure future growth engines and cultivate converged multi-talented individuals. We also provide opportunities to improve job competency by strengthening job training and strengthening self-directed learning.

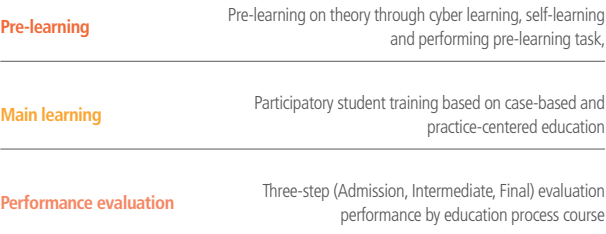
Human Resource Development Plan Based on Required Competency and Needs

KORAIL establishes and implements a human resources development plan based on the capabilities and needs of each employee. Linking the environmental analysis such as work environment and external environment, employee's educational needs and management strategy issues, we drew implications and conducted educational programs and programs for 2016 human resources development. As a result, S-OJT has been activated, and the self-directed learning infrastructure through mobile and SNS has expanded, establishing a new HRD direction in which the basis for training talent has been strengthened.



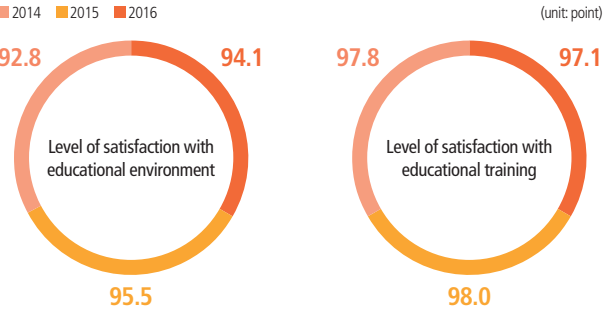
Acceptance of KORAIL Learning Model

KORAIL adopted the KORAIL Learning Model, a participatory education that is interactive, away from one-way lectures. Participatory education, which is a new learning model where technology development activities are linked directly to the curriculum and direct participation is employed in the field, aims to strengthen the problem solving ability and job capacity of employees through collective education. In addition, in this education, creative capacity and crisis response are possible in order to adapt to the 4th industrial revolution, and a diagnosis is made about the changes in job competence level. We also maximize the effectiveness of our jobs by the customized training based on individual level diagnosis.



Current Status of Educational Management

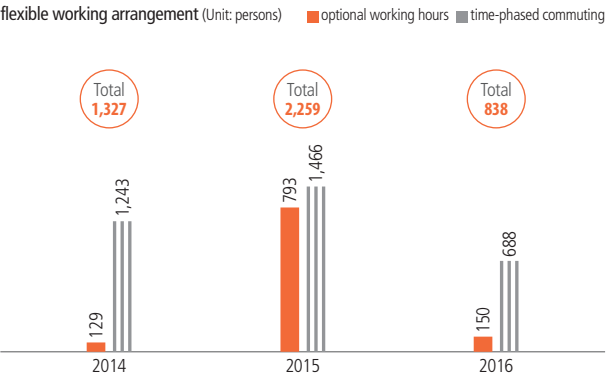
KORAIL operates the Human Resources Development Institute HQ and five local branches nationwide to strengthen employee capacity while continuously improving old-age educational facilities. We have organized online and offline curricula, strengthened self-directed learning ability, and systemized the training progress management with designated tutors. In 2016, education and training satisfaction dropped by 0.9% from last year due to the suspension of education due to the strike. However, we will continue to make efforts to develop curricula and improve the educational environment for competency development



Work-Life Balance

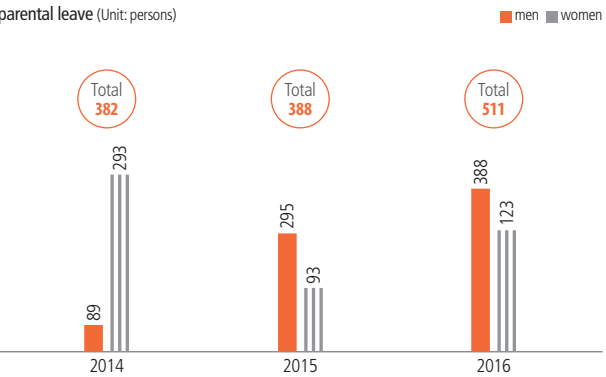
Diversification of Flexible Working Arrangement

KORAIL has been actively supporting child-caring employees, remote commuters, students and healthcare employees by adopting flexible work arrangements to establish an efficient and productive working culture where employees work and rest properly. In 2016, in order to revitalize flexible working arrangement, we actively strived to revitalize the opportunity to participate by expanding the opportunities to participate into three types of work, namely, time selection system, time-phased commuting, and committed work. As a result, in 2016, we achieved a high satisfaction rate of 82.4, as 150 people selected the time selection system and 688 people selected the time shift commuting.



Work-Home Compatibility Support

KORAIL supports pre-and post-maternity leave, parental leave, optional working hours, 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 addition, in 2016, by providing parental leave with 511 applicants in total, 388 women and 123 men, we saw the application rate increased by 31.7% over the previous year.



Family-Friendly Company Certification

KORAIL has obtained family-friendly certification for 6 consecutive years, 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. 565 families and 1,375 people participated in 36 family empathy invitation events. Currently in 2016, we are operating nine places with the ongoing expansion of daycare centers for childbirth promotion and childcare support. In addition, 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. By implementing a system according to 55 checklists based on the Reckless Management Improvement Manual, we have established transparency and reliability as can be seen from the recognition of two-year consecutive official faultless management notice. In addition, we created pleasant working environments by expanding partner services and improving working conditions.

Occupational safety

- Employee group insurance (KRW 200 million compensation at work disasters)
- Employee health checkups (once a year for site workers, once every two years for office workers)
- Disaster relief (if the settlement is lost or damaged due to disaster, subsidy is provided.)

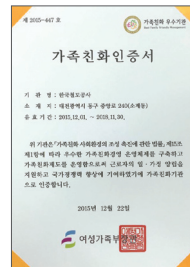
Livelihood security

- Free financial support for high school students, college student loans with no interest
- Scholarship (railway scholarship), operation of children's dormitory, day care facility at work
- Employee housing management (employee apartment, company, crew housing)
- Support for childbirth supplies and optional welfare points
- Retirement support (retirement allowance, retirement training program, training for retirement etc.)

Other welfare support

- Support for the cost for family events, wreaths, and other funeral supplies
- Operating employee recreational facilities (Naksan, Muchangpo, and Mangsang)
- Supporting sports facilities (gym, tennis court etc.) and in-house clubs
- Legal insurance support: national pension, health insurance, employment insurance, and industrial accident insurance

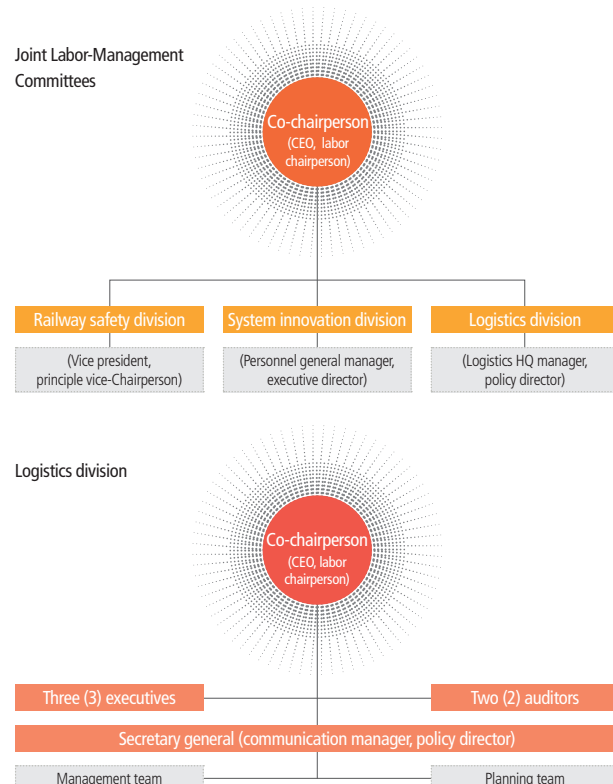
Family-friendly company certificate



Labor-Management Relations

Founding Labor-Management Cooperation

Founded on November 1, 1945, KORAIL's labor union has been conducting improving business processes and pre-consultation by enhancing communication efficiency and profitability. In the joint labor-management, the first labor-management communication committee, the CEO and the union chairman are co-chairpersons. The executives and union executives have been discussing, jointly serving as the heads of subcommittees, current core issues between labor and management and managerial directives in each division of the railway safety, the institutional innovation, and the logistics. In addition, we established the 'Hope Railway Foundation', the first joint labor and management foundation in the public sector, where the CEO and the union chairman, jointly serving as chief executives, conduct social contribution activities.



Labor Relation Strategy and Goals

In order to establish labor relations that are rational and harmonious, KORAIL has set its 2016 management goal of "Realizing win-win labor-management culture through communication and cooperation" so that trade unions and employees can communicate transparently. Thereby, we have been promoting advanced labor-management relation strategies, cooperative labor-management relations, activation of labor-management relations and reasonable labor-management relations as strategic tasks. In particular, to stabilize the wave caused by the longest strikes and to strengthen teamwork, we have set up contingency plans for no strike for the third consecutive year, secured work alignment through sharing labor-management relations strategy, and are continuing to operate joint labor-management programs.

Hope Railway Foundation

KORAIL has established the Hope Railway Foundation, the first labor-management joint foundation in the public sector, to enhance labor-management relations. We laid the foundation for social responsibility as the CEO and the union chairman serve as co-directors, and the secretariat is also jointly run by the labor and management. In particular, in 2016, we implemented a collective labor-management joint-venture to strengthen our negotiations and strived to fulfill our social responsibilities even in the midst of labor dispute. As a result, we have been able to keep mutual trust by drawing the results of building labor-management consensus establishing a basis for continuous foundation management.

2016 Indicator management goal	realizing win-win labor-management culture through communication and cooperation			
Strategic tasks	advanced labor-management relations strategy	cooperative labor-management relations	promoting cooperative labor-management relations	rational labor-management relation
Main promotional tasks	<ul style="list-style-type: none"> stabilizing labor-management relationship securing leadership by improving labor and management culture 	<ul style="list-style-type: none"> stabilizing relationship teams creating results through joint labor-management committees 	<ul style="list-style-type: none"> strengthening labor capacity implementing joint social responsibility among labor and management 	<ul style="list-style-type: none"> rational operation of labor-management system leading implementation of government policy
Performance indicator	<ul style="list-style-type: none"> advanced rolling strategy industrial relations index 	<ul style="list-style-type: none"> labor-management cooperation program labor-management cooperation index 	<ul style="list-style-type: none"> communication index hope railway foundation project 	<ul style="list-style-type: none"> time-off transfer improving irrational system compliance with wage increase rate implementation of government policy
Performance measurement & monitoring	<ul style="list-style-type: none"> outside experts' diagnosis self-workshop & survey 	<ul style="list-style-type: none"> audit of on-site team activities and performance evaluation Investigation of labor-management cooperation index 	<ul style="list-style-type: none"> communication index survey performance analysis of foundation projects 	<ul style="list-style-type: none"> compliance with related laws personnel system & union negotiation diagnosis implementation of government policy

Results of Labor-Management Relations in Harmony

KORAIL has established labor-management councils, round-table meetings, and top-to-bottom communication channels to ensure continuous and smooth communication between labor and management. In 2016, the introduction of the annual salary system based on performance led to an increase in the general strike climate, but we have made every effort to engage in communication activities such as holding briefing sessions, dialogues and meetings to reconcile both stances and to form consensus. As a result of these efforts, we have minimized inconveniences to the general public and strengthened the labor-management culture by drawing labor-management unity through the withdrawal from the strike by the railway union and the need to improve the organizational culture.

Establishment of Labor-Management Conflict Prevention and Management System

KORAIL strives to improve mutual trust by pre-empting labor conflicts and established a monitoring system to respond positively to employee complaints and grievances. Through workshops, meetings (KORAIL's thinking meeting) with representatives of labor and management and onsite management activities, we have established an ongoing monitoring system to build trust, resolve conflicts and form consensus. This system works through communication through Online/Offline, identification and sharing of conflicting issues, and the process of opinions gathering and answers. In order to systematically manage conflicts, labor-management workshops have been institutionalized and labor-management joint committees are being opened to strengthen communication.

Labor-Management Conflict Prevention System



Social Contribution

Business & Social Context

Being grateful for the trust and support of local residents, local communities, and internal and external stakeholders, KORAIL recognizes their needs and implements community-contributing activities. We aim to be able to grow together by devising activities that can contribute to the long-term development of the local community, not just one-time activities. We also strive to become a corporation that will contribute to the local community by continuing our social contribution activities with authenticity.

Progress

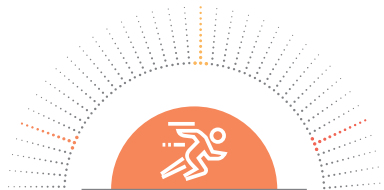
- Creation of private sector jobs through railway projects
- Promoting social contribution through railway infrastructure
- Finding projects with an option to purchase
- Strengthening social contribution program customized for KORAIL
- Proliferation of mutual growth culture



Future Plan

Expansion, reorganization, and activation of the first social contribution corporation among public institutions

Strengthening KORAIL-style social contribution activities



Activation of Hope Railway Foundation

Performance

- 6% Y-O-Y increase in job creation
- A number of awards from local government bodies by local service group
- 27% Y-O-Y increase in new product purchases



SDGs implementation status



- 4 Creating a generous, safe, resilient and sustainable city and residential areas
- 9 Building resilient social infrastructures, promoting inclusive and sustainable industrialization as well as innovation
- 16 Promoting a peaceful and generous society for sustainable development at all levels, providing access to justice for all, and building effective, responsible and inclusive institutions.

Social Contribution

Promotion of Social Contribution

Social Contribution System

KORAIL is promoting community-rooted social contribution activities to fulfill its social responsibilities and to become a company that can be trusted and easily accessible to the public. Under the slogan of "Creating happy world leading to rail" with the social vision of "KORAIL for people's happiness," we have selected three core areas – namely, talent sharing, happiness sharing, and community contribution. Through railway infrastructure and talent sharing of employees' talents, we are carrying out knowledge transfer to high school and

university students who are studying railway. We are also striving to contribute to the local community through volunteer services and national events.

Detailed Activities Of External Partners



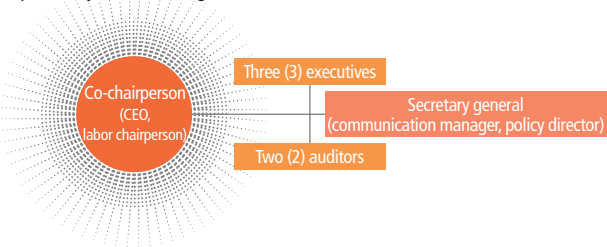
Vision	KORAIL for people's happiness'		
Slogan	Happy world leading to rail		
Three (3) key areas	talent sharing rail infrastructure & sharing employees' work talents	happiness sharing specialized sharing by industry based on the empathy with public	community contribution strengthening contribution to the local community through the nationwide sharing network
2016 key promotion & implementation tasks	<ul style="list-style-type: none">• KORAIL Village• railroad experience learning center• KORAIL Symphony Orchestra	<ul style="list-style-type: none">• happy train• Hope Railway Foundation• blood Donation bringing life• Hope Project for the Homeless	<ul style="list-style-type: none">• sharing activities in holidays, year-end and New Year's day• supporting the underprivileged classes• environmental cleanup activities
Internal management organization	Strengthening Social Contribution Operation System		
External partnership	49 volunteer corps, 430 volunteer organizations Korean National Red Cross, Green Umbrella Child Fund Korea, Community Chest of Korea		

Hope Railway Foundation

KORAIL has established the Hope Railway Foundation in order to practice sharing and coexistence with the local communities, spreading warm-heartedness through supporting the underprivileged and youth. The Hope Railway Foundation, which was established as a corporation under the permission of the Ministry of Employment and Labor for the first time in February 2016, is jointly operated by labor and management and focuses on social contribution activities based on regional characteristics. The first event was held for the patriots and veterans and 400 members of the railway support organizations. We are carrying out social contribution activities that

are tailored to railroad industry for the children from multicultural families and migrant family and internally displaced persons.

Hope Railway Foundation Organization



Opening news from the Hope Railway Foundation



Operation of KORAIL Hope Railway Foundation Veterans Trains

KORAIL Social Contribution Program

Talent Sharing Program

KORAIL Village

KORAIL is operating over 430 volunteer corps throughout the country to donate staff talents that visit and repair homes to create warm residential environment for the socially underprivileged. Contributing to the improvement of quality of life through improvement of living space as well as participating in making people's happy town, electric and civil engineering staff have been working to improve the residential environment of the socially underprivileged class living by the railroads by improving residential environments and building study rooms for them and starting Study Pro Bono activities. As a result, in 2016, they delivered their talents to 2,494 people in a total of 91 donation events.

Railroad Experience Learning Center

KORAIL is operating a railroad experience learning center at 18 locations to provide opportunities for young people across the country to explore their careers. We have been carrying out career search as well as railway safety training by configuring programs through which they can tour railway facilities and railway jobs. In 2016, a total of 29,156 students participated in the programs 538 times. We organized the "Railway Love Camp," that are intensive courses in response to the hot reaction to the railroad experience learning center.

KORAIL Symphony Orchestra

In 2012, KORAIL created a symphony orchestra, in which all citizens can participate. Through auditions, KORAIL recruits members to run talent donating social contributions. Through musical talent donation activities in order to share the culture with the residents of the communities that do not receive the cultural benefits properly and to communicate with the people through musical concerts, we held nine concerts in 2016, which has evolved into a cultural train grafted to classical performances.



KORAIL Village



Railroad Experience Learning Center



KORAIL Symphony Orchestra

Happy Sharing Program

Happy Train

KORAIL continues to run happy trains that provide train trips to the neighbors somewhat neglected in terms of travel culture such as nursery school children, elderly people living alone, residents of Saeteo (North Korean defector town), children with disabilities and the underprivileged neighbors. We organized diverse happy train events such as the veteran train event with the Korean War veterans, test drive event with the children from the remote islands with little chance of riding trains and test drive events with the elderly in social welfare facilities. In 2016, supportive events for the disabled students in Boryeongjeongshim School were held, and 10,600 local residents participated in the happy train events 107 times.

Hope Railway Foundation

In 2016, KORAIL established the Hope Railway Foundation with the permission of the joint labor-management social contribution corporation for the first time as a public corporation. In February, KORAIL opened a foundation office in cooperation with labor and management. We are carrying out systematic social contribution activities such as unification dream tree support project and unification train experience for the marginalized class, multicultural families, immigrant children, the North Korean defectors etc.

Homeless Hope Project

KORAIL is carrying out projects to improve self-reliance, self-help recovery programs and job skills in order to support the economic independence and willingness to work for the homeless. The homeless self-help business, which started in 2012, was smoothly operated and a total of 74 people succeeded in getting new lives. In 2016, a total of 40 people participated in KORAIL, and KORAIL will continue to make efforts to contribute to stable employment and social recovery of the homeless.



Happy Train



Hope Railway Foundation



Homeless Hope Project

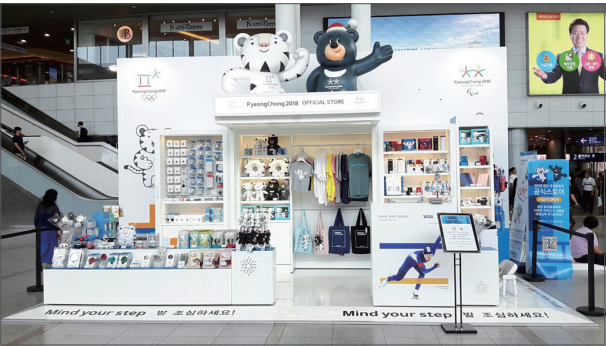
Community Contribution Program

Corporate-Wide Sharing Activities

KORAIL is carrying out love-sharing events such as distributing holiday supplies and gift certificates every year during the national holidays such as Korean Lunar New Year' and Chuseok. We have been running companywide sharing events so that the whole nation can share the abundance in holidays. Through 4092 events in total by 2016, we shared holiday and year-end sharing activities with 934,488 people. As a result of these companywide sharing activities, a total of six awards have been recognized by local governments and external organizations. KORAIL will continue to work for the sake of people's warm holidays.

Expanding Social Responsibility Management

With the responsibility for social contribution, KORAIL has been implementing community-based programs through national events and relief activities. In 2016, we launched a support program for the 2018 PyeongChang Winter Olympic Games and the Winter Paralympic Games to set up special traffic measures for the increased floating population, and to conclude business agreement such as support for human resources. In addition, we carried out social responsibility management activities for cultural experience through Automata opening ceremony and ensemble performances at Seoul Station.



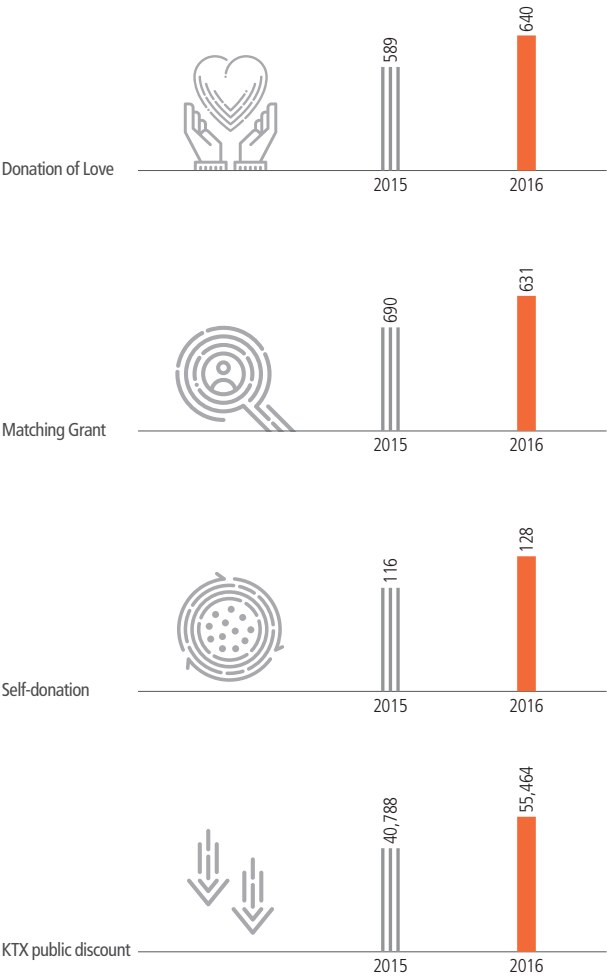
PyeongChang Winter Olympic Support Program (Automata & Promotion Booth)

Happy Train Heading for The Forest

We work with related organizations to offer you various themed products with which healing experience is possible. In particular, in cooperation with the Ministry of Education and the Korea Forestry Service, the "Happy train heading for the forest," which provides the students who are victims of school violence with a forests healing program, has been awarded with the Ministry of Education Award through a total of 17 events.

Increased Amount of Social Contribution Support

KORAIL utilizes railway-specific infrastructure to support the underprivileged, along with social contribution, by increasing the amount of support for local communities. In particular, running 'Donation of Love' by voluntarily donating as much as they want from their monthly salaries, its employees are growing their interest in social contribution activities. We operate the "Matching Grant" system, which is to support social contribution projects with the budget secured by 1: 1 matching grant system and used the donation for social contribution projects. In addition, we are making efforts to raise additional funds through self-funding and KTX public discounts. As a result of these efforts, we secured KRW 56.8 billion aid money in total in 2016.



Companywide sharing activities



Happy train heading for the forest

05

COEXIST WITH ENVIRONMENT



Eco-friendly railway operation

Response to climate change

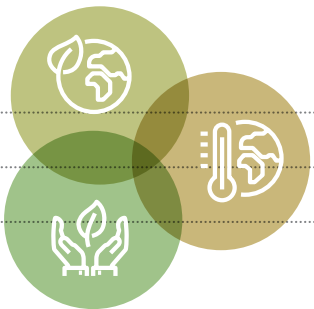
Eco-Friendly Railway Operation

Business & Social Context

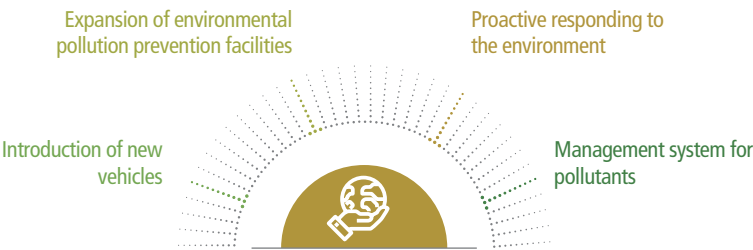
KORAIL has been constantly striving to grow into a company that actively responds to environmental changes and practices environmentally-friendly green management. In addition to the executives and employees, we are paying companywide close attention to climate change both at home and abroad in response to climate change, energy issues, etc. We are also striving to operate environmentally friendly railways by establishing an environmental strategy system, sustaining environmental conservation activities and sharing environmental management.

Progress

- Establishment of environmental management system
- Expanded operation of high-efficiency electric railway vehicles
- Increasing investment in eco-friendly railway

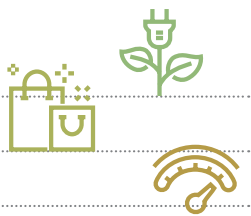


Future Plan



Performance

- Investment in environmental facilities
- Purchasing green products
- GHG emissions per distance covered



SDGs implementation status



- 6 Ensuring availability and sustainable management of water and sanitation for all
- 14 Conservation and sustainable use of oceans, oceanic and marine resources for sustainable development



Eco-Friendly Railway Operation

Eco-Friendly Railway Operation

Environmental Management Operation Policy

KORAIL is one of the leading green transportation railway operators. It has established four environmental management policies to promote advanced railway organizations and advanced environmental management at industry level. We are implementing a companywide effort to create a sustainable environment through conservation and improvement activities

Organization of Environmental Management

KORAIL has established a department dedicated to environmental affairs at its headquarters for the smooth execution of the operation policy for environmental management and systematic environmental management. It has a network of over 70 employees in local business headquarters, logistics business centers, vehicle maintenance teams, and an affiliate office for efficient and active operations through establishing an organic communication system and strengthening communication with external organizations. We are running various communities with the aim of eco-friendly railroad operation such as railroad environment consultation, railroad environment technology exchange meeting, railway operating organization environment meeting etc., and striving to be one of the best examples of environment-friendly industries in transportation.



Realization of environmentally friendly green railway			
Settlement of environmental management and establishment of adaptation to climate change			
Three (3) key strategies		Comprehensive response to climate change	Enhancing environmental operation management
Twelve (12) key tasks		• Strengthening GHG target management system	• Improvement of waste management system
		• Establishing of climate change adaptation measures	• Establishment, prevention, response and management system of soil pollution
		• Strengthening the operating system for carbon management	• Promotion of effective water pollution prevention measures
		• Improving energy efficiency and rationalizing its use	• Strengthening noise management and effective response to new environmental regulations
			Domestic and overseas customer satisfaction
			• Expanding environmental services by visit
			• Creating a pleasant environment in stations and trains
			• Activities of sharing the love for environment
			• Strengthening environmental competence

First, we are committed to companywide environmental management to minimize emissions of pollutants.

- Strengthening regulations on various pollution emissions and maximize resource recycling
- Zero risk through proactive and preventive management

Second, we strive to improve the environmental friendliness of the transportation industry by establishing an environmental management system

- Contribution to the creation of social and environmental benefits through the use of green products
- Promoting eco-friendly transportation through carbon labeling certification
- Enhancing corporate image by raising environmental credibility by revitalizing environmental education for employees

Third, we are always in full compliance with environmental regulations under international climate agreements.

- Activate the activities at home and abroad to cope with international trends and climate change issues
- Continuous technology development to reduce GHG
- Strengthening the competitiveness of enterprises by promoting construction project for eco-friendly railway system

Fourth, we are fulfilling our corporate social responsibilities through active environmental protection activities.

- Strengthening environmental communication with NGOs and local governments to enhance the environmental credibility of the corporate
- Continuous development of local environmental conservation activities and events

Eco-Friendly Railway Operation Strategy System

Vision & Strategy For Environmental Management

Based on its advanced environmental management system, KORAIL established its environmental management vision and strategy system to carry out various environmental preservation activities. We conduct continuous environmental management and rigorous internal and external environmental audits to monitor emission pollutants caused by railway operations. We also redefine our role as an alternative means of transportation that can reduce up to 70% of GHG emissions from automobiles. Through these efforts, we aim to achieve low carbon green growth by building a railway-based traffic system and seek to firmly achieve advanced railway system and advanced environmental management at the highest level.

Roadmap for Environmental Management Promotion

KORAIL is striving to achieve its GHG-reduction targets by setting long-term goals and implementation tasks until 2025. We contribute to the government’s reduction policy by taking advantage of the energy efficiency of

the railway, take responsibility for conservation, actively invest in the installation and improvement of preventive facilities in order to minimize environmental impacts, and minimize the emission of environmental pollutants at a level far-beyond government’s regulations.

	Short-term (2013 ~ 2019)	Mid-term (2020 ~ 2022)	Long-term (2023 ~ 2025)
Goal	Achieved target of GHG reduction (530,129 tons of CO ₂ -eq)	Achieved target of GHG reduction (582,237 tons of CO ₂ -eq)	Achieved target of GHG reduction (639,508 tons of CO ₂ -eq)
Tasks to be implemented	<ul style="list-style-type: none">Realization of management system suitable for the climate change by establishing a dedicated organization for climate changeEstablishment of countermeasures for adaptation to climate change in the railway sectorStrengthen environmental management for participation in carbon trading (second period) : Information System Validation : Step by step introduction of energy meterPromotion of eco-friendly project : Selection of project through comparison and competition of technology development projectReview and design of introduction of new and renewable energy: solar, wind, geothermal, etc.	<ul style="list-style-type: none">New environmental regulation (light pollution, electrostatic waves etc.)Operational advancement of environmental management system for its cost managementCreation of profit through participation in carbon trading rightsImplementation and return of adaptation measures for climate changeAchieving the goals through the system management suitable to GHG energy target management : Measuring and analyzing energy consumption of railway vehiclesExpansion of eco-friendly facilitiesPilot installation of new and renewable energy : 3MW photovoltaic power generation facilityCreation of a new environmental regulation manual in the railway sector	<ul style="list-style-type: none">Establishing sustainable environmental management system through carbon tradingEstablishment of secondary countermeasures for the adaptation to climate changeExpansion of environmental management through discovery and expansion of eco-friendly projectsEnhancement of management system through efficient management of environmental management statisticsReview of the expansion of the operation and installation of new and renewable energy

Environment Operating System

Environmental Information System

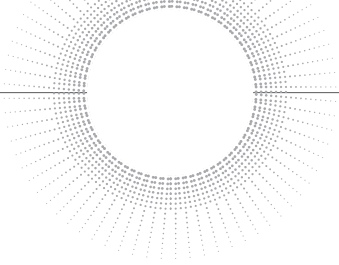
KORAIL operates an environmental management system and runs its own environmental information system for systematic analysis and management of environmental resources, facilities, investments, and information. In order to



respond positively to the changes in the future environment, we are enabling rapid decision-making by means of big data through integrated management of environmental facilities and environmental operation data through environmental operation process definition and enhanced ERP system.

Establishment and Revision of Environmental Laws

KORAIL’s environmental-related activities are conducted based on company policies, and are managed in accordance with the scope, responsibilities, and authority levels of the KORAIL Group. In addition, in response to the changes in the environment and related laws and regulations, we are constantly making and revising our environmental policies in accordance with reality.



Environmental Cost Investment Management

KORAIL conducts environmental investment and cost analysis by sector and reflects them in the next year’s environmental budget compilation to maximize

Open to Public

Through KORAIL’s website (www.korail.com) and its Environmental Management Report (first published in 2006), KORAIL is sharing transparent environmental information with its stakeholders on climate change response and environmental protection activities.

Training Environmental Experts

KORAIL is striving to foster environmental experts who have cultivated environmental technology and information sharing, environmental conservation and efficient operation of environmental facilities, streamlining of energy use and leading response to climate change. We conducted self-education such as green environment management and education for external specialists for environmental managers and all employees. As a result, in 2016, a total of 230 employees completed the training. Furthermore, through supporting gaining environmental qualifications in the sectors such as soil, atmospheric environment, noise vibration, water quality environment, and waste through the training, our environmental managers and employees have acquired a total of 222 certificates in 2016.

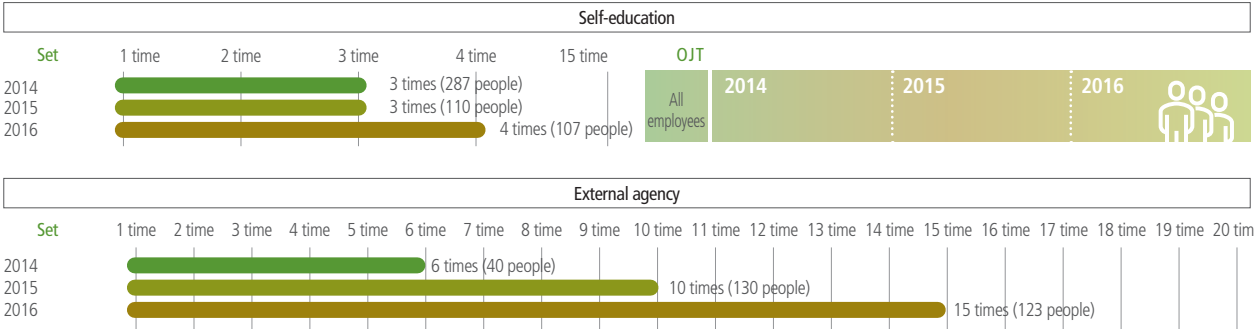
investment efficiency and environmental performance of environment cost, maximize transparent enforcement and investment effect of environmental budget.



(As of Dec. 31, 2016)

Name of qualifications	Number of holders	Name of qualifications	Number of holders
Soil environmental technician	1	Soil environmental engineer	4
Atmospheric environment engineer	22	Atmospheric environment industrial engineer	39
Noise and vibration engineer	15	Noise and vibration industrial engineer	1
Water quality environmental engineer	39	Water-quality environmental industrial engineer	37
Waste treatment engineer	19	waste treatment industrial engineer	31
Craftsman environmental	11	Others (environmentally related)	3

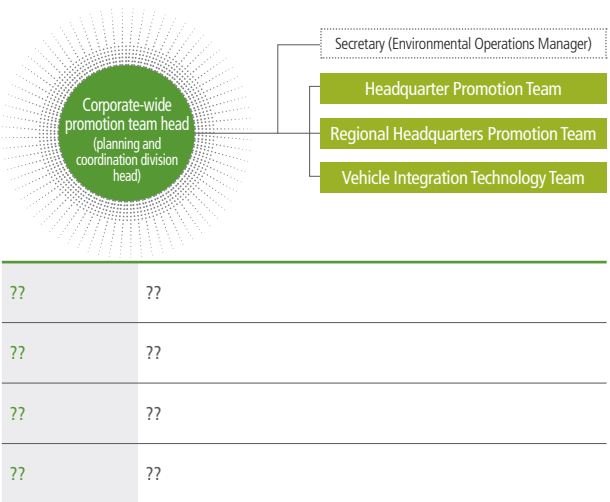
Environmental education status and completion number (people)



Activity of Environmental Pro Bono

Start of Sharing management, KORAIL Environmental Pro Bono

KORAIL will continue to implement environmental education consulting, environmental education and campaigns to small and medium-sized enterprises, social enterprises and NGOs in the local communities through talent donations made by the employees with expertise accumulated in the environmental field. We are also striving to achieve mutual growth with local companies. KORAIL has grafted Pro Bono Publico, a professional technology sharing and diffusion activity, onto its environmental activities to start operating it at its head office since 2011. Since then, it has been expanded as a companywide operation from FY2016 to the present.



Systematic Management of Environmental Management Activities and Promotion of Sustainable Environmental Management

(Registration of environmental activities, evaluation of activities, disclosure of internal and external information, response to sustainable evaluation etc.)



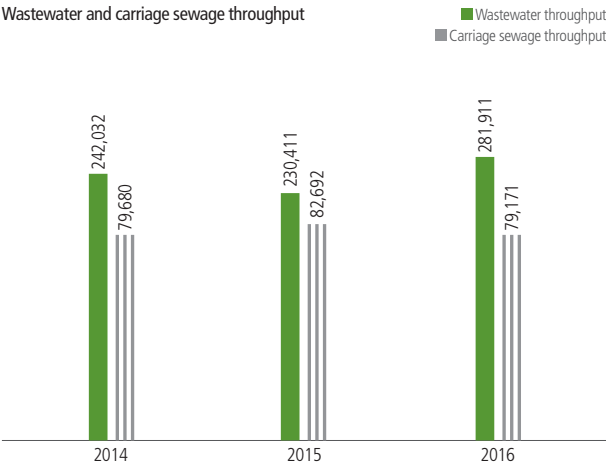
Environment Pro Bono Activities

Water Quality Management

KORAIL operates water and wastewater treatment facilities at its stations and offices to prevent public health and environmental damage caused by water pollution, and strives to preserve the water quality and water ecosystem of public water areas such as rivers and lakes. We are trying to improve water quality of the wastewater from railway car repair and washing process, wastewater generated from train toilet, and vehicle sewage from station check facility and reverse operation facility. We are also actively participating in water quality management by implementing water conservation through distribution of water saving machine and water pressure control and by installing waste water reuse system, recycling wastewater, and installing rainwater reuse facilities.



Wastewater and carriage sewage throughput



Air Management

KORAIL operates indoor air quality control and air pollution prevention facilities and is committed to air quality management to provide customers with pleasant environment. We are actively endeavoring to conserve air environment and to prevent environmental harm such as ventilation equipment operation, underground tunnel section and railway station air conditioning facility cleaning, etc. We measure indoor air quality every year and report to the local governments to acknowledge our efforts for air quality management. As a result, in the entire 96 stations for indoor air quality control (34 stations on the ground and 62 underground stations), the maintenance standards and the concentration of the relevant pollutants are appropriately controlled within the statutory standard level.

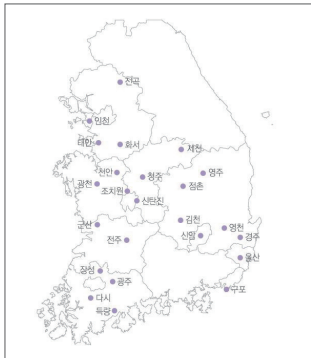
Operation of air pollution prevention facility



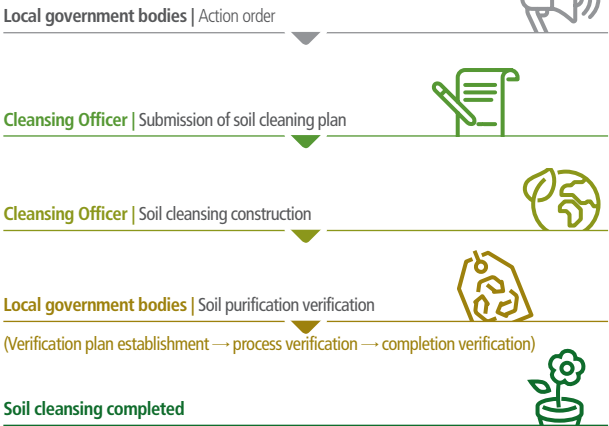
Soil Management

KORAIL conducts a survey of soil contamination at points where soil contamination is probable, and conducts clean-up operations at points where contamination is found. 21 branches of the railway soil monitoring network, whose soil pollution levels are measured every year by the Ministry of Environment, are all within the "Area 1" soil pollution concern standard, which means that they are in good condition compared to the railway standards (3 areas).

Railway soil monitoring network (railway site management)



Soil cleansing Process



Soil Prediction Status by Regional Headquarters

Western capital area	2
Eastern capital area	1
Chungbuk	1
Daejeon, Chungnam	4
Jeonbuk	1
Jeonbuk	4
Gwangju	1
Gyeongbuk	3
Daegu	3
Busan, Gyeongnam	1

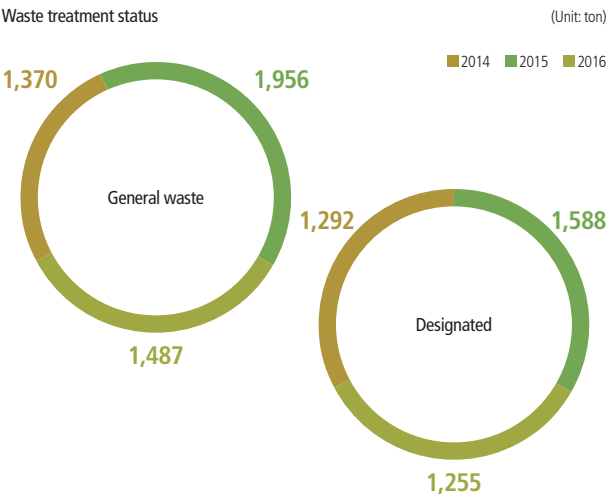
Classification	Measurement result	Standard value	Measurement result (average)					
			2014		2015		2016	
			Underground	Above ground	Underground	Above ground	Underground	Above ground
maintenance standard	fine dust (μg / m³)	not more than 150	82	63	76	43	68	56
	carbon dioxide (ppm)	not more than 1,000	513	488	501	469	507	493
	formaldehyde (μg / m³)	not more than 100	43	24	21	14	11	10
	carbon monoxide(ppm)	not more than 10	1	1	1	1	1	1

Waste management

KORAIL has set up waste separation and storage facilities at all work sites for proper treatment and reduction of wastes generated from trains and stations, set up waste and recycling targets for each site, and performed designation of management personnel, waste logistics system, selection of specialized processing companies, designation of discharge time and so on.



Waste treatment status



Current Status of Waste Recycling

Classification	Recycling in trains			Recycling in stations		
	2014	2015	2016	2014	2015	2016
Paper	277,465	306,595	345,777	1,236,738	482,567	1,103,844
Plastics	82,810	52,225	65,103	449,805	141,174	303,642
Cans	30,138	28,363	31,298	361,781	106,694	309,050
Bottles	30,625	79,742	47,818	418,014	179,502	305,610
Others	309	86	572	191,071	53,128	68,511
Total	421,347	467,011	490,568	2,657,409	963,065	2,090,657

Noise and Vibration Management

KORAIL is striving to minimize the damage caused by the noise from the mechanical noise caused by the propulsion system of the train, the electric noise due to the rail cloud, the aerodynamic noise caused by the train front and pantograph and the noise caused during train operation (whistle, alarm sound). Except for urgent cases, we have restricted the use of train whistle,

introduced low noise vehicles based on indoor and outdoor noise recommendation standards starting from the vehicle manufacturing stage, and installed continuous long rails, dustproof fasteners and track (improved) soundproofing and dustproof facilities. We are making every effort to reduce railroad noise by consultation with the Korea Railroad Authority.

Annual Noise Measurement Status (Unit: Leq dB (A))



Response to Climate Change

Business & Social Context

KORAIL is striving to reduce GHG emissions as well as carbon emissions, and to utilize renewable energy sources. We are striving to strengthen GHG target management system, step up the operating system for carbon management, and provide the highest level of customer service by improving energy efficiency.

Progress

- Responding to climate change and energy problems
- Reducing GHG emissions
- Reduction of sustainable energy consumption
- Efficient energy use through energy diagnosis



Future Plan

* New environmental regulations: Environmental facility integrated management law, emission trading system, chemical management law etc.

Expanding green management system to promote sustainable green management

Finding eco-friendly businesses and expanding facilities

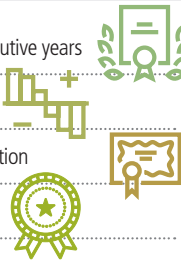
GHG reduction targets set higher than government standards

Introduction of new vehicles



Performance

- In 2016, the first public company to receive 'Green Product of the Year' for five consecutive years
- In 2016, GHG emissions was 162.0 million tCO₂-eq
- Acquired KTX (Yongsan-Mokpo route) environmental mark (carbon emission) certification
- Awarded with CDP Special Award for Excellence in Response to Climate Change



SDGs implementation status



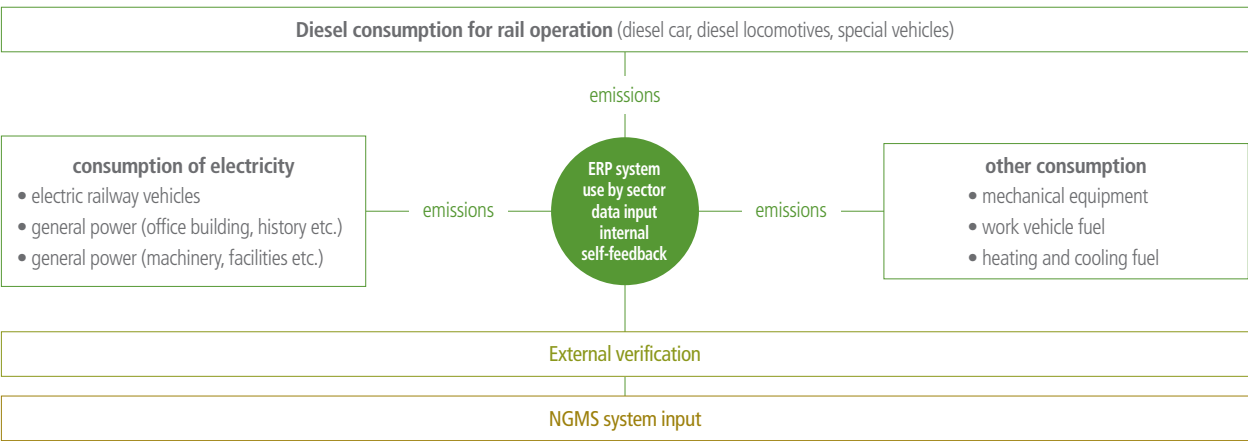
- 13 Taking urgent actions to prevent climate change and its impacts
- 15 Promoting protection, restoration and sustainable use of land ecosystems, sustainable forest management, preventing desertification, stopping and reversing land degradation, and stopping biodiversity loss

Response to Climate Change

Response to Climate Change

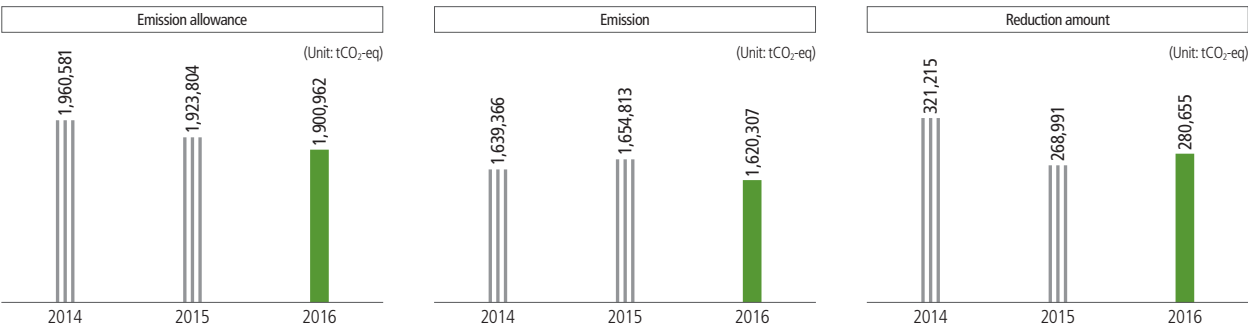
Management system of GHG and Energy

KORAIL strictly complies with the GHG reduction targets set by the government pursuant to the "GHG and Energy Target Management System" and establishes its own GHG and energy reduction targets higher than the emission allowance. In addition, we operate the GHG Energy Committee, manage systematic GHG inventory systems, and actively respond to GHG reduction policies by establishing a corporate-wide organization.



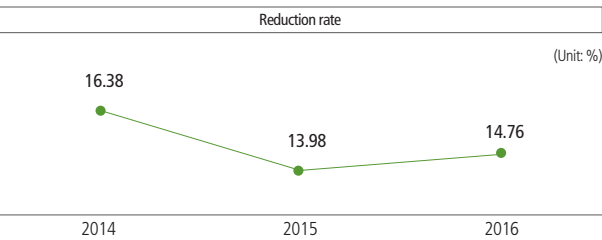
GHG Emissions Status

KORAIL's companywide emission amount of GHG in 2016 is 162.0 million tons of CO₂-eq. This is a reduction of about 3.5% of the emission compared to the 2010 emission (1.679 million tons of CO₂-eq) when the GHG target management system started, which is equivalent to 355,000 tons of CO₂-eq less than the 2015 emissions. We are actively working to implement the government's GHG reduction policy.



GHG Inventory

KORAIL has constructed and managed a GHG inventory to effectively calculate the amount of GHG emissions generated when railway operations are carried out. The main emission sources are divided into the energy for railway operation and the life energy for operation of railway facilities. Grasping the GHG emission amount for our 27 workplaces nationwide, we are striving to achieve reduction targets through monthly and quarterly feedbacks, and to get the verified results from specialist institutions.



GHG Reduction Rate

KORAIL contributes to the reduction of GHG emissions through the operation of railway, an eco-friendly mean of transportation. We are working to reduce GHG emissions by expanding low-carbon, high-efficiency railway vehicles and introducing new and renewable energy sources.

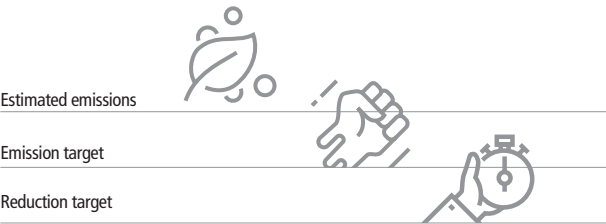
(Unit: tCO ₂ -eq)			
Year	Classification	Numbers	Reduction rate
2014	Emission allowance	1,960,581	16.38%
	Emission	1,639,366	
2015	Emission allowance	1,923,804	13.98%
	Emission	1,654,813	
2016	Emission allowance	1,900,962	14.76%
	Emission	1,620,307	



Classification	Total	Electrical vehicles				Diesel vehicle		
		Sub-total	High-speed	Motor car	Locomotives	Sub-total	Motor car	Locomotives
2014	4,561	4,048	1,160	2,688	200	513	204	309
2015	4,713	4,220	1,380	2,640	200	493	201	292
2016	4,857	4,391	1,420	2,776	195	466	178	288

Setting Mid-term Target for Reducing GHG Emissions by Itself

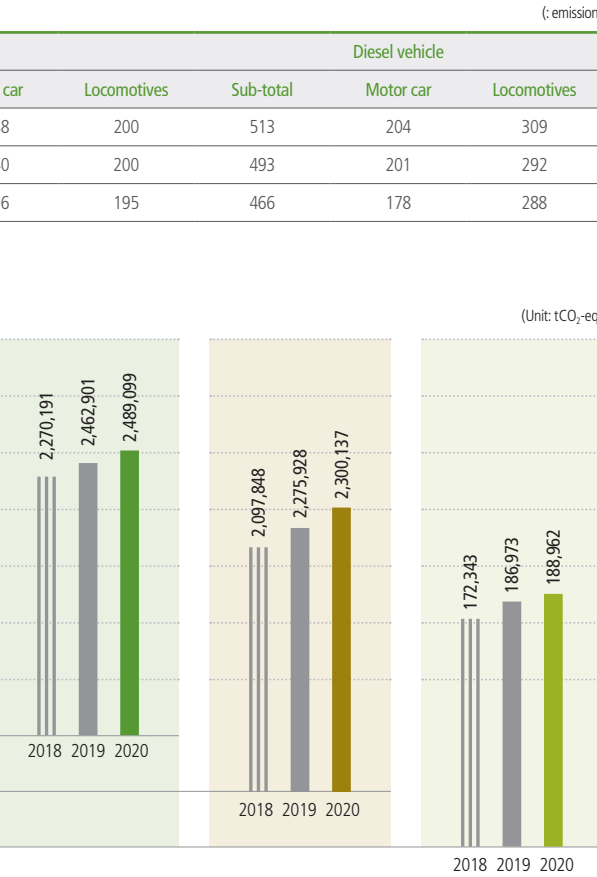
KORAIL has set its own GHG reduction targets that are strengthened more than government standards, and is doing its utmost to implement eco-friendly railway and government policies to reduce GHG emissions. Furthermore, we are striving to take the lead in dealing with climate change through reduction of GHG emissions.



Efforts to reduce GHG emissions

Expanding low-carbon, high-efficiency railway vehicles

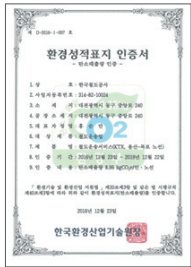
KORAIL has taken a leading role in R & D for the implementation of green railway, introduction of low-carbon electric vehicles, operation of environmentally friendly high-speed vehicles, and construction of eco-friendly railway systems. As of 2016, it has a total of 466 diesel vehicles and 4,391 electric vehicles. After stopping the operation of the diesel vehicle, PMC, we expanded low-carbon high-efficiency railway vehicles through operating the ITX-Saemaul Electric vehicle to improve the environment-friendly railway operation.









Recognition of External Performance in Carbon Management

KORAIL is the first in the railway sector to receive the environmental footprint (carbon footprint) certification for the KTX (Seoul-Busan route) in 2011 as well as the ITX-Saemaul (Seoul-Busan route) in 2015 and the KTX (Yongsan-Mokpo route). The environmental labeling (carbon footprint) is the government’s official certification to verify that thorough GHG and energy management is being carried out for the entire railway service provided by KORAIL. It is the result of KORAIL’s environmental friendliness by reducing total GHG emission compared to the fuel-powered cars. In addition, KORAIL has been voluntarily participating in the Global Climate Change Project on Carbon Information in the Korea Climate Change Report 2016 and was awarded with the “Special Carbon Management Award”.

Environmental Labeling Certificate



(Unit: kgCO₂/ person-route)

Criteria for carbon emission calculation	Related vehicle	Total GHG emission	Logo
Based on one way for one person, KTX (Seoul-Busan route)		10.21	
Based on one way for one person, KTX (Yongsan-Mokpo route)		8.96	
Based on one way for one person, ITX route (Seoul-Busan route)		12.23	

Energy

Energy Management

KORAIL is responding to rapidly changing climate change as well as actively implementing energy conservation through seasonal energy saving promotion plan establishment. It is playing a role as a green traffic through continuous reduction of fossil fuel consumption, efficient operation of electric railway vehicles, energy reduction activities for railway vehicles, and the use of new and renewable energy. 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)

Energy consumption

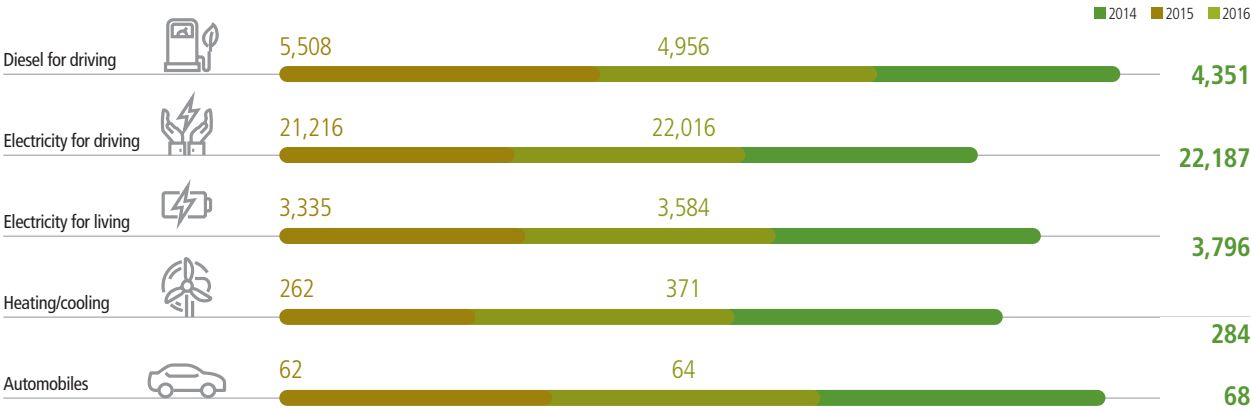
(Unit:TJ)



Energy use performance

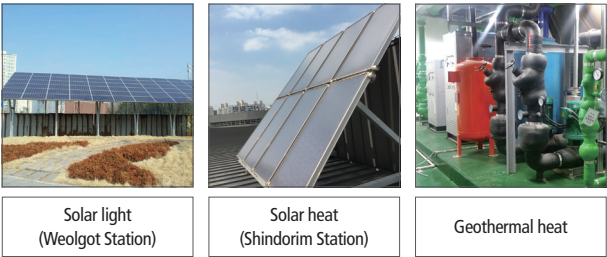
(Unit:TJ, %)

Classification		2014		2015		2016	
		Consumption	ratio	Consumption	ratio	Consumption	ratio
For railway driving	Diesel	5,508	18.1	4,956	16.0	4,351	14.2
	Electricity	21,216	69.8	22,016	71.0	22,187	72.3
	Sub-total	26,724	88.0	26,972	87.0	26,538	86.5
For living	Electricity	3,335	11.0	3,584	11.6	3,796	12.4
	Heating/cooling	262	0.9	371	1.2	284	0.9
	automobiles	62	0.2	64	0.2	68	0.2
	Sub-total	3,659	12.0	4,019	13.0	4,148	13.5
total		30,383	100.0	30,991	100.0	30,686	100.0



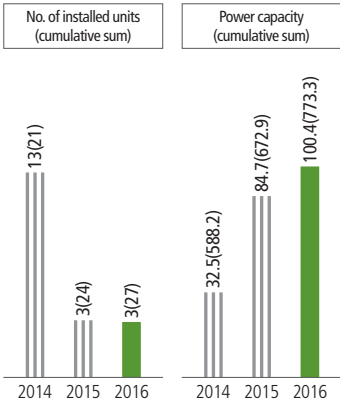
New and Renewable Energy Utilization

KORAIL is striving to continuously expand new and renewable energy facilities such as solar light energy facilities, solar heat energy facilities, and geothermal energy facilities in order to provide stable supply of energy, conversion to environmentally friendly energy structure, and reduction of GHG emissions. Through these, we contribute to conservation and national GHG reduction.



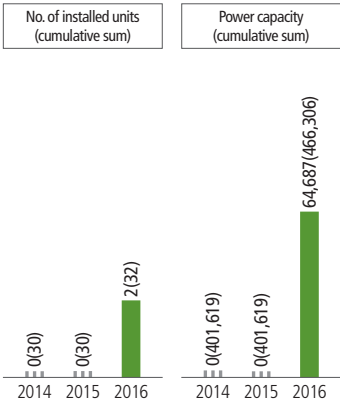
Solar light energy

(unit: unit, KWh)



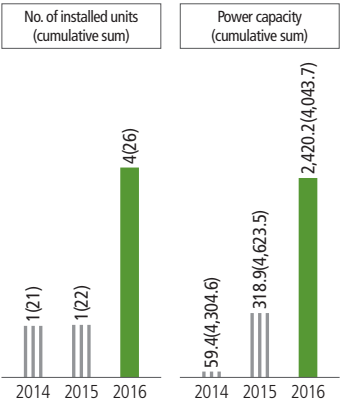
Solar heat energy

(unit: unit, KWh)



Geothermal energy

(unit: unit, KWh)



APPENDIX



Sustainability Management Performance
Awards History and Affiliation Status
Results of ISO 26000 Compliance Level Diagnosis
Status Of KORAIL's Implementation of UN SDGs
GRI G4 Index
Third Party Verification Statement
Sustainability Management Promotion System

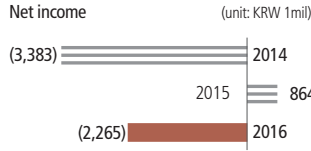
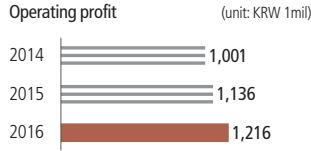
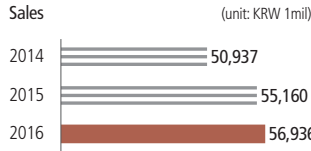
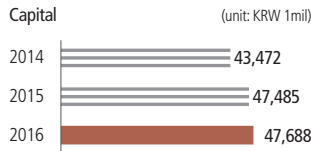
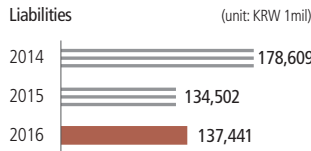
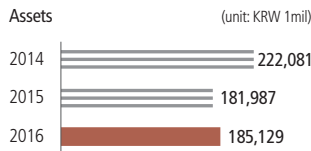
Sustainability Management Performance

Economic Performance

Summary of Consolidated Financial Statements

(Unit: KRW 100 million)

Classification		2014	2015	2016
Assets	current assets	55,188	9,527	10,961
	non-current assets	166,893	172,460	174,168
	total assets	222,081	181,987	185,129
Liabilities	current liabilities	55,492	28,067	29,087
	non-current liabilities	123,117	106,435	108,355
	total liabilities	178,609	134,502	137,441
Capital	paid-in capital	95,989	99,890	101,038
	loss	(84,581)	(82,830)	(83,877)
	other capital component	30,149	29,507	29,305
	parent company theory	1,916	918	1,221
	total capital	43,472	47,485	47,688



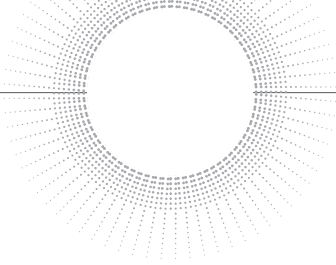
Summary of Consolidated Comprehensive Financial Statements

(Unit: KRW 100 million)

classification	2014	2015	2016
Sales	50,937	55,160	56,936
Cost of sales	47,205	51,089	52,324
Gross profit	3,732	4,071	4,612
Sales and administrative expenses	2,732	2,935	3,396
Operating profit	1,001	1,136	1,216
Other profit	99	227	340
Other expenses	307	337	529
Other profit (loss)	(1,228)	696	563
Financial revenue	1,030	1,027	455
Financial costs	6,154	5,721	4,543
Profit from Associates and Joint Ventures	199	209	178
Net loss on continuing operations before income tax	5,361	2,764	2,320
Continuing operating tax income	(41)	(2,194)	(55)
Loss on continuing operations	5,320	569	2,265
Operating profit from discontinued operations	1,937	1,433	-
Net income(loss)	(3,383)	864	(2,265)
Net income attributable to owners of the parent (loss)	(3,542)	823	(2,058)
Net income attributable to non-controlling interests	158	41	(207)
Other comprehensive income (after tax)	(597)	757	1,324
Total comprehensive income(loss)	(3,981)	1,621	(941)
Capital attributable to owners of the parent company	(4,139)	1,581	(734)
Non-controlling interest	158	39	(207)

Social Performance

Classification		unit	2014	2015	2016	
Employees						
Employment	Total No. of employees		persons	27,461.25	26,498	26,394
	No. of employees of fixed-term workers (male / female)		persons	276(25)	278(27)	186(27)
	No. of employees by age	Under 25	persons	59	124	33
		25~34	persons	2,159.625	2,334.375	2,163
		35~44	persons	9,766	9,519.625	7,645
		45~54	persons	11,910.875	11,765.625	12,299
		55 or above	persons	3,565.75	2,754.5	4,257
	Employment of the disabled (mandatory employment rate 3.0%)		persons(%)	938(3.3)	887(3.2)	847(3.1)
	Employment of elderly persons (mandatory employment rate 6.0%)		persons(%)	2,725(9.7)	2,988(10.9)	4,388(16.3)
	Average years of service		year	18.2	18.6	19.2
	Safety workplace implementation rate		No. of disaster victims / No. of workers	0.273	0.250	0.205
Recruitment	Total No. of new recruits		persons	500	319	599
	New recruitment by age	20 or below	persons	2	13	0
		21~25	persons	243.5	123	187
		26~40	persons	219	143	310
		31~35	persons	31	31.5	75
		36~40	persons	4	6	16
		41 or above	persons	0.5	2.5	11
		New recruitment by region	Metropolitan area Seoul, Incheon, Gyeonggi Province	persons	271.5	129.5
	Non-metropolitan area Seoul, Incheon, Gyeonggi		persons	228.5	189.5	334
Retirement	retirement rate (%)	%	4.0	3.8	1.8	
Female employees	No. of female employees		persons	2,712	2,747	2,815
	Female employment (compulsory employment rate 7.67%)		%	9.65	10.02	10.46
	No. of female managers (%)		Persons(%)	316(3.77)	317(4.05)	340(4.6)
	No. of newly hired female employees (%)		Persons(%)	149(29.8)	55(17.2)	98(16.4)
	Education	Educational budget	KRW 1 million	6,021	8,423	8,451
Education fee per capita		KRW 1,000	220	317	320	
Education time per capita		hour	54	32	46.8	
Customers						
Customer satisfaction	Customer satisfaction on public organizations (PCSI)	Point	Grade A	Grade A	Grade A	
Regular time operation rate	KTX-regular time operation rate (UIC basis)	%	99.88	99.90	99.87	
Business partners						
Support	SME product purchase	KRW 100 million	6,703	6,249	6,310	
	SME purchase rate	%	58.9	76.7	76.2	
	Financial support performance	KRW 100 million	645	-	-	
Local community						
Fund raising	Love fund	KRW 1 million	630	589	639	
	Matching grant	KRW 1 million	603	673	630	
Service hours	Service hours Per capita	hours	12.8	13.0	11.5	



Environmental Performance

Classification		unit	2014	2015	2016
Amount of energy use	diesel for railway	TJ	5,508	4,956	4,351
	electricity for railway	TJ	21,216	22,016	22,187
	electricity for living	TJ	3,335	3,584	3,796
	heating and cooling fuel	TJ	262	371	284
	business car	TJ	62	64	68
	total	TJ	30,383	30,991	30,686
GHG emission	diesel for railway	tCO ₂ eq	428,329	385,431	338,353
	electricity for railway	tCO ₂ eq	1,030,405	1,069,248	1,077,553
	electricity for living	tCO ₂ eq	162,000	174,079	184,363
	heating and cooling fuel	tCO ₂ eq	14,309	21,576	15,137
	business car	tCO ₂ eq	4,323	4,479	4,901
	total	tCO ₂ eq	1,639,366	1,654,813	1,620,307
Environment facility investment	water quality	KRW1 million	179	103	430
	air	KRW1 million	10	153	150
	soil	KRW1 million	1,145	214	134
	waste	KRW1 million	80	61	99
	total	KRW1 million	1,414	531	813
Environment impact management	amount of reused water	ton	138,848	130,312	151,051
	reuse rate	%	2.61	2.37	2.61
	waste water throughput	m³	242,032	230,411	281,911
	industrial waste for (general) throughput	ton	1,370	1,956	1,487
	designated waste throughput	ton	1,292	1,588	1,255
	municipal waste recycling (train)	kg	421,347	467,011	490,568
	municipal waste recycling (station)	kg	2,657,409	963,065	2,090,657
Green product purchase	amount of green product purchase	KRW 1 million	8,678	4,613	2,868
	green product purchase rate	%	96.59	83.66	98.29



Awards History and Affiliation Status

Awards History

Year	Awards history	Sponsor
2016	Green Commodities of the Year (S-Train) for five consecutive years	Korea Green Purchasing Network Inc.
	Consumer-oriented Management (CCM) Certification for four consecutive years	Fair Trade Commissions
	Public Organizations Consolidated Disclosure Excellent Organizations	Ministry of Strategy and Finance
	Republic of Korea Star of Tourism (Buncheon Station)	Korea Tourism Organization
	Korea Communication Ministry of Government Administration and Home Affairs (KTX Magazine)	Korea Sabo Association Inc.
	Republic of Korea Beloved Company Information Reward	Ministry of Trade, Industry and Energy
	Web Accessibility Quality Certification	Ministry of Science, ICT and Future Planning
	CDP Climate Change Excellent Enterprise Special Prize	CDP
	Award of Excellence in Environmental Dispute Prevention Competition	Environmental Protection Association of Korea Inc.
	2016 Republic of Korea Invention Patent Prize Prime Minister Award	Korea Invention Promotion Association / Korean Intellectual Property
	Selected as the best institution for disaster management evaluation in public sector	Ministry of Public Safety and Security(MPSS)
	Republic of Korea Grand Safety Excellent Industry Award	Ministry of Public Safety and Security(MPSS)
	Eulji Training Outstanding Industry Award	Ministry of Land, Infrastructure and Transport
	Public Purchase Facilitation President Award	SMBA
	Invention Patent Competition Prime Minister Award	Korean Intellectual Property
	Invention Promotion Activity Prime Minister Award	Korean Intellectual Property
2017	Galaxy Awards	MerComm Inc.
	Sustainability Report Award KRCA	Korean Standards Association
	This Year's Green Product (ITX- Saemaul) for six consecutive years	Korea Green Purchasing Network Inc.
	Republic of Korea Brand Hall of Fame Award Institute	Industrial Policy Research Institute
	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(NRCT)

Group Subscription Status

Domestic		Overseas
<ul style="list-style-type: none">• Korea Standards Association• Korean Railway Society• Audit Association• Korea System Engineering Association• Korean Public Administration Association• Corporate Consumer Expert Association• Korean Transportation Association• Korean Policy Institute• Asia Pacific Tourism Association Korea Branch• Korea Electronics Technology Association	<ul style="list-style-type: none">• UN Global Compact Korean Association• Korea Knowledge Management Association• Korea Electric Railway Technical Cooperation Association• Korea Management Association• Korean Logistics Association• Seoul Public Administration Association• Korea Productivity Center• Railway Industry Committee• Public Auditing Innovation Forum	<ul style="list-style-type: none">• UNGC (United Nations Global Compact)• UIC (International Railway Federation)• EURAIL SPEED (International Conference on High-speed Rail)• CCTT (Siberia Transit Coordination Council)• Korea-Japan Railway Exchange and Cooperation• WCRR Railway Conference)• OSJD (National Railway Convention)• Korea-Russia Railway Exchange Cooperation• Korea- China- Mongolia Railway Exchange and Cooperation

Results of ISO 26000 Compliance Level Diagnosis

Diagnostic Criteria

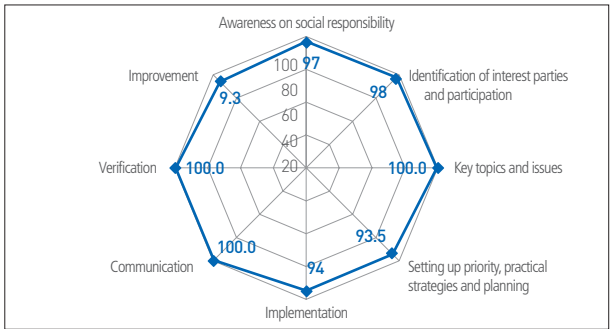
To KORAIL's Management and Stakeholders

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 (organization, governance, environment, human rights, labor practices, consumer issues, community participation and development and fair operating practices). The Korean Standards Association assessed KORAIL's level of social responsibility compliance according to the ISO 26000 checklist.

Diagnostic Results

Results of Social Responsibility Process Diagnosis

KORAIL has been recognized for its efforts to respond to growing demands for corporate social responsibility and to share social responsibility activities and outcomes with stakeholders, and it was excellent in core themes, issues, communication, and verification.



Classification	Details	Score
Awareness on social responsibility	Review of the current situation of the organization based on management's will	97
Identification of interest parties and participation	Establishing engagement strategy through review of stakeholder's interests and requirements	98
Key topics and issues	Reviewing key issues and making a list of issues through the analysis of organizational internal competencies.	100
Setting up priority, practical strategies and planning	Implementation strategies, planning priorities, goals and action plans of the issues to be improved in consideration of organizational capacity	93.5
Implementation	execution of strategies and vision, goals and action plans and regular monitoring of social responsibility tasks	94
Communication	Communicating with stakeholders after creating a performance report	100
Verification	Verifying the activities and reports for improving performance and confidence	100
Improvement	Leading to continual improvement by regular review of performance	9.3

Diagnostic Scope

The Korea Standards Association conducted a diagnosis of 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.

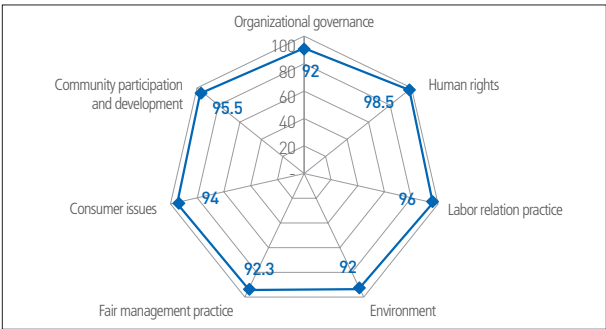
Diagnosis Method

The Korean Standards Association conducted the following activities based on objective diagnostic criteria based on the departments concerned with the publication of the sustainability report.

- Reviewing of the internal data on KORAIL's sustainability management activities and achievements
- Interviewing KORAIL's representatives for sustainability management issues

Diagnosis of Seven Key Subjects

KORAIL, which was diagnosed according to Seven Core Themes, has a good overall level in the fulfillment of the expectations demanded by the seven key themes of ISO 26000. In particular, the level of human rights, labor practices, community participation and development has been evaluated to be outstanding.



Classification	Details	Score
Organizational governance	Activities to respect the social responsibility principles and conform to the existing system, policies and customs	92
Human rights	Activities to respect and protect human rights within existing organization and the influence of the organization	98.5
Labor relation practice	policies and customs that affect the labor environment of the laborers in terms of the subcontractors within the organization	96
Environment	Activities to approach in an integrated way considering the decisions and activities of the organization in order to reduce the impact of the organization on environment	92
Fair management practice	Activities to pay attention to the ethical behaviors among different organizations such as organization, partners, and suppliers	92.3
Consumer issues	Promoting consumer education, fair and transparent marketing information, contract, sustainable consumption etc.	94
Participation and development of local communities	Activities to recognize and respect the rights of local communities and to maximize the resource use and opportunities	95.5

Seven Key Themes Sectorial Recommendations

① 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.

② Human Rights

KORAIL 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.

③ Labor Relation Practices

KORAIL stands out for its employees' safe working conditions and efforts to balance work and life. Through active communication between labor and management, KORAIL has accomplished achievements such as abolishing the promotion system based on length of service and introducing a wage peak system. In order to overcome the anxieties caused by frequent changes in the personnel system, we recommend expanding support for the creation of a stable work environment and strengthening employee professionalism.

④ Environment

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.

⑤ Fair Management Practice

KORAIL has set up a dedicated growth organization (joint growth center) 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. However, in order to eradicate intermittent incidents of abuse, we recommended activating the anonymous report channel and strengthening the punishment standards for neglect and misconduct.

⑥ Consumer Issues

In order to meet changing consumer expectations and demands, KORAIL has continuously improved customer satisfaction by improving mobile application

functions, enhancing user convenience, and taking care of the social weak. However, in spite of the continuous enhancement of safety management level, we recommend building a preventive centered safety system in preparation for train accidents.

⑦ Participation and Development of Local Communities

KORAIL has contributed to the development of local communities and the creation of new tourism culture by completing five major tourism belts. In addition, we have been actively engaged in social contribution activities such as establishment of the joint social contribution foundation for labor and management, railroad experience study station, KORAIL symphony orchestra, KORAIL village, and happy train. It is recommended that KORAIL strengthen the social contribution activities of labor and management in the future and continue to strengthen our professional and systematic social contribution utilizing the nationwide railway network.

Diagnostic Conclusion

KORAIL obtained 940 points out of a total score of 1000 points as a result of the diagnosis of ISO 26000 level, and it was evaluated to be 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.



June 7, 2016
Park Su-hyeon,
President of Korea Standards Association

박수현

The Korea Standards Association is a specialized legal entity established under the Korean Industrial Standardization Law in 1962. It is a knowledge service organization that disseminates and spreads industry standardization, quality management, sustainability management, and KS and ISO certification. In particular, we are contributing to the sustainable development of our society as an ISO 26000 domestic secretariat organization, GRI-designated educational institution, AA1000 verification organization, Korea Sustainability Index (KSI) management organization, UN CDM management organization and GHG target management verification organization.

Current Status of KORAIL's Implementation of UN SDGs



1 Poverty eradication

- KORAIL Village
(Improvement of living spaces for the underprivileged)



2 Famine eradication and food security

- Love donation system
- Happy Train



3 Healthy living and welfare

- Activation of flexible work arrangements
- Creating a work-family compatibility culture
- Operating reasonable welfare system



4 Quality education

- Employee training
- Designating a companywide safety day
- KORAIL LEARNING MODEL training



5 Gender equality and advancing women's rights

- Jobs and personnel policy without discrimination
- Implementing gender equality system
- Implement social equity employment



6 Clean water and sanitation

- Water pollutant management
- Reusing wastewater treatment facility water



7 Providing sustainable energy

- Introduction of new and renewable energy



8 Sustainable Economic Growth and good jobs

- Open jobs
- Advanced labor-management culture
- Creation of private sector jobs
- Creation and distribution of economic value



9 Building infrastructure and sustainable industrialization

- Safety first management



Resolving inequality 10

- Jobs and personnel policy without discrimination



Building sustainable cities and residential areas 11

- Community contribution activities



Sustainable consumption 12

- Purchasing SME products
- Purchasing eco-friendly products



Prevention of climate change impacts 13

- Reducing GHG emissions
- Energy saving activities
- Response to carbon emissions trading system



Conservation of ocean, sea and marine resources 14

- Use of hot waste water



Protecting terrestrial ecosystems 15

- Sewage and wastewater management
- Ecosystem protection



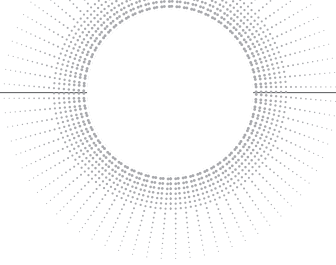
Realization of peace and justice 16

- Ethical management system
- Corruption prevention system and education
- Privacy and information security



Global partnership 17

- Join and support UNGC
- Join and support UC (International Railway Federation)
- Member states of OSJD (International Railway Convention)
- Korea-Japan railway exchange and cooperation
- (Ministry of Land, Infrastructure and Transport, JR Kyushu and JR East Japan)

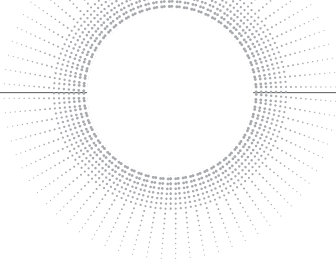


GRI G4 Index

GRI G4 Index		Classification	Page
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Organization Profile	G4-3	About KORAIL	8
	G4-4	About KORAIL	9-12
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	G4-6	About KORAIL	8
	G4-7	About KORAIL	8
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	G4-22	Materiality Evaluation	16-17
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	G4-28	About this report	2
	G4-29	About this report	2
	G4-30	About this report	2
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	G4-32	About this report	2
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GRI G4 Index		Classification	Page
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Third Party’s Assurance Statement

KMR Assurance Statement

To the Readers of 2016 KORAIL Sustainability Report:

Foreword

Korea Management Registrar Inc.(hereinafter “KMR”) has been requested by of Korea Railroad Corporation.(hereinafter “KORAIL”) to verify the contents of its 2016 Sustainability Report (hereinafter “the Report”). KORAIL is responsible for the collection and presentation of information included in the Report. KMR’s responsibility is to carry out assurance engagement on specific data and information in the assurance scope stipulated below.

Scope and standard

KORAIL describes its efforts and achievements of the corporate social responsibility activities in the Report. KMR performed a Type 2, moderate level of assurance using AA1000AS (2008) as an assurance standard. KMR’s assurance team(hereinafter “the team”) evaluated the adherence to Principles of Inclusivity, Materiality and Responsiveness, and the reliability of the selected GRI G4 indices as below, where professional judgment of the team was exercised as materiality criteria.

- GRI Reporting Principles
- General Disclosures
- Specific Disclosures
 - Generic DMA material Indicators of Aspects
 - Economic Performance: EC1
 - Indirect Economic Impacts: EC7, EC8
 - Energy: EN3, EN6, EN7
 - Water: EN10
 - Emissions: EN15, EN16, EN18
 - Effluents and Waste: EN22, EN23
 - Compliance: EN29
 - Employment: LA1, LA2, LA3
 - Occupational Health and Safety: LA5, LA6
 - Training and Education: LA9, LA11
 - Labor Practices Grievance Mechanisms: LA16
 - Non-discrimination: HR3
 - Freedom of Association and Collective Bargaining: HR4

- Local Communities: SO1
- Anti-Corruption: SO3, SO4
- Anti-competitive Behavior: SO7
- Customer Health and Safety): PR1
- Product and Service Labeling: PR3, PR5
- Customer Privacy: PR8

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

Our approach

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

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

Our conclusion

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

■ Inclusivity

Inclusivity is the participation of stakeholders in developing and achieving an accountable and strategic response to sustainability

- KORAIL is developing and maintaining stakeholder communication channels in various forms and levels in order to make a commitment to be responsible for the stakeholders. The assurance team could not find any critical stakeholder KORAIL left out during this procedure.



■ Materiality

Materiality is determining the relevance and significance of an issue to an organization and its stakeholders. A material issue is an issue that will influence the decisions, actions, and performance of an organization or its stakeholders.

- KORAIL is determining the materiality of issues found out through stakeholder communication channels through its own materiality evaluation process, and the assurance team could not find any critical issues left out in this process.

■ Responsiveness

Responsiveness is an organization’s response to stakeholder issues that affect its sustainability performance and is realized through decisions, actions, and performance, as well as communication with stakeholders.

- The assurance team could not find any evidence that KORAIL’s counter measures to critical stakeholder issues were inappropriately recorded in the Report.

We could not find any evidence the Report was not prepared in accordance with the ‘Core Option’ of GRI G4.

Recommendation for improvement

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

- Management for stakeholders: KORAIL separates stakeholders into value purchasing customers, value-impact customers, value-transfer customers and value-creating customers and form a consensus with stakeholders through various channels of communication. It is recommended to build a stakeholder management system, subdivided it into more groups and prioritize the most important stakeholders in the center. In addition to build a management strategy system from the stakeholders’ standpoint.

- Integration of management value system and sustainability management system: It is recommended to integrate management value system and sustainability management system in terms of efficient use of limited resources and integration of core values.

Our independence

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

September, 7th, 2017 CEO **KI HO Park**

K. H. Park



Sustainability Management Promotion System

Vision and Strategy of Sustainability Management

Republic of Korea's railroad with people, world and future					
Vision	Trust	Responsibility	Ardor	Innovation	Nature
Strategy	Growing into a trusted company performing upright management through spreading ethics culture of corporations and employees such as anti-corruption integrity and internal ethics awareness.	Contributing to mutual growth with local communities through the promotion of social contribution activities that are specific to railways and fulfilling the responsibility as a public industry through the active promotion of mutual growth policies such as SME technical support	Realizing employee policy without discrimination through offering active employment culture and equal opportunities and forming the basis to focus all capacity on the corporate development through expanding complaint processing and management of employee health	Growing into the world's best railway company through constant innovation of various policies for customers such as human and material service improvement and safety improvement	Realizing low carbon green growth through green policy and GHG reduction etc. and promoting green railway through prevention of various environmental pollutions

Sustainability Management Promotion Process

Decision Making		Sustainability Management Promotion			
Decision-making of management activities considering vision and sustainable growth		Sustainability Management Promotion Committee Establishment Of Expert Advice And Direction		Sustainability management implementation Implementation and operation	
CEO		Environmental Advisory Committee	Environmental management	Green growth	Environment friendly policy
Board of Directors		Human Error Research Committee	Employee safety	Health promotion	Mental health
		Rail Safety Committee	Review committee	Absolute safety	Elimination of insecurity
		Transparent Ethical Management Committee	Ethical management	Anti-corruption integrity	Fair trade
		Social Contribution Management Committee	Happiness sharing	Talent sharing	Community contribution
		National Happiness KORAIL Practice Team	Customer service	Reflecting feedback	Communication channel

Sustainability Management Promotion Division and Its Roles

Strategic system	Major divisions	Role and Focus Management Sector		Promotion Department
Trusted company	Sustainability division	<ul style="list-style-type: none"> overseeing sustainable management and external response performance inspection and consulting for each field 	<ul style="list-style-type: none"> enhancing awareness level and promotion 	Culture & Public Relations Office
	Integrity division	<ul style="list-style-type: none"> operating anti-corruption integrity policies and systems internal employee ethics (education, system improvement etc.) 	<ul style="list-style-type: none"> strengthening integrity support and incentives 	Integrity Investigation Office
Fulfillment of social responsibility	Social contribution division	<ul style="list-style-type: none"> overseeing companywide social contribution activities finding and disseminating the activities specialized in the pertinent areas 	<ul style="list-style-type: none"> supporting the policies for the mutual living with communities 	Culture & Public Relations Office
	Mutual growth division	<ul style="list-style-type: none"> establishment and promotion of mutual growth policy overseeing SME support policies such as the development of new products under purchasing conditions. 		Material Management Office
Realization of passionate organization	Passionate personnel division	<ul style="list-style-type: none"> discrimination-free fair personnel (recruitment, etc.) welfare policy for implementing GWP government policy 	<ul style="list-style-type: none"> operating employee competency development program compliance with the labor standards act and overseeing 	Human Resource Development Center Corporate Welfare Office
	Corporate health division	<ul style="list-style-type: none"> anti-corruption integrity policy and system internalized employee ethics (education, system improvement etc.) 	<ul style="list-style-type: none"> transparency and incentive support 	Transparency Investigation Office
Customer satisfaction innovation industry	Customer division	<ul style="list-style-type: none"> establish and promote customer service improvement policy VOC processing and information protection system operation 	<ul style="list-style-type: none"> activate customer communication channels and feedback 	CS Planning
	Safety division	<ul style="list-style-type: none"> establish and implement railway safety policy 	<ul style="list-style-type: none"> operating customer safety management system 	Safety Innovation Department
Eco-friendly green railway	Environment division	<ul style="list-style-type: none"> establishing and managing environmental business policy establishing and implementing waste management system 	<ul style="list-style-type: none"> introducing and utilizing eco-friendly technology Policy promoting GHG emission reduction policy 	Environmental System Office
	Energy division	<ul style="list-style-type: none"> establishing and managing energy saving policy operating energy efficiency program 	<ul style="list-style-type: none"> developing and utilizing new and renewable energy 	