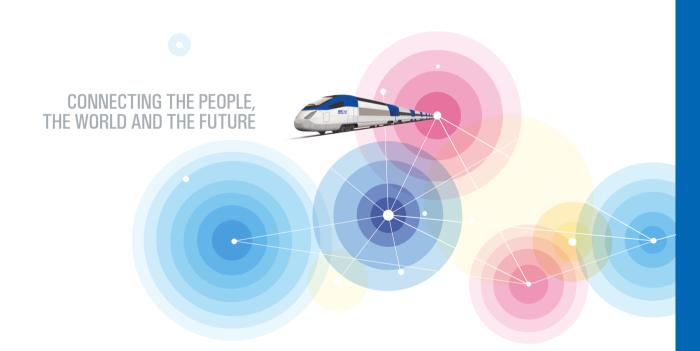
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2019-20 KORAIL **Sustainability Report**

Connecting the People, World, and the Future

Railroad of the Republic of Korea

KORAIL









About this Report

environmental and social values while working toward achieving that mission. KORAIL has been transparently disclosing all of its activities and performance to its stakeholders through its annual

Standard

This report has been prepared in accordance with the Core Option of the GRI (Global Reporting Initiative) Standards and ISO 26000 Guidance on Social Responsibility. It reports primarily

Period, Scope and Boundaries

This report reveals sustainability management activities conducted by KORAIL headquarters and its regional divisions and includes activities carried out by some of its affiliates from January 2019 to December 2019. The qualitative performance data from the past three years (2017- 2019) have been included to show the improvements and changes made over the years, and it also contains some data generated during the first half of 2020 considering its importance in terms of timeliness. In addition, we have identified and covered the impact of core issues drawn from a materiality assessment on our key stakeholders within the value chain of KORAIL.

calculating data and stating contents. Some of the performance data

and information that have not changed since the previous year have been restated to help readers better understand the content of this report.

Assurance

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

Additional Information

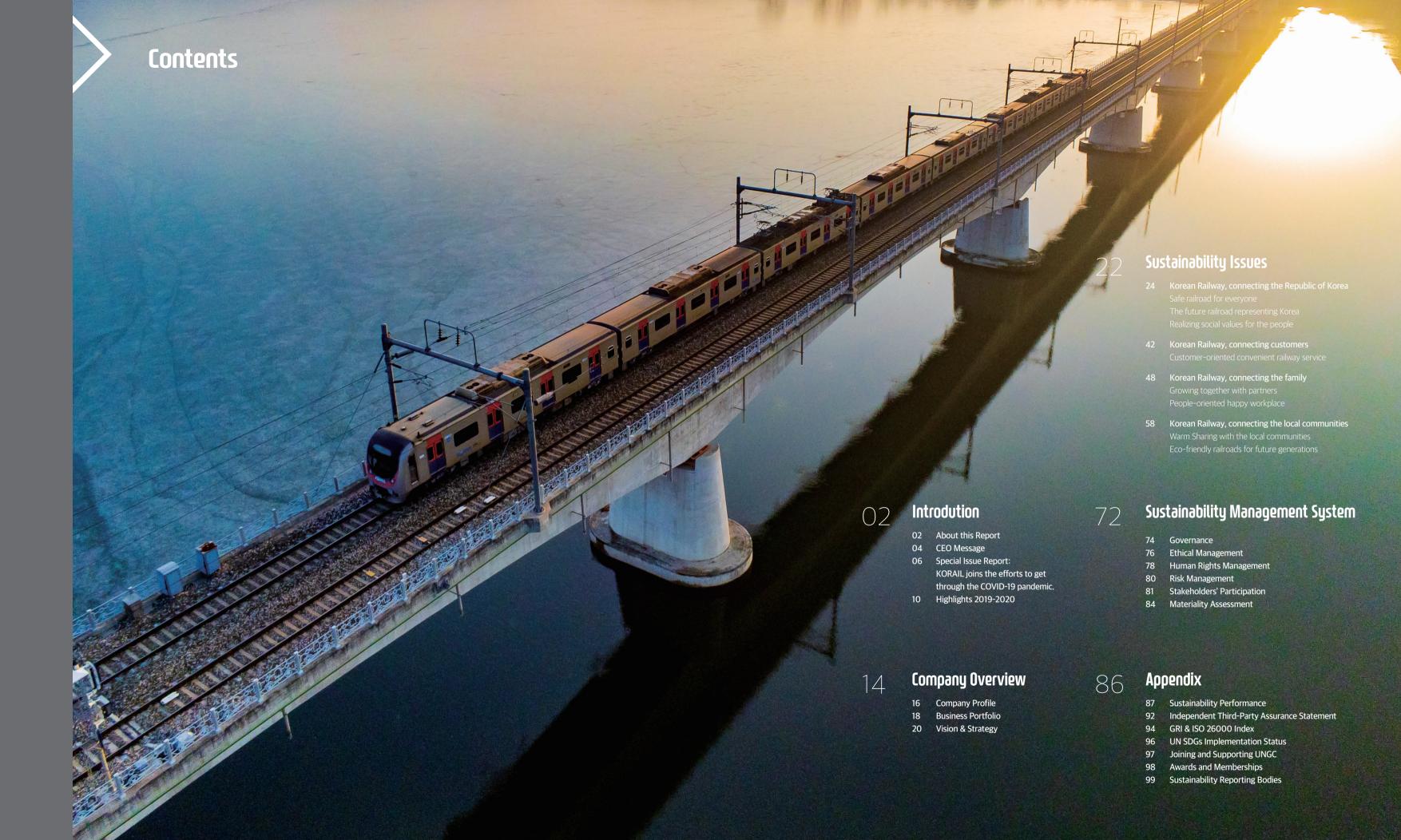
PDF files from the website of KORAIL. If you have any inquiries about this report, please contact the company via the following details.



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042-615-3162



CEO Message



KORAIL will lead the future railway in the 'Contactless and New Normal Era,' protecting the value of 'Public Railway and the People.'

KORAIL will Rise to the Challenges of a Post Coronavirus World and New Normal Era.

In 2020, KORAIL is going through an unprecedented year of trials and challenges that began with Coronavirus (COVID-19). The number of railway passengers has decreased to less than half, and the operating losses are expected to exceed 1 trillion won.

We are witnessing fundamental changes in which the lifestyles and value systems of people in our society have been changing completely. KORAIL will wisely meet the current challenges that we are facing based on "Overcome the COVID-19 Crisis," and "New Deal Korea" through watertight disease prevention measures, preemptive safety precautions, and intensive structural reform,

Just as we have been writing the long history of Korean railroads constantly for more than 100 years, KORAIL is vigorously preparing for the future without being swayed at all.

We will ensure 'Safe KORAIL' that everyone can use with confidence.

KORAIL is strengthening its protection efforts against COVID-19 to ensure that the people can use the trains again with a sense of security. Every day, we are disinfecting stations and trains, and we are campaigning for the continued mandatory use of face masks and hand sanitizers in order to prevent the spread of COVID-19 and other infectious diseases.

In the face of our first-ever operating loss, we are tightening our belts to save everything, except for investment in safety measures, which is directly linked to the safety of the people. This year alone, we invested about 1.7 trillion won by increasing the safety investment by 70% compared to last year to replace old vehicles and improve facilities.

Above all, in order to prevent accidents, we will adhere to the principles of 'We will not drive trains if it's not safe, we will not work if it is not safe.'

Thanks to such principles, not a single accident has happened — even in the record floods we experienced this year. We will spare no efforts to ensure a safe railroad for both passengers and KR employees by preventing accidents and improving the system with our limitless sense of responsibility and mission for railroad safety.

We will secure future growth engines through intensive 'Structural Reform and Organizational Reform.'

We will pursue structural reform, organizational innovation, and management efficiency continuously in order to overcome the management crisis and flexibly adapt to the non-face-to-face society. To this end, we plan to enhance the efficiency of the headquarters' organization, secure organizational resilience by consolidating 12 regional headquarters across the country, and utilize the reforms to improve the work system, increase safety, and secure more manpower in new fields. In addition, we will actively develop the inter-Korean and Continental railways and overseas rail markets to gear up for our entry into new markets in order to secure future growth engines. We intend to lay the

foundation for the East Asian railroad community by joining forces with the government policies and strengthening exchanges and cooperation with the relevant countries.

We will take the lead in implementing the 'New Deal Korea' program in the era of the 4th Industrial Revolution.

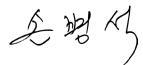
Railway is a low-carbon and eco-friendly means of transportation and has the potential to lead the era of the Fourth Industrial Revolution. To this end, we will install IoT sensors on tracks and facilities, build an automatic detection and remote monitoring system, and boldly adopt new technologies such as big data and VR for the digital New Deal in the SOC field. In addition, we will strive to develop Green New Deal technologies such as solar power generation business using railway infrastructure and the operation of hydrogen hybrid trains. Through these measures, we will take the lead in the innovation of the railroad industry so that people can enjoy the railroad services more safely and conveniently

We will emphasize the value of "National Railroad" and "Public Railroad."

As a public railway operator, we are committed to providing universal railway services and revitalizing the national economy. We will further expand the public concessionary fare policy and reservation policy for the transportation disadvantaged, and strive to improve transportation convenience for residents living in remote areas. We are developing more tourism products to revitalize the local economies stagnated and affected by the COVID-19 pandemic and natural disasters. We are actively participating in urban regeneration projects, such as improving the residential environment of 'shanty town (Jeonbangchon)' around the station and preparing business spaces. We will promote win-win cooperation with social economy enterprises and strive to create decent quality jobs for the youth and the underprivileged for the better public interest.

Just as railroad tracks run side by side, the paths before us are even more beautiful when we walk together alongside each other. Constructive criticism and the sincere support and care of all stakeholders have been the greatest source of power that has brought KORAIL to where we now stand. We welcome your continued strong interest and unwavering encouragement and support for our efforts as we advance toward an exciting new era for the railway. Thank you!

August 2020
President of KORAIL
Son Byung-seok

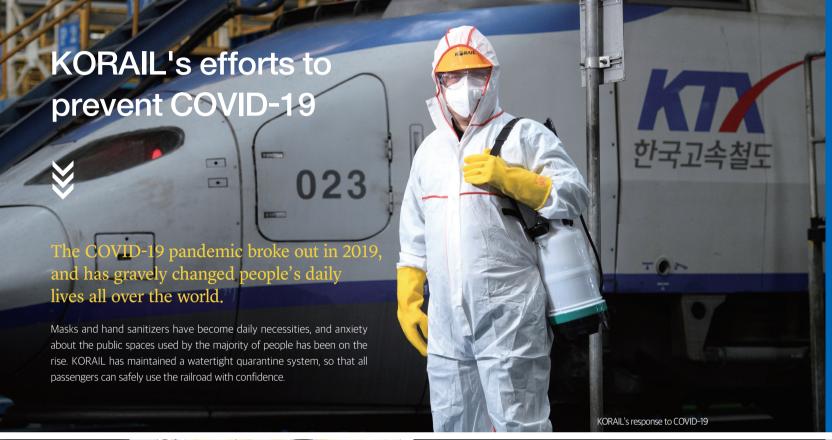


Special Issue Report

07

06

KORAIL joins the efforts to get through the COVID-19 pandemic.



KORAIL thoroughly disinfects all railway stations twice a day and major stations at least six times daily, and attaches antibacterial film to places that are often accessed by users to prevent indirect contact. Hand sanitizers are provided in major passageways, reception rooms, and platforms of the stations, and 'transparent partitions' are installed at the general information center and ticket counters to minimize contact between customers and station staff. In addition, KORAIL has established a strict quarantine system, installing 106 thermal imaging cameras in 95 major stations. We are also striving for the prevention of the pandemic inside the trains. Quarantine and disinfection are carried out when trains enter and leave the railway depot and whenever they stop operating at the destination station. The KTX high-speed railway continues to conduct intensive quarantine at least 4.5 times a day on average, and ITX-Saemaul and Mugunghwa trains more than twice a day.

Meanwhile, KORAIL is actively participating in social distancing and is playing its role for the public interest. When assigning train seat, we assign the window side seat first to minimize the use of adjacent seats between passengers, fully expand the operation of trains with non-reserved seats during rush hour, and separate the traffic lines for passengers boarding and arriving at the main entrances and exits of 10 major stations. The KTX high-speed railway and 'ITX-Youth' trains that run on weekends and public holidays were reduced to participate in the efforts to prevent mass infection in areas where entertainment facilities are concentrated, and the travel time of late-night electric trains was shortened by one hour. From March 28, we have been operating KTX train and airport buses for immigrants, and provide

the KORAIL HR Center dormitory as a temporary residence facility for them. As such, we are proactively supporting social distancing of overseas visitors. In compliance with the government's quarantine guidelines, we are actively practicing social distancing, such as implementing the flexi-time work system and telecommuting system, and we have delayed the written test for hiring new employees twice until June, making every effort to prevent the spread of COVID-19. KORAIL's efforts against COVID-19 were recognized as best practices in the international community, and we shared our knowhow at a video seminar co-hosted by the UN ESCAP (Economic and Social Commission for Asia and the Pacific) and OSJD (Organization for Cooperation of Railways).

KORAIL SUSTAINABILITY REPORT 2019-20

In addition, we are helping to boost the national economy by taking the lead in supporting damaged small businesses as well as small and medium-sized enterprises (SMEs) affected by COVID-19, by reducing the rent and operating charges of shops in the stations and all sales fees of travel agencies.

The worsened management performance due to COVID-19 has led to reduction or suspension of operation of other means of transportation such as airlines and buses, but KORAIL minimizes the reduction of all trains and metropolitan railways as it is regarded as the last resort to guarantee the people's right to travel. KORAIL, which the public uses 24 hours per day, 365 days per year, will fulfill its responsibilities as a public railway for all of the people until the COVID-19 pandemic ends, and defeat corona virus together with the people







Installing thermal-imaging cameras (Seoul Station)

Separating the traffic lines for passengers boarding and arriving at the entrance and exit gates (Yongsan Station)

Sharing know-how during web seminar with UN ESCAP-OSJD

08

KORAIL joins the efforts to get through the COVID-19 pandemic

KORAIL's efforts to prevent COVID-19

Establishing thorough quarantine system











Two or more times daily

4.5 times per day for KTX high-speed railway

ore than twice per day for ITX-Sac and Mugunghwa trains)

istalling thermal imaging

100 units at 90 major stations

Placing hand sanitizers in the stations. and attaching antibacterial film

Separating traffic lines for passengers poirving and arriving at the entrance

Practicing social distancing



seats during rush hours







Providing KORAIL HR Center as a temporary residence facility for overseas immigrants



Postponing tests for new employee recruitment till June

Supporting efforts to overcome COVID-19 damag







Donating KRW 200 million to Daegu City together with the members of Korean Railway Workers' Union

KORAIL supports the dedication of medical personnel.

09

KORAIL provides free passes of all types of trains for medical personnel traveling to fight against COVID-19 to encourage the medical personnel struggling on the frontline of pandemic disease. Free railway transportation for medical volunteers started on February 28 this year, and as of the first half of 2020, a total of 3,355 medical personnel had traveled by train.

KORAIL makes efforts to enhance the convenience for medical personnel by providing both general and special trains so that medical personnel can take a comfortable rest during travel, and providing free parking service at railway stations. In addition, we streamline the use process so that medical volunteers can use all trains free of charge by presenting documents of proof at the station ticket counter, and if the fare has already been paid, the fare can be refunded in full within one year.

In addition, we continuously encouraged medical volunteers by posting messages on the website and smartphone application "KORAIL Talk" to support medical volunteers fighting against COVID-19 and posting relevant promotional materials at stations.

Thanks to the medical volunteers dedicated to the health of the people, we are gradually recovering a healthy daily life. KORAIL will continue to provide free trains support for the dedicated medical personnel who volunteer across the country to prevent the spread of COVID-19.

Supporting medical personnel fighting against COVID-19

Free trains

As of the first half of 2020, 3,355 medical volunteers have used the free trains.







Other support



Supporting free parking at the station parking lots



Station staff have messages encouraging medical volunteers



Streamlining use process

2019–2020 Highlights

Holding a Conference of General Directors of OSJD Railways in Seoul

The '34th Conference of General Directors of OSJD Railways,' called the UN General Assembly of Continental Railway, was held in Seoul (April 8, 2019~April 12, 2019). About 300 railroad officials from home and abroad, including delegations from 20 countries around the world, attended and discussed various agendas to enhance the competitiveness of continental railways. The 34th Conference of General Directors of OSJD Railways was the first international railway conference held and attended as an official member country after the Republic of Korea became an official member in 2018. KORAIL not only strengthened cooperation among member countries through the conference, but also confirmed the strong support of OSJD member countries on the connection of inter-Korean and continental railways.



Introducing 'Zero Pay' system for the first time among the public enterprise corporations

KORAIL introduced 'Zero Pay,' a mobile-based simple payment system, for the first time as a public enterprise corporation at the stations. Customers can pay using 'Zero Pay' which can be conveniently used in railway shops nationwide, and purchase tickets using 'Zero Pay' at the ticket counter and mobile app 'KORAIL Talk'. Following 'Zero Pay' for the Android version, KORAIL launched "KORAIL Zero Pay" for iPhone, promoting win-win growth with small business owners and consumers, and constantly pursuing services that enhance their convenience.

Expanding support for young job-seekers

KORAIL

KORAIL takes the lead in realizing social values as a public corporation by implementing differentiated programs to support youth employment. In 2019, we provided free training on railway certificates to young job seekers to give hands-on opportunity to strengthen young people's job skills, and supported the education of a total of 320 young job seekers. In addition, we held the 'Job Fair for the Young, and Officers and Soldiers to provide jobs in SMEs, providing customized employment support programs for 800 job seekers, helping young people to prepare for tomorrow.



Expanding the Benefits of 'KTX N Card'

The benefits and types of 'KTX N Card,' a card ticket for pre-determined time and routes in set number of travel of customer's choice at reasonable price have been expanded. 'KTX N Card' is a mobile-based discount card providing price discount up to 40% for pre-determined time and routes. KORAIL has launched the new 'KTX N Card for 2 persons' with which a group of two passengers can designate the route and enjoy discount and a card for 'Three sections' with which one person can designate three sections and use it, in order to increases the convenience of users.



We held the 'Fair for Shared Growth' to explore ways of shared growth with SMEs, small business owners, and social enterprises. The Fair provides product exhibitions developed with partners and technology consultations programs, as well as presentations of KORAIL business performance for shared growth and best practice of representative partners. KORAIL is committed to building a healthy railway industry ecosystem by continuously exploring measures to grow together with partners.



Conducting The '2019 Safe jointly with the

Conducting 2019 Safe Korea Exercise (SKX)

The '2019 Safe Korea Exercise' was conducted at the Daegu Gomo Maintenance Depot jointly with the private, public, and military. Safe Korea Exercise was conducted under the assumption that the KTX train passing through the tunnel was derailed due to falling rock caused by an earthquake, and a fire occurred, focusing on rapid lifesaving and initial response and strengthened cooperation with the competent authorities. KORAIL will further enhance its emergency response capabilities by reinforcing the cooperation system with competent authorities so that people can use the railway with confidence.



KORAIL has obtained the international standard for occupational health and safety system (ISO 45001) for its headquarters. For this certification, KORAIL has reorganized its safety management system in accordance with international standards, and has been striving to upgrade systematic safety and quality management by identifying risk factors throughout the work environment and facilities. We will make best efforts to manage safety and quality so that the occupational accident prevention management system can be firmly established in the railway field.





KTX, proves its worth as an eco-friendly transportation means both internally and externally

KTX high-speed railway Honam line was selected as the 'Green Product of the Year' in service sectors in 2019 with high evaluation for its eco-friendliness. In addition, KTX Gangneung line, which connects Seoul and Gangneung, has been recognized for its eco-friendliness by acquiring the 'Carbon Footprint' certification. The Carbon Footprint is a certification granted by the Ministry of Environment to low-carbon eco-friendly products, and by obtaining the certification, KTX Gangneung line proved itself as an eco-friendly transportation means that reduce carbon emissions.







Company Profile — KORAIL Sustainability Report 2019-20 — 16

Composition of Shareholders (As of December 31, 2019)



Overview

The history of railway of the Republic of Korea is the history of KORAIL. Starting from the founding of the Railway Bureau in 1894 and the launch of Gyeongin Line in 1899, KORAIL has written the history of railway of Korea. KORAIL has been the key driver of economic growth in Korea by connecting people and transporting goods along the railway tracks nationwide over the past 100 years. KORAIL, through the railway that will be connected to the continent, will lay a stepping stone for peace on the Korean peninsula, and we will prepare for the future where Korean people and supplies advance into the world.

Company Name	Korea Railroad Corporation (KORAIL)	Competent Authority	Ministry of Land, Infrastructure and Transport
President	Son Byung-seok	Type of company	Market based public corporation
Date of Establishment	June 28, 1894 (KRAIL: January 1, 2005)	Total Assets	KRW 22.6606 trillion
Head quarters	240, Jungang-ro, Dong-gu, Daejeon, Republic of Korea	Operating income/ Net income	KRW 108,304 million/ KRW 46,922 million
Legal Basis	Korea Railroad Corporation Act (Act No. 7052, December 31, 2003)	No. of Employees	29,281

^{*} Organization information: As of June 30, 2020 (Employees as of 2019)/ Financial information: As of December 31, 2019 (K-IFRS consolidated)



7 COMPANY OVERVIEW



Overview of Overseas Office

KORAIL opened overseas branches in France, China, Russia, the Philippines and Tanzania, and has strengthened global competitiveness through the expansion of international exchanges and cooperation as well as overseas business. In addition, we have strengthened the networks and cooperation systems with those nations along the continental railway tracks to prepare for the inter-Korean railway connection by dispatching our employees to International Union of Railways (UIC) and OSJD as part of endeavors to follow the government's new Northern policy and form East Asian railway communities. The branch in France supports efficient procurement of components for rolling stock by building network with advanced European nations in terms of the railways, while our China-based branch promotes exchanges & cooperation with those nations along the continental railroad tracks to prepare for the connection to Eurasian continental railways, working hard to attract Chinese tourists, and implementing a project of directly purchasing components for rolling stock.

We also established our branch in Russia in August 2018 to proactively conduct exchanges with Russia including various joint researches and studies for the railway cooperation project among the two Koreas and Russia and the connected operation between TKR and TSR. We are pursuing profitable businesses including railway operation consulting services and so forth by dispatching our employees to the Philippines and Tanzania to explore overseas railway markets with KORAIL's outstanding railway technologies and operation-related experience. We plan to continuously expand the target area and scope of overseas business.

Subsidiaries

KORAIL has formed its subsidiaries in order to secure expertise in specific business areas. By coordinating businesses among the subsidiaries, KORAIL strengthens its competitiveness and creates synergy by managing the group. By stabilizing the revenue base of its subsidiaries, KORAIL supports sustainable growth.

					(As of Jur	e 30, 2020)
Company Name	CEO	Business	No. of Employees	Capital (KRW 100 Million)	Sales in 2019 (KRW 100 Million)	Shares (%)
KORAIL Retail	Park Jong-bin	Commercial Facility Operation, Advertising Media Operation	492	100	3,128	100.0
KORAIL Logis	Yoon Yang-soo	Railway-Connected Logistics Business	797	77	476	92.1
KORAIL Tourism Development	Kim Soon-chul	Tourism & Leisure, In-Train Retail/Crew Business	1,400	40	644	51.0
KORAIL Networks	Kang Kwi-seop	Labor Management and Customer Center Consignment, Parking Lot Operation	1913.8	72	967	89.5
KORAIL Tech	Lim Jae-ic	Management of Tracks and Electrical Facilities, Maintenance of Trains, Keeping Stations Clean	5,257	19	2,035	97.3
SR Co., Ltd.	Kwon Tae-myeong	Sooseo high speed railway transportation business and incidental business	667	2,500	6,670	41.0

*(Reference) SR Co., Ltd. is designated as a quasi-market-based public corporation on February 11, 2019.

Overview of Overseas Office

Dispatch OSJD (Poland)

Business Portfolio — KORAIL Sustainability Report 2019-20

Main Rusiness



Transport

Passenger Transport Business

 Passenger transport business through train services
 Development and operation of railway tourism products by establishing railway tourism infrastructure

Metropolitan Railroad Business

- Passenger transport business through metropolitan subways and ITX-Cheongchun line
- O&M business for private railways and biddingbased line

Logistic Business

- Transport of containers, cement, steel, etc.
- Loading and unloading, storage, warehousing

Business Areas

KORAIL is doing its best to ensure safe and convenient railway operations to achieve its foundation purpose: contributing to the development of the railway industry and the national economy. We are providing advanced services under the vision of 'Korea's Future, People's KORAIL,' and achieving our goals in various business areas.



· ·

Business Development Asset Development Business

- Development and operation of businesses by utilizing the corporation's assets including stations, areas nearby stations, and lands nearby railways
- Overseas Business & International Cooperation
- O&M of and consultation for overseas railways, export of used locomotives, international railway training programs
- Efforts to advance into continental railway



Maintenance & Repair

Rolling Stock Maintenance

- & Rental and Facilities Maintenance Business
- Rolling stock maintenance and rental
 Train facilities maintenance and management
- Maintenance of tracks, subway power facilities, signaling systems and other structures





Key Achievements in Passenger Transpor

No. of Passer	ngers	141,192,000 persor
Daily Operati (Tuesdays to		613 time
Average Daily Transported		390,000 persor
Average Dail	y Sales	KRW 6,944 millio
Train	High speed	99.89
Punctuality	General	99.59



Key Achievements in Metropolitan Railroad

No. of Passengers	1,189,213,000 persons
Daily Operation (Tuesdays to Thursdays)	2,562 times
Average Daily Transported Volume	KRW 322.2 million
Average Daily Sales	KRW 2,162 million
Reduction in General Trains Commuting	26 times
Hours Express Trains	22 minutes

Passenger Transport Business

KORAIL is generating revenues by providing transportation services including high-speed trains (KTX), general trains (ITX-Saemaeul, Mugunghwa trains, etc.), and other main passenger trains, while operating trains, transporting passengers, establishing infrastructure related to railway tourism and developing relevant products. By providing precise and universal railway transport services based on the value of safety first, we are contributing to the advancement of the national economy and promoting welfare services through railway transportation. Furthermore, we are concentrating on the improvement of transport convenience for the public and on the enhancement of public good by increasing the operation of trains, establishing efficient connection & transfer systems and expanding services for the underprivileged.

Metro Railway Business

Starting with 29 stations in 1974, KORAIL's metropolitan railways have now become indispensable for citizens living in the Seoul metropolitan area, transporting approximately 3.2 million users daily through 261 stations as of 2019. KORAIL improves its customers' time value by increasing the operation of express subway trains, reducing transfer times, improving connection & transfer systems and securing metropolitan railway network. In addition, we are constantly striving to become a metropolitan railway loved and trusted by people through continued expansion of new lines and service innovation.

Logistics Business

KORAIL operates a comprehensive logistics business that includes transporting, loading, unloading, storage, and warehousing mainly containers, cement, steel and other core items. High-efficiency and eco-friendly railway is the ideal means of transportation for long-distance, large-scale transport. KORAIL puts its energy into developing products befitting railway transport and to improving the nation's transportation system aiming at reducing logistics costs of law materials, which are fundamental for the nation's industrial development and securing competitiveness to lead the era of continental railway.





Key Achievements in Overseas Business (As of December 31, 2019)				
Revenues from Overseas Businesses	New Business Orders			

KRW **7.6** billion

Overseas Business Orders (Accumulated) (As of December 31, 2019) No. of No. of Business Orders (Accumulated) Amount of Business Orders (Accumulated)

135 orders



18 countries **58** projects KRW **82.5** billion



Key Achievements in Logistics Business (As of December 31, 2019)						
Eroight	Daily Operation	Daily	Average	Sales		
Freight Transport	(Tuesdays to Thursdays)	Transported Volume	Daily Sales	Freight transport	Comprehensive logistics	
28.664 tons	208 times	7.9 tons (Freight)	KRW 807 million	KRW 338.4 billion	KRW 37.5 billion	

COMPANY OVERVIEW

Asset development business

KORAIL provides various services around its stations to contribute to management improvement through the development of assets with high added value. In addition, we are contributing to boosting local business and culture and enhancing the value of people's lives by developing the surrounding areas. KORAIL is focusing on securing organizational sustainability through the creation of new growth engines by fostering and establishing future businesses, and realizing new values by diversifying its business.

Key Achievements in Asset Development Business (As of December 31, 2019)					
Revenues from Assets Development	Revenues from Assets Utilization	Total			
KRW 7.7 billion	KRW 157.1 billion	KRW 164.8 billion			

Overseas Business & International Cooperation

KORAIL carries out overseas business based on railway operation know-how and technologies it has acquired over the past 120 years. We are promoting the outstanding technology of Korean railroads throughout the world by developing and operating overseas railway projects and cooperating with foreign railways and international railway organizations. Since 2018, we have strived to build trust between the two Koreas by creating a taskforce for the inter-Korean railway operation to understand the current status of the inter-Korean railway and collect relevant data. In addition, we were able to gain a foothold in 28 continental railways after becoming an official member of OSJD. KORAIL held a 2019 Conference of General Directors of OSJD Railways in Seoul, preparing for the new era where KORAIL can be connected to the continent through the inter-Korean railway. We plan to continuously expand the overseas markets, explore new businesses and secure new growth engines based on our outstanding technologies.

Rolling Stock Maintenance & Rental and Facility Maintenance Business

KORAIL has established a scientific system for maintaining rolling stock and managing facilities in order to guarantee safe train operations. We have established a facility management system that deals with seasonal disasters and environmental factors, and upgraded our work processes by converting the maintenance system to an ICT-based system to prevent rolling stock failures and accidents. By doing so, we are working hard to realize a reliable railway that the people can use with confidence by minimizing rolling-stock failure rates and facility error rates through the continued improvement of outworn facilities and performance improvement activities.

Key Achievements in Facilities Maintenance Business (As of December 31, 2019)						
Rolling Stock Failure Rate	Facility Error Rate	KTX Failure Rate				
0.074 Case/One Million km (One failure per 13,430,000 km)	1.333 Cases/1,000km (25 cases/18,759*km) *total line + railway track extended	0.060 Case/One Million km (One failure per 16,646,000 km				

Vision & Strategy — KORAIL Sustainability Report 2019-20

Management value system

Under the vision of 'Korea's Future, People's KORAIL,' we provide safe and convenient railroad services, boosting people's happiness and strengthening our social responsibility. In addition, we are striving to lead the new era of Korean railroads by connecting the inter-Korean and continental railways and securing future growth engines.

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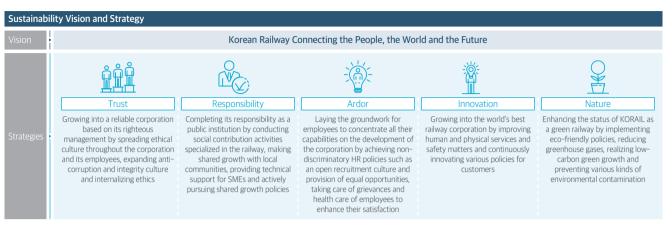


Mission	Ко	Korea Railroad, Connecting the People, World and the Future					
Vision		VISION 2025. Korea's Future, People's KORAIL					
	Safety		Customers	Com	munications		
Core Values	Safety of the People Ability to Secure Safety Customer Satisfaction Employee Happiness Communication With the Public Managen Relatio						
Management Principles	Safe Railway	Convenient	Railway Railway	of the People Rai	lway of the Future		
Five Main Strategies	Smart Railway Safety	Strengthening Public Value of the Railway	Value-Oriented Customer Services	Future Growth Engine	Corporate Cultur Innovation		
Strategic Tasks	Building an advanced system for the railway safety management	Realizing KORAIL- type social value	Optimizing railway network operations	Internalizing future core Technologies	Achieving a transparent, fair and responsible management systen		
	Expanding prevention- centered safety investment	Strengthening universal services	Establishing connected traffic services	Expanding multifaceted business portfolios	Pursuing win-wi Labor management relations		
	Strengthening people-oriented railway safety	Improving railways environment and energy management	Realizing ICT- based railway services	Laying the groundwork for the inter-Korean and overseas railways	Creating pleasar workplaces		
	Improving railway safety awareness and culture	Expanding number of decent jobs	Strengthening financial soundness	Building optimal future railway network	Improving IT-based work process		

Sustainability Value System

KORAIL regards 'protecting the safety and life of the people' as the mission of public railroads, and pursues sustainable growth by realizing social values through specialized social responsibility activities. Sustainability management activities of KORAIL are operated by 10 sub-divisions centered on the Office of Public Relations and Cultural Affairs, Public Relations Team, which is the supervising team, and a committee composed of internal and external experts for each division identifies and implements the tasks for sustainable growth of the corporation such as tasks for economy, society, ethics, environment, etc. KORAIL continuously reviews its sustainability management strategy and roadmap, responds to risks proactively, and practices sustainability management across the corporation. In addition, we are creating the future value of the railroad industry by communicating with various stakeholders and actively reflecting their opinions in management activities.

21 — COMPANY OVERVIEW



Decision-Making	7	Sus	tainability Implement	tation Process	
Establishing visions and making decisions on management activities considering sustainable growth		Committees on Sustainable Management Providing Professional Advice and Setting Directions	Impleme	nting and Operating Sus	stainability
		Environmental Advisory Committee	Environmental Management	Green Growth	Eco-Friendly Policie
CEO	Providing Driving Force	Human Error Research Committee	Employee Safety	Health Promotion	Mental Health
		Railway Safety Review Committee	Absolute Safety	Safety Technologies	Elimination of Unsa Conditions
	Implementing and Providing Feedback	Transparent and Ethical Management Committee	Ethical Management	Anti-Corruption and Integrity	Fair Trade
Board of Directors		Social Contribution Steering Committee	Happiness Sharing	Talent Sharing	Contribution to Loc Communities
		Customer Evaluation Team	Customer Services	Feedback	Communication Channels

Strategies	Main Subcommittees	Roles and Tasks	Implementing Bodies
Reliable	Sustainability Subcommittee	Conducting overall management of sustainability and handling external affairs / Inspecting and consulting about progress and performance of each area / Increasing awareness-levels and strengthening promotions	Cultural Affairs Department
Corporation	Integrity Subcommittee	Implementing policies and institutions on anti-corruption and integrity / Internalizing employee ethics (conducting training and improving institutions) / Supporting integrity and strengthening incentives	Integrity Inspection Department
Fulfilling Social	Social Contribution Subcommittee	Social Value Realization Subcommittee / Conducing overall management of social value realization activities throughout the corporation / Strengthening the public nature of the railway work • Producing results on social values that the people can benefit from	Shared Value Creation Department
Responsibilities	Shared Growth Subcommittee	Establishing and implementing shared growth policies / Supporting SMEs by encouraging them to develop new products under the condition of purchasing them	Materials Management Department
Realizing a Passionate Organization	Personnel Subcommittee	Complying with the Labor Standards Act and conducing overall management of government policies / Making non-discriminatory and fair recruitments (employment, appointment and others) / Implementing programs to develop employees' capabilities / Operating welfare policies to achieve GWP	Human Resource Management Department
	Health Subcommittee	Conducting overall management of industrial accident prevention policies/ Promoting VOC channel and collecting opinion/ Handling VOC and operating information protection system	Welfare Management Department
Innovative Corporation	Customer Subcommittee	Establishing and implementing policies on improving customer services / Facilitating communication channels with customers and collecting their feedback / Handling VOC and operating information protection system	Safety Planning Department
Satisfying Customers	Safety Subcommittee	Establishing and implementing policies on railway safety / Implementing customer safety management system	Service Innovation Department
Eco-Friendlyand	Environment Subcommittee	Establishing and managing policies on environment-related jobs / Establishing and implementing waste management system / Introducing and utilizing eco-friendly technologies	Environment Management
Green Railway	Energy Subcommittee	Establishing and managing policies on saving energy/Implementing energy efficiency programs / Developing and utilizing new renewable energy / Implementing polices on reducing greenhouse gas emissions	Energy Department







Safe railroad for everyone

Future railroad representing Korea

Realizing social values for the people

SUSTAINABILITY DSSUES

Safe Railroad for Everyone

Business & Social Context

In addition to natural disasters, the number of factors that threaten the safety of the railroad is increasing as the occurrence of abnormal weather such as heatwaves in summer increases.

Most importantly, KORAIL prioritizes safety management, as minor carelessness in railroad operation can result in major accidents. Accordingly, KORAIL is establishing a safety culture that considers safety as its basic mission, and places safety as the top priority over punctuality. For the safety of the public, we have established a prevention-oriented safety system that identifies and deals with risk factors in advance, and we are striving to create the safest possible railroad environment by actively introducing advanced technologies. In addition, KORAIL expands its safety manpower and strengthens its capabilities to respond quickly and accurately to unexpected accidents and disasters, and we are committed to making a safe railroad where all the people can feel safe by upgrading the information security management system for cyber safety management.

Progress

Inspiring a field-based railroad safety culture

- Securing safety facilities to prevent safety-related accidents affecting users
- Establishing a smart safety system utilizing cutting-edge technolo gies
- Upgrading information security infrastructure

Future Plan

- ▼ Establishing a field participation-based preventive safety system
- ▼ Continuously securing facilities required for public safety
- cutting-edge technology-based facilities
- ♥ Continuously providing safe railroad service through a multi-directional information security system

2019-2020 Key Performance



Safety Management Rate*

1,982

Rolling Stock Failure Rate*

0.074



Facility Error Rate*

1,333



ZERO

Accident and Cyber Infringement

Link to SDGs

Related Stakeholders

Related Department



Employees / Customers / Government

Safety Administration HQs

KORAIL Sustainability Report 2019-20

Human-oriented Safety Management

Industrial accident rate in 2019 Compared to the previous year

0.017%n reduction 0.418% in 2018 → 0.401% in 2019)

International Standard for Occupational Health and Safety (ISO 45001)

Certification obtained

Falls and electric shocks Compared to the previous year 50% reduction

(Four cases in 2018 → Two cases in 2019)



Performance result

Job accidents related to Total train delayed hours due to accident. Failure railway operation

Reduced **28.6**% compared to the previous vear

→ 464 hours in 2019) (Seven cases in 2018 → Five cases in 2019)

Reduced **40.9**% (786 hours in 2018

Safety of Employees

Inspiring a Field-Based Railroad Safety Culture

KORAIL has reinforced field-based railroad safety management to maintain world-class railroad safety. To this end, we declared 'safety first' as a management principle, and the CEO took the initiative to participate in safety activities. We revamped our safety management organization including the Industry Safety Department and the Joint Railroad Facility Safety Innovation Division to continuously improve the system related to accidents and failure. In addition, we have established a safety management system tailored to the characteristics of the railway field by operating the Railway Safety Management Committee, in which the representatives of the labor and management participate for the first time to intensively discuss safety management issues. In addition, KORAIL has provided on-the-job training to increase the number of safety and health personnel and to strengthen their capabilities, and systematically identified and managed the risk factors of industrial accidents by introducing the international standard for occupational health and safety management systems (ISO 45001). Furthermore, we are making various efforts to prevent industrial accidents, such as expanding investment to improve the working environment, securing safe working hours, and thoroughly implementing risk assessment at the workplace to eliminate unsafe factors in advance. In addition, we are motivating the workers through rewards for people of merit in preventing railroad accidents and making efforts to establish a field-based railroad safety culture.

Realizing Safe Work Places Accepted by Employees

In order to ensure the safety of subcontractors, KORAIL has adopted Safety Call, a system that requests the suspension of work upon occurrence of a dangerous situation. To ensure the safety of track workers, we have updated the app on train approach to promptly check alarms when the train approaches. In addition, we have built customized safety equipment that guarantees the life and safety of workers. KORAIL has focused on establishment of safety facilities reflecting the working environment, such as installing safety scaffolding at 2,106 locations, and expanding safety facilities at 320 locations to prevent fall accidents, installing solid-insulated switchgear to prevent electric shock accidents, and providing individual electroscopes. Thanks to such efforts, job accidents caused by falls or electric shocks in 2019 decreased by 50% compared to the previous year. In addition, KORAIL has provided safety vests with improved visibility to ensure the safety of night track workers, and secured more shelters for employees in consideration of the increase in manpower. We have created safe workplaces for workers by improving outdated shelters to build a safety system focusing on people and accident prevention.

Introducing Cutting-edge Safety Equipment related to Train Approach

KORAIL has introduced advanced equipment linked to the train approach app in order to ensure the safety of railroad workers. The existing train approach app gave only an alarm sound when the train approached, so workers were not aware of its approach if there was noise in the field. To improve this, KORAIL has upgraded the train approach app and introduced advanced appbased safety equipment. We have improved the function of the train approach warning app (terminal), so that the track workers and engineers can mutually recognize the status of rails in operation in advance, and thereby supported not only employees of KORAIL but also external companies to use them together. In addition, we adopted wearable equipment such as a safety helmet speaker that can detect train approach by vibration to prevent the workers from not recognizing an alarm sound due to noise during work, and we also installed a horn and LED warning lights to further enhance worker safety. As a result, job accidents related to railroad operation decreased by 28.6% compared to the previous year, and the total train delayed hours due to accidents and failure decreased by 40.9%.

Safety of Partners

selecting partners, KORAIL strives to raise the safety awareness of partners by restricting the participation of accident-causing companies and encouraging the participation of companies with a high level of safety. In addition, we have reinforced construction quality by signing 1.8m contracts with excellent companies that have abundant high-quality human resources by 1.2m 0.6m reflecting the ratio of full-time employees of partners in the evaluation items. Furthermore, we are realizing an accident-free railroad business by reinforcing safety management support for the employees of our partners. In order to reduce the risk of railroad track work, KORAIL has increased the electric rail safety managers in high-voltage adjacent construction projects by 33%, After improvement Refore improvement and has fulfilled its social responsibilities by supporting the insurance premiums for small repair works of less than KRW 10 million. The construction project management service was expanded by 49% to prevent safety accidents due to overloaded supervisory work, and a mobile terminal with a train approach warning app was provided to the contracting workers so that they can also check on train approaches. In addition, we focused on securing the safety of the contracting ZERO workers by expanding and installing an automatic train supervision (ATS) device to prevent trains

Death of Partners' Employees in 2019

onducting accident prevention activities in

Increasing installation of AED in stations and trains

Addition of eight stations (63 → 71)

Raising Safety Fences

- Installation of an additional 33 AEDs (546 → 579)
- Conducting regular training for 3,633 employees in the field

Conducting unique promotion on elevator safety

- Installing '3D hologram' drawing customers' attention ··· Improving safety experience when using an elevator
- Conducting joint safety campaigns (Korea Elevator Safety Agency)

Improving accident prevention facilities in stations

- Installing 662 auxiliary elevator brakes to prevent accidents such as reverse driving
- Raising height of platform safety fences (at 74 stations)

Safety of Customers

partners in 2019.

We are expanding safety facilities to prevent safety accidents for railway passengers. We have expanded the air conditioning zones on platforms in 100 stations and waiting room in 91 stations in preparation for heatwaves, and installed and replaced new escalators and elevators. In addition, 622 elevator auxiliary brakes were installed to prevent reverse driving, and the height of the safety fence was raised by 0.6m in 74 stations. As such, we have improved the accident-prevention facilities in stations. As a result, in 2019, we successfully minimized the casualty accidents involving passengers and the public. In addition, KORAIL installed safety messages in '3D hologram' drawing the attention of users in order to secure elevator safety, installed 33 additional AEDs in stations and trains, and conducted CPR training for station staff and crew members, which enabled us to rescue 23 customers at Yongsan Station, Daegok Station, and Gwangmyeong Station, respectively, in 2019. We also waged railroad safety campaigns. We publicized the railroad safety at the 5th Korea Safety Industry Fair, attended by about 58,000 people in order to create a traffic safety culture with the public, and provided support for better understanding on railroad safety by conducting railroad safety campaigns involving 8,732 persons. Increase in and spread of public awareness of safety decreased the number of those attempting to take their own lives on the railways by 52% in 2019 compared to the five-year average.

from entering the track in operation, and as a result, we achieved zero deaths for employees of

We are reinforcing the safety management system to enhance the safety of our partners. When

Focus Issue

Contest Renewing Safety Practicing Resolution of KORAIL Employees

On November 4, 2019, KORAIL held the 'Contest Renewing Safety Practicing Resolution of KORAIL Employees' to break down the existing practices and to implement safety. All employees, including Son Byung-seok, CEO (President) of KORAIL, participated in the event and made a resolution for 'absolute compliance with regulations and rules, thorough confirmation and consultation, and selection of the safest method' for safety, which is the core value and priority of the railroad business. In addition, after sharing accident cases and risk factors which might happen before work with the support of employees at the Daejeon-Chungnam Regional Division, we demonstrated the process of replacing the parts of all of our lines according to the work manual that strengthened safety. Son Byung-seok, CEO (President) of KORAIL remarked, "We can make no compromise on safety under any circumstances and under any conditions, and employees should have a clear will to practice safety themselves.



Resolution of KORAIL

SUSTAINABILITY ISSUES

KORAIL Sustainability Report 2019-20 SUSTAIN ABILITY ISSUES

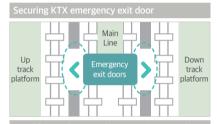
Monthly Failure Rate of Elevators

15.2% reduction (1.57cases/100 units in 2018 ~ 1.33 cases/100 units in 2018 ~ 1.33 cases/100 units in 2019)

PSD Safety Door Accidents (2 years in a row)

ZERO

Expanding safety facilities and preparing quick response system



Simplifying railway accident reporting procedures

Before improvement

After improvement

(4-stage)

Report → information on report number → Customer re-report → Connection to

(2-stage)

Report → Control Center
(Direct) (connected after







The lowest power-supply failure in history

50% reduction (Seven cases in 2017 → Two cases in 2018 → One case in 2019)

The Construction, Facility Safety Innovation Outstanding Practice Contest (Hosted by Korea's Ministry of Land, Infrastructure and Transport in 2019)

Best Award

Train and Facility Safety

Expanding railway safety facility

We have expanded the railway safety facility to create railroad spaces that anyone can use safely. The height of the fences of the high platforms of the metropolitan railway has been raised to block access to railway in operation in advance, and thermal imaging cameras for drones have been introduced to prevent unauthorized intrusion into the track and to block access by animals and people. In addition, we have expanded the installation of protective fences to prevent accidents in contact with trains, expanding the facilities with the aim of a complete blockade by 2022. We installed safety scaffolding at 15 stations where the distance between the platform and the train is 100 mm or more to prevent foot loss accidents, while getting on and off the trains. KORAIL has also established a response system that can quickly and safely respond to unusual situations. In preparation for emergency stop of KTX, emergency barriers exit doors were installed in 8 stations for quick escape, and an organization specialized in platform safety doors (PSD) was newly established to enhance the ability to respond immediately to failures. In addition, by simplifying the reporting procedure, we made a report on an emergency situation such as a railroad accident reported to number '110' be directly connected to the control center, and we established a remote broadcasting system at the control center to announce information on accident from the center to all stations simultaneously.

Advanced Technology-based Facility Safety

KORAIL has introduced and expanded advanced technologies such as drones and IoT into the railroad maintenance system to strengthen railroad safety. KORAIL has trained professional manpower to promote facility inspections using drones, conducted in-depth inspections using drones at railway facilities where engineers cannot inspect, and increased the level of safety inspection by expanding the inspection using drones at dangerous locations by 36%. Meanwhile, we introduced IoT technology to detect the degree of deflection of the electric lane in real time with an ultrasonic sensor in order to secure safety against abnormal climates, prevented the tension deflection of the electric lane in advance by transmitting the results through wireless communication. An automatic watering system was developed to prevent rail deformation when the rail temperature rises to prevent rail deformation. As a result, in 2019, the power supply failures decreased by 50% compared to the previous year, recording the lowest rate ever, and failures due to broken rail decreased to zero. In addition, slow track operation rate during heatwaves decreased by 73% compared to the previous year. Furthermore, we have installed video devices that automatically detect birds' nests on railway tracks by applying artificial intelligence technology, and developed an artificial intelligence algorithm with 95% accuracy for the first time in Korea, thus contributing to improving the accuracy and efficiency of railroad maintenance. Such efforts have allowed KORAIL to win the Excellence Award at the 2019 Construction and Facility Safety Innovation Technology Contest hosted by Korea's Ministry of Land, Infrastructure and Transport.

Disaster Safety

Establishing Disaster Management System

Based on the know-how in railroad operation and scientific analysis method, KORAIL has advanced its disaster management system that can quickly respond to disasters and abnormal events. In particular, we are striving to establish a safety management system in which people can feel safe through disaster management focused on preemptive prevention and spreading safety culture. To this end, we split emergency response stages into 4 stages, implement tasks to strengthen competency at each stage, and make every effort to ensure customers' safety.

2019 Emergency Response Drill

11.908 times

(1,266 times increased compared to the previous year)

Emergency Drill against Railway Accident



Strengthening Disaster Management Competency

KORAIL classifies emergency response stages into prevention, preparation, response, and recovery, and strives to strengthen its capabilities at each stage in order to protect the safety and lives of people in the event of a disaster. We formed the Joint Railroad Facility Safety Innovation Division, an organization dedicated to cooperation between construction and operation divisions, increased safety manpower, and expanded safety investment to secure safety through improvement of railroad infrastructure, replacing rolling stocks and performing facility maintenance works. In preparation for 'Disaster', we have established a smart disaster safety management system based on IoT, and shifted the safety paradigm focusing on prevention by classifying the emergency response process by types, subjects, and time zones. We have prepared company-wide safety measures focusing on restoring the trust of the people in order to respond to disasters such as the KTX derailment on the Gangneung Line. We operated a situation judgment team to recover from accidents safely and utilize the golden hour, and focused our capabilities on minimizing customers' inconvenience by establishing guidelines for customer movement in case of accidents and failures, and sharing train operation information. In addition, we have strengthened emergency response drills such as national crisis response exercises and KTX derailment drills. On the other hand, we also operated a field response team to prompt recovery from disasters, and made every effort to prevent casualties of customers through rapid relief measures. We have strengthened our disaster management competency such as maintaining railroad function of transportation through connected transport upon occurrence of disasters including typhoons, and contributed to the improvement of public safety.

Cyber Safety

Information Security Strategy

KORAIL has established an information security strategy to build a complete cyber-attack response system. With the goal of achieving 'Zero Personal Information Leakage Accidents and Zero Cyber Infringement Accidents,' we raised security awareness, strengthened personal information protection and information security management system, and advanced information security infrastructure. As a result, in 2019, we achieved 0 (zero) personal information leakage accidents and zero technical cyber infringement accidents.

Information Security Management System (ISMS)

ZERO

Certified for four years in a row

Result of MOLIT's simulation training in preparation for cyber attack

Personal Information Leakage Accident

/Cyber Infringement Accident

Excellent (for eight consecutive years)

Information Security Activities

We are protecting the people's valuable information assets by strengthening the protection of personal information. KORAIL added information security indicators to the internal management evaluation so that the security culture can be properly instilled, and provided training on security accident prevention for employees working at the headquarters to strengthen expertise in the security area, and improved emergency response competency through simulation training to respond to crises. In addition, security has been reinforced at each stage from collection to management, provision, and destruction of personal information. To this end, we are striving to thoroughly protect the personal information of 17 million persons by revising the company rules and procedures for personal information protection, strengthening the personal information management consignment contract, and destroying and encrypting unnecessary personal information in PC in the office. In addition, we have strengthened our information security management system, receiving information security management system (ISMS) certification for 4 consecutive years, to increase cyber threat response capabilities, and we have updated information security infrastructures by expanding big data security control to all systems, and introducing a ticket terminal protection system to prevent infringement accidents. KORAIL will remain committed to realizing personal information protection and cyber safety through an allround update of information security system.

KORAIL/Sustainability Report 2019-20

Future Railway Representing the Republic of Korea

Business & Social Context

As the national railroad that will lead the future of Korea, KORAIL strives to secure new growth engines by utilizing the unique assets and competitiveness of the railroad. We are dreaming of a tomorrow that overcomes limitations of freight transport businesses, increases demands for the public nature of the railway assets, and connects people and goods of Korea to foreign nations through the inter-Korean railway. Furthermore, we are exerting our best efforts to open up a sustainable future by utilizing the world's best railroad technology to explore a wide range of overseas railway markets.

Progress

- Creating revenue from transportation business through expansion of transportation service and optimization of logistics system operation
- ✓ Maximizing value creation through utilization of railway assets
- ♥ Strengthening foundation for advancement of inter-Korean and continental railways
- ▼ Exploring new overseas railroad markets

Future Plan

- ▼ Establishing and operating railroad logistics process optimized for customers
- Creating continued value through utilization of railway assets
- ❖ Strengthening exchange and international cooperation network for advancement to continental railway and expansion of overseas business

2019-2020 Key Performance



OS IF

Holding a Conference of General Directors of OSJD Railways



Creating Revenue from Railway Station Development

KRW 5 billion



Creating Revenue from Overseas Business

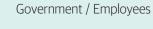
KRW 7.6 billion

Link to SDGs

Related Stakeholders

Related Department





Trans Korean Railway and Overseas Business Division / Logistics HQs / Business Development HQs 31 — SUSTAINABILITY ISSUES

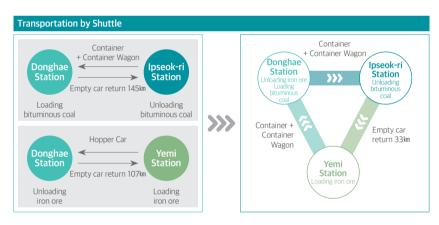
Items for National Growth Rase



Logistics Business

Expanding Transportation Service

KORAIL has expanded transportation services to increase the efficiency and competitiveness of railroad logistics. Breaking out of the existing marketing method that had high dependence on transport companies, we conducted owner-oriented marketing, and improved the process by actively reflecting customers' requirements, such as flexible fares and adjustment of train timetables, to enhance satisfaction. In addition, as a result of efforts to overcome the limitations of existing transportation services, we changed the counseling system to a one-person, onecustomer-only system from the existing method where a small number of employees were in charge of customer companies, and operated a TF to increase transportation volume to overcome the limitations in the existing transportation services. As a result, despite the negative factors such as continued decline of the economic growth rate, we successfully attracted 970,000 tons of items for the national growth base in 2019. In addition, KORAIL has improved the railroad logistics transportation process. By establishing transportation by shuttle system, we changed the transportation container method from a hopper car and a container/ container wagon to a container/container transportation system, and integrated two one-way transportations into one shuttle transportation system, reducing the return of empty cars by 219 km. Through this, the shortage of freight cars has been resolved, and the transport volume has increased by 140,000 tons, thereby enhancing the productivity of trains through stable responding to demand.





Optimization of Logistics System Operation

We have optimized the operation of the logistics system to respond to changes in the logistics environment, such as a decrease in demand for rail transport resulting from changes in the industrial structure. In consideration of the market situation, we reorganized the train operation system such as reducing the number of freight trains operation by 730 times per year, and established a real-time operation monitoring system to increase the punctuality rate by 1.9%p compared to the previous year. We expanded the number of freight trains with one engineer and increased the operation of high-speed and long & large-sized trains to enhance the efficiency of train operation. On the other hand, we improved the way of operating wagons and stations by converting surplus wagons to non-business use, reducing the maintenance cost of wagons, and reinforcing the transport system at base by reducing the number of freight handling stations to 84 stations. In addition, we have reorganized the organization considering the volume of transportation and workload, strengthened marketing and monitoring for each station activity, and strived to lay the foundation for sustainable growth of the logistics business. As a result, operating expenses in 2019 decreased by KRW 56.9 billion from 2018, and the operating coefficient improved by 5.3%p.

Expanding Communication Channel for Stakeholders and Potential Customers

KORAIL has expanded the external communication channels to diversify the logistics industry and respond to rapidly changing trends. We formed the logistics business review committee and academic and research working groups to strengthen communication with domestic stakeholders, and participated in the Organization for Cooperation between Railways (OSJD) Freight Subcommittee Meeting and the East Asia Railway Forum to establish overseas communication channels. In addition, we have increased our external competitiveness by expanding marketing channels across the logistics industry, such as participating in the logistics industry youth recruitment fair to secure future potential customers.

Communication Channel with the Stakeholders in Logistics Business					
Domestics	Overseas	Potential Customers			
• Forming logistics business review committee (April 2019)	• OJSD Freight Subcommittee Meeting and the East Asia Railway Forum (4th)	Participating in the logistics industry youth recruitment fair (hosted by MOLIT and Ministry of			
• Forming academic and research working groups (September 2019)	Establishing regular communication channel with RZD	Employment and Labor) "" Introducing current and future status of railway			
Meeting for private, industry and academic experts debate and information exchange	Signing MOU between Korea and Poland, and Korea and China	logistics and consulting about recruitment, etc.			

Revenue from commercial power supply Commercial power supply Commercial power supply

olar Power Business

Development of Station Areas



Boosting the Value of Railway Assets

Private Solar Power Business Using Railway Building

KORAIL actively utilizes buildings that are railway assets, to promote private solar power business. After selecting the roof of a building such as a station as a target site, we proceed with bidding for private power-generation companies, and sign a lease agreement with the selected company to receive rental fees for the provision of railway buildings. In 2019, we designated the Siheung-Byeongjeom vehicle depot and the onboard parking lot at Busan Station as target sites, executed the bidding, signed a lease agreement, and supported the solar power business. As a result, it produced 3,468MW of eco-friendly energy per year, created 56 jobs, and secured a total of KRW 3 billion in rental income for 20 years which will start from 2021. KORAIL will continue to create social and economic value by actively utilizing its infrastructure.

Developing Core Station Sphere

KORAIL carries out station area development projects for core station areas such as Seoul Station. We cooperated with the Seoul Metropolitan Government to reduce the public contributions ratio in order to improve the business feasibility of the station area in the northern part of Seoul Station, and we plan to create a representative high-density and mixed land platform in Gangbuk after selecting business operator and concluding agreement. In order to increase the business feasibility of the Yongsan Hospital site, we cooperated with Yongsan-gu office to resolve development restrictions such as the abolition of general hospitals and complex use of cultural properties. We signed an agreement with business operators through bidding after upgrading use land. In addition, KORAIL operated an official consultative body with the Seoul Metropolitan Government to discuss development guidelines for Yongsan Station area development, and commissioned an environmentally specialized public institution to clean up the contaminated land. In addition, we signed an agreement with the Seoul Metropolitan Government to develop the Susaek Station and Gwangwoon University Station areas and began to develop those areas in earnest. The development of the DMC station in the Susaek Station area is currently underway, and there are plans underway to proceed with the development of the railway facility site. For the development of the Kwangwoon University Station area, we selected the business operator in 2017, and we are now pursuing licensing and approval for the project aiming at commencing construction in 2021. We will continue to expand the development of core station areas to vitalize the economy and strive for railroad operation.

Before and after the development of Sungkyunkwan University Station

Before the development of Sungkyunkwan University Static





After the development of



Developing Station and Improving Outdated Facilities

We have carried out a project for developing outdated stations and secure more parking lots to meet the demands of railway users for facility improvements. KORAIL has completed the project of developing Sungkyunkwan University Station into a complex building by installing entrances, elevators, escalators and other convenient mobility facilities to contribute to the improvement of convenience for customers. At the same time, we entered into a service agreement with LH to upgrade Geumcheon-gu Office Station into a complex building and reviewed the improvement plan through analysis on facilities to be introduced into a complex building. In addition, we started the improvement projects of nine outdated stations, including Mangwol, Banghak, and Shinimun, which will be completed by 2023. KORAIL achieved KRW 5 billion in revenue in 2019 as it developed an old and narrow station into a modernized complex station. On the other hand, we have established and are operating a parking building development plan to provide convenient transfers through linkage between car driving and railroad use. For the development of the parking lot at Gwangmyeong Station, KORAIL selected a private investor and started the construction in December 2019, and we decided to develop parking buildings at Gwangiu Songjeong and Jeonju Stations and commissioned design services respectively. When the parking buildings at Gwangmyeong Station, Gwangju Songjeong Station, and Jeonju Station are completed, the total parking spaces are expected to increase by 2,684 cars, generating KRW 7.8 billion in annual revenue.

Developing Unused Railroad Land

As the downtown hollowing phenomenon is accelerating due to the lack of housing facilities for the youth and the ordinary people in the station area, KORAIL is supplying high-quality residential facilities for the youth and the ordinary people on unused land near stations where transportation is convenient. In August 2020, we plan to supply 299 rental housing units near Wangsimni Station, and to start the construction of 1,208 officetel units near Bupyeong Station in 2020 as we obtained the construction permit. We started the construction of 145 urban housing units near Yeongdeungpo Station and expect to complete the construction in 2021. In addition, in cooperation with local governments and LH to build public housing at unused sites near the Geumcheon-gu Office Station, Shinimun Station, and Ilsan Station, KORAIL will continue to play its social role through continuous value-creation activities utilizing railroad assets.

Conference of General Directors of OSJD Railways



Inter-Korean and Continental Railway & Overseas Railway Business

Strengthening Foundation for Advancing into Inter-Korean and Continental Railway

KORAIL makes various efforts, including actively cooperating with government policies and strengthening exchanges and cooperation with Eurasian continental railway operating countries and international railroad organizations in order to lay the foundation for the possible eventual linkage of the Korean Peninsula and continental railroads.

In April 2019, a Conference of General Directors of Organization for Cooperation between Railways (OSJD), attended by 300 people from 20 countries, was successfully held to raise the status of KORAIL, and an interpretation of two OSJD government agreements and seven conventions was produced, laying the foundation for the enactment and revision of company regulations for railroad operation. We are actively cooperating with the Korean government to join the OSJD government agreement. In addition, we are continuously discussing international train operation plans such as holding workshops in cooperation with government departments and the competent authorities to establish the international train transportation process. And we are making practical preparations for the operation of the continental railway, such as preparing [Simulation Plan for the Border Station] and a [Detailed Train Operation Plan for International Passenger and Freight Railway].

KORAIL Sustainability Report 2019-20

Communication for Advancing into

Together with the People

Creating Public Consensus

- Meeting for private companies (February, June, and October)
- Establishing the Inter-Korean Railway viewing zone (In May, Uiwang Railway Museum)
- Busan International Railway Technology Industry Exhibition (In June)
- East Asia Railway Talk Concert
- Raising interest in academic fields (March, September, and November)
- * Participating in the Korean Association fo

Strengthening Implementation Base

- Supporting East Asia Railroad Community Forum and Policy Seminar (4 times)
- Supporting government policies and establishing cooperation with local governments and competent authorities
- * Government Meeting for Inter-Korean Railwa
- * Four institutions including Busan City

Together with the Continer

Establishing Partnership for Exchange and Cooperation

- Signing an MOU with Poland Railway (in April)
- Korea-France Railway Technology Exchange Meeting (in May)
- Korea-Russia Railway Cooperation Meeting (in September)
- * Discussing the plan for pilot transportation between South and North Koreas and Russia
- Signing MOU with China Railway (in November)
 * Jointly developing cargo transportation and third-country markets

Operating profit from overseas business

Based on annual average growth rate

6% growth per year (KRW 6 billion in 2015) KRW 7.6 billion in 2019)

Strategy to Expand Regionally Based Hubs in Overseas Markets

Furthermore, we are striving to nurture continental railroad experts by continuously sharing information on trends related to inter-Korean railway through the entire company, forming a consensus, and conducting training for continental railway experts three times per year since 2014. On the other hand, KORAIL is making various efforts to build a public consensus on the future connection of the continental railway, such as meetings with private companies, the establishment of a new railroad museum and viewing zone, the production of a continental railway route map, the attraction of trains at the Peace and Unification Education Experience Center at Jejin Station, and participation in the Korean Association for Policy Studies. At the same time, we are further strengthening the communication with the public, the government, Eurasian continental railway operation bureau and related organizations, building a cooperation system with the government and the competent authorities through participation in East Asian railway community forums and policy seminars. Furthermore, by continuously establishing global partnerships, such as signing an MOU between KORAIL-Poland Railway, Korea-France Railway Technology Exchange Meeting, Korea-Russia (RZD) Joint Research, and Korea-Russia Railway Cooperation Meeting, we are introducing the excellence of KORAIL to the world, preparing and strengthening the basis for advancement in preparation for linkage with the the future continental railway.

Exploring New Overseas Railroad Markets

In order to strategically explore overseas markets, KORAIL is identifying additional projects targeting the countries where it has entered. In the Asian region, we are expanding our business area from technology consulting to operation of business. Currently, we are providing a technical advisory service for Metro Line 7 in Manila, Philippines, and we are strengthening our business capabilities by establishing a branch in the Philippines to participate in the operation and maintenance business of the same line, dispatching experts and increasing technical manpower. In addition, we are exploring additional markets efficiently by expanding the markets to neighboring countries such as Myanmar and Bangladesh based on the Philippines branch, providing consulting on rolling stock purchase, and participating in new business bidding with private companies. Meanwhile, in the Africa region, we are expanding business from railway construction consulting to a new business field. KORAIL is jointly conducting the railroad technical advisory services for the Tanzania Central Line with private companies, and we are conducting related projects such as training for engineer engineers as a related business. In addition, we are exploring new markets by identifying the railroad feasibility study project in Namibia with private companies and jointly participating in bidding. Moreover, we have established an external cooperation system to gradually expand the scale of overseas business and are concentrating to build up internal capabilities. We have formed and operated a consultative body to support overseas expansion of the railroad industry, with Korea Rail Network Authority and Korea Railroad Research Institute, and newly established and operated in-house training to strengthen job competency in overseas business. As a result, the overseas operating profit of KORAIL continued to grow, recording 6% CAGR from KRW 6 billion in 2015 to KRW 7.6 billion in 2019, and we are continuously making efforts to make achievements by participating in three international biddings, developing 4 new businesses, and discovering five public development assistance projects.



*Advancing into Neighboring Countries after Securing Region Based Hub

SUSTAIN ABILITY DSS UES

Realizing Social Value for the People

Business & Social Context

KORAIL regards the reinforcement of public service as its core value. By actively utilizing railroad assets and creating jobs, and expanding recruitment for the self-reliance of the socially underprivileged, we strive to increase decent jobs for the people. In addition, we are implementing a railroad service experience program in consideration of the socially underprivileged, expanding concessionary fares for the public for the mobility handicapped, and public transportation means for residents in traffic blind spots, and taking the lead in providing convenient and comfortable rail service for all citizens. Furthermore, we focus on creating shared value by practicing win-win growth and cooperation with various social communities such as social enterprises and SMEs. KORAIL will continue to develop together with the people by realizing social values for the people with a delicate and warm heart.

Progress

- Creating jobs utilizing characteristics of business
- Opening shops to support the employment of people with hearing impairment
- Expanding public transportation means for the underprivileged
- ✓ Improving traffic access of the underprivileged and reducing freight burden

 Strengthening support system for social economic companies

Future Plan

- Expanding shops to support the employment of people with hearing impairment
- Continuously creating decent jobs
- Implementing plan to make lines for the remote rural areas as planned

2019-2020 Key Performance



Creating jobs in the private sectors for

11.420persons



Winner of Grand Prize

for '2019 Social Contribution', in the job creation sector



Concessionary fares for the public for

1,220,000persons/year

Link to SDGs

Related Stakeholders

Related Department







People / Government

Office of Future Planning and Innovative Strategy /Office of Financial Management / Passenger Transport HQs

Main Tasks

Secretariat

Safety &

Team

Job

Team

HO

(24

Creation

Transport

Win-Win

Ethical

Regional Driving

Divisions (17 of Them

Seoul Department

Safety & Environment Team

People Business

in Five Team

Environment

Main Tasks

find dust

issues.

railway

Partnership enterprises. Vitalizing the

Management practices, Protecting human

Department

Discovering and checking

Managing steering committee

tasks to be implemented

and network in general

management, Preventing

Addressing irregular job

Hiring new employees

Developing jobs for the

and other convenience

matters when using the

Expanding marketing

regional economy

Enhancing transport system.

fare system, transfer system

channels for SMEs and social

Eradicating unfair contracts,

Addressing unfair business

rights, Strengthening social

Supporting and implementing

HQ's tasks, Operating regional

cooperation network

industrial disasters, Reducing

Systemizing safety

KORAIL Sustainability Report 2019-20

Realization of Social Values

Strategic Systems for Realizing Social Values

KORAIL is working hard to create social values by setting up five major strategic directions with the aim of 'realizing social values through the strengthened public nature of railways', and selecting 14 tasks to systematically realize them.

Goal and Tasks to Realize Social Values								
Goal Realizing Social Values by Strengthening the Pubic Nature of Railways								
Strategic Directions	Achieving smart safety and ecofriendly railways	Creating socially integrated jobs	Strengthening universal railway services	Making win-win cooperation and developing local communities	Implementing ethical management based on communications and trust			
	Establishing a system for smart safety management	Improving job quality	Strengthening railway-based mobility rights for the public	Expanding chances of win-win railway cooperation	Realizing reliable railways with integrity			
Tasks	Expanding safety investments in decrepit railways	Creating internal job positions	Realizing services customized for underprivileged	Diversifying shared economy business models	Branding happy trains and other social contributions			
	Realizing ecofriendly railways	Creating jobs in the private sector	Reducing transport fares for the public by providing public concessionary fare	Contributing to boosting local economies				

Steering Committee

KORAIL has established 'The Steering Bureau for Realizing Social Values' headed by the vice president in order to achieve social values. The Bureau comprises five teams including the Office of Future Planning and Innovative Strategy, which controls the overall operation of the Bureau and 17 regional steering committees. The five teams of the Bureau, including Safety & Environment Team, Job Creation Team, Transport Business Team, Win-Win Cooperation Team and Ethical Management Team, are implementing tasks in responding to the government's evaluations of our business management, to quantitative objectives and to other specialized evaluations, while 17 regional steering committees are supporting the projects carried out by the Bureau and working to establish and develop regional cooperation networks. KORAIL is improving its ability to realize social values mainly led by 'The Steering Committee for Realizing Social Values,' taking the initiative in realizing social value for the public.



Progress

In order to achieve social values aligned with the governmental tasks, we established the Social Value Division under the Office of Future Planning and Innovative Strategy, and we have defined the concept of KORAIL's unique social values and set up directions in advancing relevant projects. Having the new vision proclamation ceremony, we placed the realization of social values on top of the management goals and we completed the establishment of 'mid/long-term social value systems.'

SUSTAINABILITY ISSUES

odel of KTX-Sancheon High-Speed Trail



The K-Model Team, an in-house venture team of KORAIL manufactured the KTX-Sancheon model, which precisely reduced KTX-Sancheon to 1/87 ratio. The model was produced based on the actual design drawings of KTX-Sancheon from seating arrangement to the lower part irregularities exactly copying the design drawing, and only a total of 2009 units were produced and sold, receiving great responses from consumers.

Job Creation

Creating jobs utilizing characteristics of business

KORAIL took the lead in creating jobs in the private sector by conducting projects utilizing characteristics of businesses such as localization of imported parts and procurement projects. We have created 407 jobs by establishing the foundation for growth for SMEs through localization of railroad technology, implementation of national R&D research projects, and advancement into overseas markets. We also created 8,258 jobs through procurement projects such as railroad business-related parts purchase and rolling stocks purchase and renovation. In addition, a total of 11,420 private jobs were created in 2019 by creating 956 jobs through consignment projects for specialized job services such as elevator maintenance, and 1,758 jobs through development of station areas and activation of tourism products and related transportation services. Meanwhile, KORAIL is contributing to job creation in a new way that comes out of the box, such as fostering in-house ventures and commercializing a representative railroad brand. KORAIL, which has formed three venture teams (K-model Team, Rail Cell Team, and Premium Vending Machine Team) through public offerings, is carrying out new business based on its brand and ideas. In 2019, the K-model Team produced and sold a precisely scaled-down Korean high-speed train (KTX-Sancheon), and achieved sales of over KRW 100 million in 5 days through advance reservation, creating 56 jobs.



Creating Jobs for the underprivileged

To create jobs for the person with hearing impairment, KORAIL signed a business agreement with Busan City, Korea Rail Network Authority, SR Co., Ltd., and Korea Employment Agency for Persons with Disabilities (KEAD), and opened 'Seomseom Oksu,' a nail care store operated by the person with hearing impairment, at Busan Station. 'Seomseom Oksu,' KORAIL's first job support store for the disabled, is run by six people with hearing impairment who have completed specialized training in nail care, and provides free nail care services to customers with train tickets on the same day. Through this project, KORAIL created six direct jobs and 30 indirect jobs, and we plan to expand brand stores to Seoul Station and other areas to create more jobs for persons with hearing impairments.

Best Practice

'2019 Social Contribution' In the job creation sector

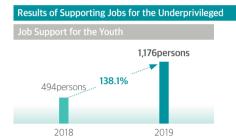
Winner of Grand Prize

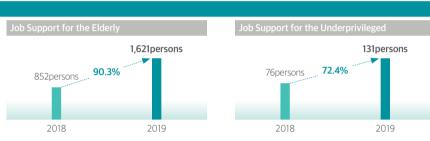
Since 2018, KORAIL has converted 6,753 non-regular workers into regular workers, provided free railroad technical certification training for young job seekers, and promoted nail care services operated by the people with hearing impairment, and has been recognized for its efforts to create jobs for the youth, women, and the socially underprivileged, KORAIL was awarded the Minister of Social Affairs Award (Minister of Education Award), a Grand Prize for '2019 Social Contribution' in job creation sector. KORAIL will continue to take the lead in realizing social values by creating jobs for the self-reliance of the socially disadvantaged.

KORAIL Sustainability Report 2019-20

Creating Jobs for the Underprivileged in Employment

KORAIL has provided employment and career development opportunities to the elderly, homeless, low-income, and young people using stations, which are assets of the railway. We hired the elderly as helpers to maintain safety and order inside stations, creating jobs for 1,573 people, and paying transportation and food expenses to elderly culture guiders who served at the railway museum without payment to inspire their will to work. In addition, in order to provide jobs for the homeless, we have expanded the environment cleanup project, which was conducted only in the Seoul Station Plaza, to Daejeon Station and Cheongnyangni Station, creating jobs for 75 people, and expanded the on-site car wash service inside the parking lots of station from 3 stations to 25 stations, creating 50 jobs. Furthermore, we created 16 jobs through the youth entrepreneurship support project, which gives store management rights to young entrepreneurs with excellent business items. KORAIL will faithfully fulfill its social responsibility as a public institution by operating and expanding various job creation programs that support the independence of the underprivileged.

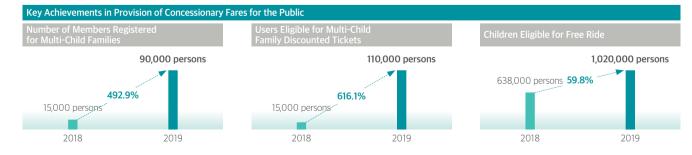




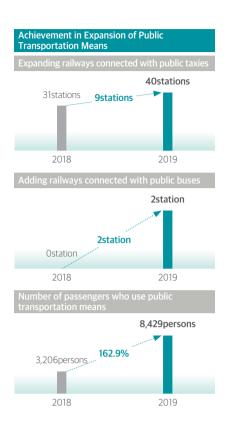
Universal Railway Services

KTX Experience Program for the Underprivileged

KORAIL has operated the 'KTX Hope Experience Ticket,' under which people can use KTX for free, to the elderly and the disabled living in the Busan, Ulsan, and Gyeongnam areas, where there are few opportunities to use KTX. This project was designed considering the wish of an elderly Busan citizen, who said 'It is my wish to ride KTX someday.' Under the program, companies and local governments purchased KTX experience tickets produced by KORAIL and provided the tickets to the underprivileged for free. Through this, 3,547 customers experienced KTX, and 1,321 people used the travel program linked to the destination. A total of 4,868 people used the KTX Hope Experience Ticket. We will continue to actively reflect the people's suggestions and be committed to establishing universal railway services so that no people are marginalized in using railroad.



SUSTAINABILITY ISSUES



Multi-Child Happiness



Operating Concessionary Fares for the Public for the Underprivileged

KORAIL expands concessionary fares for the public to reduce the transportation burden of the underprivileged including pregnant women and multi-child families. In order to increase the convenience of pregnant women and their families who use KTX, we expanded the benefits of the 'Mom-Comfortable KTX' product to support not only pregnant women, but also one guardian to use VIP room at the regular fare. In addition, we eased the registration criteria for the 'Multi-Child Happiness' product from three or more children to two or more, and provided 30%-off concessionary fares for an adult ticket, when more than three members of a verified multi-child family travel. In addition, as a result of expanding the number of beneficiaries by increasing the age of children who can use railway free of charge from under four under six years of age, the number of beneficiaries of the concessionary fares for the public has increased from 696,000 in 2018 to 1.22million in 2019.

Expanding Public Transportation Means for the Citizens in Traffic Blind Spot

KORAIL has expanded public transportation means to increase the convenience of railroad use for residents in the traffic blind spots. In 2018, KORAIL introduced a service linking public taxis and railway stations operated by local governments for the convenience of residents who had difficulty using the railroad due to the low frequency of buses and the distance to the bus stop. Subsequently, in 2019, we increased the public taxi-linked railway stations from 31 stations to 40 stations, and launched public transportation services two railway stations by introducing new public buses, further improving railway accessibility of resident in remote areas. The number of passengers using railroad-related services in 2019 increased to 8,429 people, an increase of 162.9% from the previous year. KORAIL plans to continuously expand its services and strive to enhance the public interest of the railroad.

Promoting Lines for the Remote Rural Areas

KORAIL strives to promote the lines for the remote rural areas so that all citizens can enjoy universal railroad services regardless of region and environment. In order to promote the railway tourism belt in areas where the population is declining, such as the Jeongseon Line and Gyeongbuk Line, we have prepared a plan to additionally develop a unique tourist train. In addition, in cooperation with local governments, we transformed whistle stops such as Buncheon Station (Santa Village), Deukryang Station (Memorial Street), Yeonsan Station (Cultural Experience for Children), and Samtan Station (Healing Forest) to theme stations, and built tourist attraction in connection with local tourism resources. As such, we are making efforts to develop railways in remote areas. We will contribute to the revitalization of the line in remote areas through development of unique railway tourism products, creation of a railway theme park, and development of rail buses for remote areas.

Introducing Direct Call Service for the Underprivileged in IT

We introduced a direct call service for the underprivileged in IT sectors so that anyone can easily purchase tickets. Using a direct call service that connects directly to the call center without going through an automatic response system (ARS), subscribers of the preferential reservation service such as senior citizens, national merit, and the disabled makes a call to the railroad customer center. We support KORAIL members over the age of 70 years so that they can be automatically registered for preferential reservation service in order to increase the convenience of the underprivileged in the era of IT.

KORAIL Sustainability Report 2019-20 SUSTAIN A BILITY ISSUES

Support for Ecosystem for Social Economy

Direction for Win-Win Cooperation with Social Economy Enterprises

We are reinforcing a win-win cooperation and support system for social economy enterprises, such as social enterprises, cooperatives, village enterprises, and self-supporting enterprises. To this end, KORAIL supports social economy enterprises to create stores and living culture spaces that reflect the characteristics of each station and region by using idle spaces in the railway stations. In addition, we pursue cooperative projects with the aim of creating jobs that fit the space within the station, such as parking lots, and supports the development of markets by identifying social economy enterprises linked to the tourism business, which is a representative railway business, strengthening win-win cooperation with social economy enterprises, and contributing to fostering an independent ecosystem of social economy.

Permanent Store Startup in the Station, etc.







Supporting Sales Start-up Utilizing Space in the Station

shops nationwide

KORAIL actively utilizes the spaces in the railway stations to support sales and start-ups of social economy enterprises. We are creating new spaces for permanent stores and pop-up stores in the station by searching available spaces at each regional headquarters and stations, and suggesting space utilization to companies, local governments, and social economy support centers

In 2019, as many as 20 stores were opened in the community center at Neunggok Station on the Gyeongui Line, as well as in station spaces across the country for the promotion of social economy enterprises and product sales, and nine shops and cultural living spaces were opened in stations across the country including Joseong Station on the Gyeongjeon Line. In addition, during the Chuseok holiday, Korea's Thanksgiving day, pop-up stores in 12 major stations across the country in which 120 social enterprises and cooperatives joined were opened, displaying special products. In addition, when there is demand, flea markets and day-of-week markets are held nationwide at any time, and railway stations are expanded as a space for business start-ups and even a place for people to live.



On-site Car Wash Business of Self-Support



Creating Customized Self-Support Ecosystem

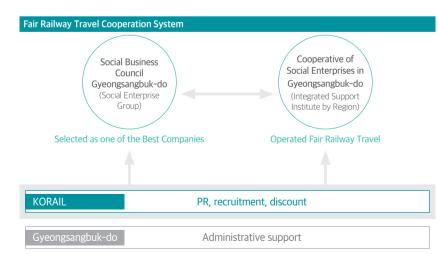
We support development of social enterprises and sales channels by identifying representative cooperation projects that fit the railroad space. To assist on-site car wash business of self-support enterprises, KORAIL continues to give active supports by providing parking and car washing spaces in station parking lots, posting promotional materials related to on-site car wash in the station, and discounting parking and car wash fees to railroad customers. The self-support enterprise's on-site car wash business was conducted in three locations as a pilot project in 2018, and it has been expanded to 29 locations nationwide in 2019, creating 60 jobs and ensuring continuous development

Meanwhile, to support the livelihood and childcare of unwed mothers, KORAIL provides business spaces to operate restaurants within the station, and renders technical education and child-rearing support together with Busan City and Green Umbrella Child Fund Korea. We cut the sales commission rate in half and provided consulting on the overall operation of the business site in order to support the ramen restaurant 'One Sodang Bowl' that opened in Busan Station. Sodang Cafe in Busan Station operated by single mothers was fostered as a preliminary social enterprise in 2019, creating 10 jobs.

In addition, KORAIL contributes to fostering young entrepreneurs and creating jobs by fostering social entrepreneurs. We built a space for fostering social ventures at Gajwa Station, and supported fostering social enterprise by providing youth with an opportunity to experience catering business through the Kitchen Lab at Gyeongsan Station. As such, we are actively carrying out activities realizing social value through the development of space customized business.

Introducing Fair Railway Travel

KORAIL introduced fair rail travel to identify and foster social enterprises connected with tourism business. First of all, we selected Gyeongsangbuk-do as a region for introduction of fair railway travel, and launched a pilot product for fair travel between Seoul and Yeongju in collaboration with social enterprise travel agencies, and then, added fair travel products linked to railroads such as Andong-Gyeongju and Pohang-Bonghwa railways. As a result, we supported the development of a market for social enterprises in the travel industry. In 2019, a total of 800 customers used the fair railway travel services, and we achieved the results of discovering 16 social enterprises in the fields of experience, lodging, and restaurants representing the region, including travel agencies. KORAIL plans to continue its diverse supports so that social enterprises can actively enter the tourism field with high social value.





Customer-oriented convenient railway service

Business & Social Context

Recently, customer-related issues have become critical as customer needs have diversified, and there are growing expectations of the public role of KORAIL as an institution operating the national transportation network. Accordingly, KORAIL strives to secure public interest by creating a railroad environment in which all citizens can use the rail network safely and conveniently. KORAIL develops products that reflect customers' opinions, and gradually improves service quality from the customers' perspective In addition, we are working to deliver customer-delight experience that goes beyond mere customer satisfaction by providing the best customer service based on safety, such as enhancing the value of time for customers with world-class, on-time operation.

Progress

- ✓ Improving service by strengthening the voice of customers (VOC) analysis system
- Developing a ticket reservation service tailored to people's modern lifestyles by linking with portal companies and social networks
- Enhancing customer convenience by expanding internal and external systems and improving service
- ▼ Enhancing on-time operation by identifying and improving train delay factors

Future Plan

- ✓ Actively implementing ticket reservation service linked to portal companies and social network
- ☑ Enhancing competitiveness through activation of railroad-linked transportation system

2019-2020 Key Performance



VOC on poor air-conditioning systems

Decreased by 65.7% year on year



Linked to portal companies and social network

Developed ticket reservation service



For 6th year in a row (KTX 99.82%, ordinary train 99.51%) **Achieved the world's highest punctuality**

Link to SDGs

Related Stakeholders

Related Department





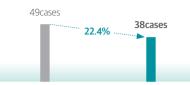
Customers

Passenger Transport HQ
/ Marketing & Customer Service Division

Korean Railway, connecting customers

SUSTAINABILITY ISSUES KORAIL Sustainability Report 2019-20

ceived VOC during Chuseok holiday



Chuseok holiday in 2018 Chuseok holiday in 2019

ceived customer VOC about poor air-



Customer Communication

Reinforcing ability to respond to VOC through upgraded analysis of VOC

KORAIL endeavors to deliver customer satisfaction through service improvement and quality enhancement reflecting the voices of customers. We have built our own VOC web analysis system to collect customer opinions and analyze them systematically. Based on such results, we are checking trends of customer complaints that are repeatedly reported or that may occur in the future, and improving our services accordingly. In addition, we are continuously improving the quality of railroad services based on an advanced VOC system, such as continuously monitoring the improvement status of VOC and publishing Weekly VOC News to share major achievements by issue. As a result of implementing precautionary activities in preparation for the Chuseok holiday, when there are many customer complaints, based on the VOC analysis system, the average daily VOC reported during the Chuseok holiday in 2019 decreased by 22.4% compared to the previous year. In addition, in order to reduce VOCs on poor air-conditioning systems in the summer, special inspections and maintenance of air conditioning systems were conducted in preparation for heatwaves, resulting in a 65.7% decrease in customer complaints on poor air-conditioning in 2019 compared to the previous year.

Service Improvement Process through VOC Analysis

- Plan On-time VOC analysis
- Weekly, monthly, half-yearly issue analysis
- · Establishing VOC web analysis system of KORAII
- * Strengthening VOC statistical function

Preemptive responses to VOC and improvement

- Promptly considering countermeasures and improving service
- Holding HOT-VOC meeting and sharing information with employees

Action Evaluation and feedback

- Rewarding employees who prevent VOC complaints
- Sharing weekly VOC news and performance * Publicizing VOC improvement results to the Persons

Check Monitoring VOC improvement status

- Continuing the monitoring and controlling
 - Analyzing and sharing the results of each issue * Checking current status and providing field
- consulting (half-yearly)

Results of Collecting Customers' Opinions

In order to reduce repetitive complaints and minimize customer complaints, KORAIL actively collects customer opinions and quickly makes improvements. We strive to deliver a customerdelight experience that goes beyond customer satisfaction by creating a railroad environment that can be used conveniently by all citizens by improving services that customers can directly feel.

"KORAIL has changed, listening to the customers' opinions!"

"I cannot see the "close" button of the toilet and tables and chairs are dirty"

"It is difficult for the elderly to call the customer service center"

"Aren't there any delay notifications for trains I purchased tickets for through the KORAIL Talk app?"

"The ticket refund penalty is too high" "Please improve the standards for applying penalty fee for

"The delay compensation for KTX starts from 20 minutes after the scheduled time, then why is it from 40 minutes for ordinary trains?"

"Please allow customers to change train bookings VIA KORAIL TAIK APP"

"It's bothersome to enter the same information every time"



• Improving the whole lock system of toilets ncreasing the number

cleaning

of cleaning personnel,

and introducing steam



• Directly connecting calls of seniors to the

• Establishing an information-sharing system under unusual circumstances



• There is no refund penalty on the day of purchase

• Different standards for each early and late departure time are applied. • Compensation standards for ordinary train have been adjusted (same as KTX)



• Times and seats can be changed up to three hours before departure

• Ticket can be bought through convenient online service

Ticket connected through social media





Ticketing Process on Kakao Talk



Improving Service Quality

More Convenient Ticketing Service

KORAIL has simplified the ticketing and refund process for better customer convenience. On the website and via KORAIL Talk, we have expanded services such as the simple sign-in with simple payment, Kakao Pay and PAYCO associated with the website and KORAIL Talk in order to minimize payment processes. In addition, customers can search and book tickets via 'Naver' and 'KakaoTalk,' and we plan to develop and commercialize the 'SNS-linked ticket reservation service' that allows customers to purchase tickets using 'N Pay' and 'Kakao Pay.' In addition, we are expanding railroad services in consideration of customer convenience, in line with the rapidly growing online platform market trend, such as developing a life-friendly railroad service that enables customers to purchase tickets, guides them in station parking lots, and connects them with traffic guidance services. In addition, KORAIL has improved the functions of "Korail Talk," a smartphone app., in order to provide optimized ticketing services to regular customers. We introduced the 'Push One-Touch Easy Purchase Service,' which allows customers who have previously registered train reservation information to receive previous reservation information. via KORAIL Talk Push notification, and purchase tickets immediately without entering repeated reservation information. Meanwhile, as we introduced a real-time refund processing service in cooperation with the Korea Financial Telecommunications and Clearings Institute, we are processing refunds in real time that were previously delayed for up to seven days. As such we are enhancing customer convenience through continuous system improvement.

Reducing Customers' Burden by Launching Concessionary Fares

KORAIL has eased the financial burden for commuting customers in the Seoul metropolitan area by operating a "Special Price of KTX 5,000" that allows customers to use KTX for short sections in the busy metropolitan area. Customer can use it at a 40% lower price than the existing fares, and it takes 15 minutes from Seoul Station to Gwangmyeong Station and 20 minutes from Seoul Station to Haengsin Station. It shortens the commuting time by up to one hour, thus receiving positive responses from customers. In addition, KORAIL has additionally launched a customized 'KTX N Card' for commuting couples and customers on business trips. 'KTX N Card', a mobilebased discount card, is a ticket for pre-determined times and routes with a set number of trips of a customer's choice, receiving discounts of up to 40% on KTX tickets. Reflecting the opinions of existing single-person N-card users, KORAIL launched 'KTX N Card for two passengers,' where two Persons designate two sections and use them together, and 'Card for Three Sections,' which allows one person to designate and use three sections. We have reduced the financial burden for customers who do not frequently use rail services, as well as office workers who travel frequently.



Creating a Pleasant Railroad Environment

KORAIL constantly improves facilities so that customers can use clean and convenient railroad facilities. KORAIL has renovated membership lounges at five stations nationwide (Seoul, Yongsan, Daejeon, Dongdaegu, and Busan Stations) to expand personal space and install Train Information Display System (TIDS), air purifiers, and speed gates. In addition, to create a pleasant toilet environment, we installed non-slip tiles, LED lights, and etiquette bells, etc. In some stations, a large pictogram was installed at the entrance of the toilet so that anyone can easily find a toilet, and safety handles were placed in each compartment, for the customers' convenience and protection. As a result of these efforts, Daegu Station (Grand Prize), Pyeongchang Station (Silver Award), and Anlak Station (Bronze Award) were awarded the 'Beautiful Toilet' awards at the 21st awards ceremony.

KORAIL Sustainability Report 2019-20

connecting customers

Electric Wheelchair Lift



Expanding Convenience Facilities for the Underprivileged

In order to strengthen the right to travel for the underprivileged, we have expanded convenience facilities. In order to enhance convenience in using trains for the disabled, we have installed more electric wheelchair lifts and electric wheelchair quick chargers. In addition, we have repaired all obsolete or damaged Braille signs for the visually impaired and installed signs for the location of wheelchair-disabled seats on the platform safety gates. In addition, we have expanded lift facilities such as escalators and elevators, added additional signs for pregnant women's seats, and expanded nursing rooms for the convenience of customers with infants. As such, KORAIL constantly strives to create a railroad environment in which anyone can easily and conveniently use trains by expanding convenience facilities for the underprivileged.

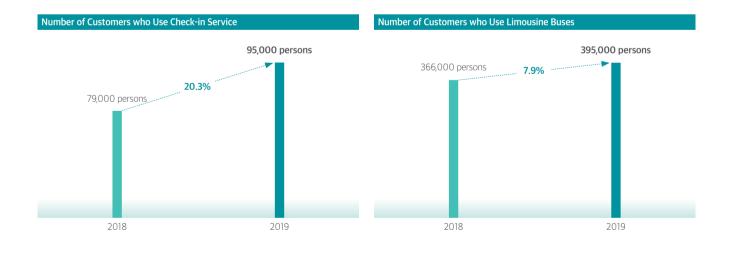
Improving Time Value for Customers

Establishing Railroad Transportation Network by Strengthening Accessibility

KORAIL strives to increase customer convenience as well as value of time by promoting railroad-centered connected transportation services. In line with the growing preference for overseas travel, Air Busan opened a new counter at city airport terminal in Gwangmyeong Station, enhancing the convenience of customers using Incheon Airport as all the domestic airlines have counters in the Station. In addition, as a result of promoting the use of city airport station through various events such as an event celebrating one million customers, the number of customers who use both check-in service and limousine bus has increased. Meanwhile, KORAIL has formed an alliance with 'Green Car,' a car-sharing company, and launched an integrated reservation service that allows customers to make reservations from train tickets to rental cars using the smartphone app KORAIL Talk.' In addition, we have expanded the service-use section to 649 locations in 141 stations nationwide, which led to an increase in the number of rental car users to 2,832 persons in 2019, an increase of 131% compared to 2018. KORAIL will do its best to make the railroad a transportation hub by establishing a railroad transportation network that is easy for customers to access.



Gwangmyong Station City Airport Terminal



47 SUSTAINABILITY ISSUES



Increasing KTX Punctuality rate

KORAIL has focused on reinforcing the safety of the train operation system with the recognition that if the safety of train operation is secured first, the punctuality rate will also improve. To this end, we received customized safety consulting and emergency response training to improve the ability to cope with train operation failures. In addition, we created new vehicle operation manuals and provided customized training to cultivate emergency response capabilities to strengthen the capabilities of the crew, and to improve the safety of train operation by updating the operating system in accordance with the establishment of new routes, and to manage the punctuality rate. In addition, by analyzing the key factors that cause train delays, we are intensively managing habitual delay of trains and we introduced an IoT-based real-time unmanned rail temperature measurement system to prevent the rise of track temperature in summer, etc., and implemented customized solutions to improve on-time operation. As a result of these efforts, the punctual operation rate of KTX in 2019 was 99.82%, achieving the 'World's highest punctuality rate for six consecutive years.'



Increasing Punctuality rate of General Trains

We have improved the train operation speed by improving the facilities and signaling system of general trains, thereby improving the punctuality rate. In order to resolve delays caused by competition between KTX and general trains, we installed a new track switch at Geumcheon-gu Office Station, eliminating waiting time outside the train signal. In addition, KORAIL installed infilled Balise* and adjusted its position to eliminate the speed limit when stopping and waiting for departure, and changed the signal system in the field from three-display configuration (G, Y, R) to five-display configuration (G, YG, Y, YY, R) to improve train speed and shorten the delay time. In addition, we adjusted train schedules to enhance customer safety and improve service, ultimately preventing delay in train schedule. As a result, the punctuality rate of general trains increased by 0.21%p from the previous year to 99.51%, and the delay time was shortened by an average of 518 minutes per day. As such, KORAIL was committed to keeping the time for customers.

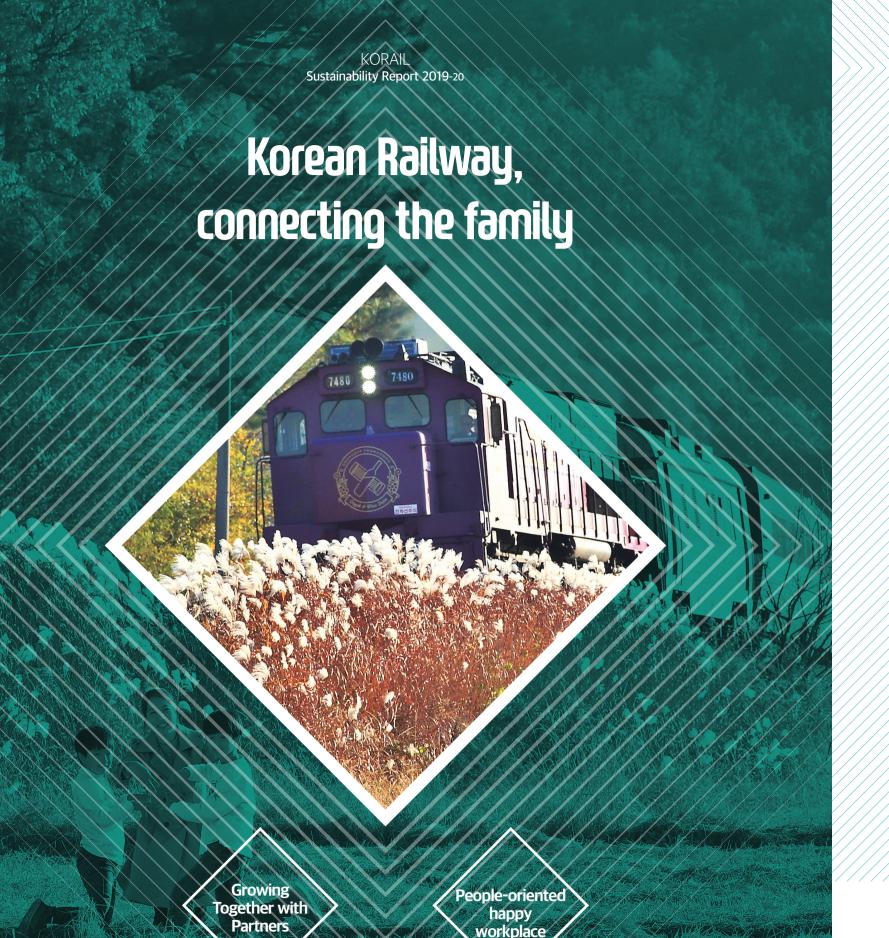
Reducing Traveling Time by Expanding the Operation of Express Trains

In order to shorten the travel time for customers, KORAIL has expanded the operation of express trains on the Gyeongbu Line by 26 times and maintained operation interval of 30 minutes. In addition, by converting general trains to express trains, we shortened the commute time by 22 minutes, increasing the value of time for customers. Furthermore, we extended the express train section from Seoul and Yongsan Stations to Cheongnyangni Station, reducing travel time by 9 to 11 minutes compared to the transfer, and improved urban accessibility from the outskirts of the Seoul metropolitan area. In addition, express trains were additionally stopped at Geumjeong Station and Sungkyunkwan University Station, which are in high demand, improving transfer convenience for 330,000 passengers per day based on the number of passengers in 2019. KORAIL will strive to increase the value of time for customers through the expansion of railroad infrastructure by securing rolling stock and improving facilities.









Growing Together with Partners

Business & Social Context

KORAIL considers it an important role of a public corporation to cooperate with small and medium-sized enterprises (SMEs) to create an ecosystem of win-win growth and fair sharing. To this end, we are developing public technologies through the 'Railway platform for shared-growth' and localizing core railway parts to enhance the competitiveness of our partners. In addition, we are leading the sustainable growth of SMEs by establishing a contract process centered on bidders, and expanding the direct wage payment system to prevent late payment of wages by partners. KORAIL will take the lead in creating a sound railroad industry ecosystem by establishing a win-win business model and establishing an institutional foundation for shared growth and fair trade.

Progress

- Strengthening the execution capability in cooperative projects by holding a shared growth fair
- Expanding support projects for SMEs and small businesses
- Making joint entry into overseas markets with SMEs with outstanding performance
- Developing joint technologies with SMEs and purchasing new products
- Laying the foundation for fair and stable activities of SMEs

Future Plan

- O Expanding joint technology development for SMEs by pursuing purchase conditional threshold projects
- Expanding public-private joint investment technology development, including stage-wise disclosure
 of localized technology development items
- ✓ Implementing support projects to develop overseas markets with SMEs
- Hosting a procurement consultation meeting in Japan for railroad rolling stock parts manufacturing companies, and supporting SMEs in Korea using overseas branches

2019-2020 Key Performance



Zero Pay Franchise at Railway Station

Introduced in 1,188 stations



Localization of new technology development with SMEs

Achieved 15 projects



Localization ratio of railway components

Achieved 85%

Link to SDGs

Related Stakeholders

Partners

Related Department



1

Office of Financial Management

Korean Railway, connects the family

KORAIL Sustainability Report 2019-20

Shared Growth with Partners

Shared Growth Activities

KORAIL pursues shared growth based on win-win growth with its partners in order to develop the railroad industry and establish a sound industrial ecosystem. To this end, we are strategically implementing shared growth based on three major activities of 'Expanding cooperative projects to build public consensus,' 'Supporting for expansion of sales channels for business partners and small business owners,' and 'Leading innovative growth for business partners by strengthening technological cooperation.' Based on these three activities for innovative growth, we are strategically implementing shared growth. In addition, through the operation of the railroad win-win platform, a two-way communication window with business partners, we have strengthened joint technology development with SMEs and pursued win-win growth projects that can be experienced through various management support projects. KORAIL will strive to become a leading public corporation in the growth of SMEs and regional economic development by actively reflecting the government's policy for shared growth.

Strategy for Shared Growth

Goal for Shared Growth in 2020

KORAIL, which contributes to the growth of SMEs and local economic development



Direction & Tasks



51 — SUSTAINABILITY ISSUES

Supporting Small Businesses in Locating their Stores in the Stations

Introducing Zero Pay syste

- For the first time among public corporations
- Payment system for small business (zero commission)
- Introducing 1.188 franchises in the stations

Locating 'Brand F

- Excellent SMEs' products designated by the government (39 products)
- Locating stores at four major stations
- Being awarded appreciation plaques by the Ministry of SMEs and Startups

Supporting small business located in the stations

KORAIL expands the support projects for SMEs and small business by using the railway infrastructure. In order to support the sales of 'Brand K,' a joint brand created by the Ministry of SMEs and Startups for SMEs with outstanding products, KORAIL has established 'Brand K Zone' in 'Luxury Floors for SMEs' in major stations such as Seoul Station, Daejeon Station, Dongdaegu Station, and Gwangju Station and has taken the lead in promoting products and supporting sales channels. In addition, we introduced 'Zero Pay,' a mobile-based simple payment service, for the first time among public corporations in cooperation with the Ministry of SMEs and Startups and financial institutions. With 'Zero Pay' system, which is available at 975 stores in 213 stations nationwide, we lower the financial burden of small businesses, and provide more benefits such as deduction of income tax to the customers.

ocus Issue Ho

Hosting Fair for Shared Growth

We held a large-scale fair for shared growth in September 2019 to explore ways to achieve shared growth with our partners and to strengthen capability to execute the projects. Seven organizations including KORAIL, Korea Federation of SMEs, Korea SMEs and Startups Agency, and Small Enterprise and Market Service, as well as 200 partners nationwide attended the event. At the fair, which was held under the banner of win-win management, performance of projects that KORAIL has implemented with SMEs, small businesses, and social enterprises and excellent results of representative partner were presented, and a separate promotional booth was established for excellent products of technology suppliers. In addition, a technology consultation meeting was held where new technology-related suppliers and KORAIL personnel could have one-on-one consultations. On this day, KORAIL signed a 'Shared Growth and Win-Win Cooperation Agreement for Innovative Growth of SMEs, Small Businesses and Social Enterprises' with the Korea SMEs and Startups Agency, Small Enterprise and Market Service, and the Korea Social Enterprise Promotion Agency, and discussed specific measures for revitalizing the cooperation projects, renewing our resolution for win-win cooperation.



Jointly Advancing into Overseas Markets

In June 2019, KORAIL signed a business agreement with KOTRA to support domestic railroad companies' advancement into overseas markets, and agreed to actively support SMEs with the necessary capabilities to expand their sales channels and overseas markets. In addition, at the 'Japanese Transportation Equipment Procurement Consultation Meeting' jointly hosted by Gyeongsangnam-do and KOTRA, KORAIL arranged one-on-one matching in advance so that railroad parts suppliers and Japanese buyers can smoothly proceed with business consultations. We installed promotion booth for products of partners and provided translation services as well as technology consulting services. As such, we supported the participating SMEs so that they can expand their sales channels in Japan. Through this, 11 partners signed export contracts worth US\$600,000. In addition, by jointly conducting Tanzania Central Line construction consulting with private companies, we are contributing to increasing partners' overseas orders and creating more jobs, and gearing up for joint advancement into overseas markets.

Japanese Transportation Equipment Procurement Consultation Meetin



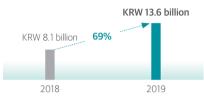


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Localization and Procurement of New Technology Items



Railway Platform for Shared-Growth Website



Co-development of Localized Railway Components

Through technology development and win-win cooperation with SMEs, we achieve localization of core railway parts. In 2019, KORAIL conducted technical training on 46 railroad parts for partners and provided consulting to 28 parts supplying partners to strengthen their technology development capabilities for localization of railroad technology. We continue to explore technical tasks by operating a railroad win-win platform through which SMEs can offer new technologies, etc., through the portal site, and we expand communication with our partners, such as operating a technology development consulting system, for a total of 15 achievements including seven localization and eight new technologies development. In addition, we made efforts to take the initiative in releasing new products of SMEs through localization and procurement of new technology products worth KRW 13.6 billion. As a result of strengthening the competitiveness of the railroad industry and focusing on joint technology development through organic cooperation with SMEs, KORAIL achieved 85% of the localization rate of railroad parts, and was awarded by the Minister of Trade, Industry and Energy in recognition of these efforts.

Establishing Fair Economic Order

Spreading Fair Contract Culture through Bidder-Oriented Contract Process

KORAIL is leading the fair contract culture of public institutions by improving the contract process centered on the convenience of bidders. In 2018, we shortened the payment deadline from 40 days to five days (MRO products) to support seamless management activities of the 2nd-tier contractors, and in 2019, KORAIL reorganized part of the electronic procurement system (www.ebid.korail.com), and changed the bidding process, reflecting the interests of the bidders. With the reorganized electronic procurement system, companies can be issued contract performance certificates more quickly, and when submitting technical proposals and electronic bidding cancellation applications, it is possible not only to apply in person and email, but also online. In addition, KORAIL has improved the procedure for confirming payment of national taxes, local taxes, and national pensions into the bidder-friendly process by changing the existing document submission method to an online processing method using the administrative information network, thereby contributing to the spread of a fair contract culture.

Efforts to Prevent Overdue Wages for Employees of Partners

In order to prevent overdue wages, we fully introduced the direct wage payment system in 2018. The direct wage payment system is a system in which the client directly pays wages and subcontract amount through the electronic payment system, the 'protecting subcontractors,' which limits withdrawal by the construction companies and allows only remittances to workers' accounts to prevent overdue wage. KORAIL expanded the scope of the beneficiary workers of this system from employees of construction companies to all construction works, and in 2019, the company checked the implementation status at the 94 construction sites nationwide at once. In addition, in 2019, we introduced the subcontract supervision system, and assigned dedicated personnel to the construction sites of 52 of our 2nd-tier partners to monitor unfair subcontracting activities. Moreover, KORAIL thoroughly supervises so as not to incur any damage to wages such as the introduction of an electronic card system that checks the commuting of construction workers by card.

S;U S TA) N AB) L) T Y SS U ES

People-oriented happy workplace

Business & Social Context

The development of KORAIL begins with the development of human resources. KORAIL not only develops the potential capabilities of each employee, but also implements various systems so that all members can realize their abilities to their fullest and feel a happy sense of accomplishment. In addition, we openly hire workers through a fair and transparent recruitment process, and actively support employees so that they can achieve self-realization as well as create the best performance through work-life balance.

Progress

- Spreading an open employment culture focused on job competency
- Conducting customized training to strengthen employee competency

 Creating a culture of maintaining work-life balance Establishing an organizational culture of win-win labor-management relation

Future Plan

- ▼ Establishing a high-quality employment system
- ☑ Building culture of win-win labor-management relation based on trust and empathy
- ▼ Fostering future talents to realize core values of KORAIL

2019-2020 Key Performance



Designated as

the Only Training Organization for Railway Traffic Controllers in Korea



Family-Friendly Certificate

from the Ministry of Gender Equality and Family (11 Consecutive Years)



Labor-management communication index in 2019

3.60

Link to SDGs

Related Stakeholders

Related Department









Employees

Office of Human Resources Management Korean Railway, — connects the family

KORAIL Sustainability Report 2019-20 SUSTAIN A BILITY ISSUES

Employment and HR Development Sectors led by HR Innovation Department

Selected as exemplary case of innovative HR management

Total number of new employees in 2019

1900nersons

2018

2018

1,132persons

2018

556persons

3% of fixed number

968 persons

9% of fixed number

357 persons

35% of fixed number

1.388 persons

3,966 Persons (11.9% of total new employees in public sector)

2.674 persons

2019

1.085persons

2019

2,412persons

2019

Fair HR

KORAIL's Excellent Talent

KORAIL values 'Persons-oriented communicators, customer-oriented experts, and future-oriented innovators' in all human resources management processes, and focuses on fostering generalists who can realize the core values of KORAIL.



Fair Employment Process

KORAIL recruits new employees through job competency-based evaluation based on the National Competency Standards (NCS). In 2019, we conducted differentiated employment according to recruitment types. We revised the examination procedure to introduce major tests for each job during the general public recruitment process as well as the employment system for vocational high school and Meister high school graduates. In addition, we focused on hiring talents with experience suitable for the job, such as selecting experienced workers suitable for the field only for special jobs. In order to secure transparency and credibility in the hiring process, we have established detailed rules on employment, and we are constantly improving the internal hiring system through consultation with the relevant ministries and the Recruitment Committee throughout the hiring process to prevent possibility of irregularities.



Socially Equitable Recruitment

KORAIL expands socially equitable recruitment for the socially underprivileged and the disadvantaged. In addition to the recruitment conducted in the first and second half of the year, we recruited employees through limited competition recruitment for the disabled and veterans, expanding the eligibility for restricted competition recruitment for the disabled from the disabled ex-service men to those with general disabilities. In addition, KORAIL exceeded its recruitment targets set for the youth, high school graduates and local talent recommended by the government by introducing customized preferential treatment for each process, such as hiring by region for excellent local talents and preparing a system for expanding hiring of high school graduates.

Supporting Professional Curricula for All Sectors

Management 3u	ipport		
Goal	Achievement		
Enhancing job expertise of staff	Course for accounting-related certificate (111 Persons), Micro e-learning (248 Persons)		

Enhancing interests of safety related certificate (98 Persons), Safety drill (10,883 times)

Sales/ Technologies		
Goal	Achievement	
Enhancing	Contracted education for	
capabilities in	overseas operators (10 Persons),	
passenger and	Nurturing remote cargo handler	
logistics business	(6 Persons)	
Securing	Nurturing master workmen	
professional	(71 Persons),	
certificate and	Contracted education for	
sourcing	overseas manufacturers	
technologies	(115 Persons)	

The 9th Competition for Land and Transportation Training

Awarded by the Minister of Land, Infrastructure and Transport

2019 Korea Social Contribution Awards

Awarded by the Minister of Education

Strengthening Employees' Capabilities

HR Development Operation System

The vision for human resource development of KORAIL is 'Realizing KORAIL for the Persons through the cultivation of generalists,' and to achieve this, KORAIL has established a systematic human resource development operation system based on the employees' needs for training, performance and feedback.

KORAIL's Excellent Talents							
HRD Mission	Systematically nurturing next-generation leaders to realize core values of KORAIL						
HRD Vision	Realizing vision of KORAIL for the Persons through the cultivation of generalists						
Excellent Talent	Persons-Oriented Communicators	Customer-Oriented Experts Future-Oriented Innovators				e-Oriented Innovators	
	Open-minded, caring p who facilitate activ communication an cooperation	acilitate active nunication and		Talented persons who make strenuous efforts to learn about consumers to achieve consumer satisfaction		Innovative persons who enhance the global competitiveness of KORAIL	
HRD Strategies	Identifying HRD Organization		Securing Growth Engine	Performance Cl HRD	reating	Creating Organizational Culture of Empathy and Communication	

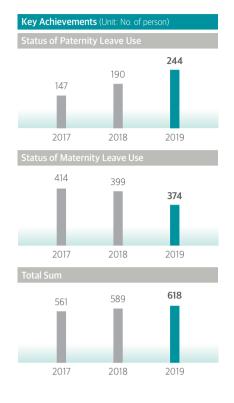
Member-Customized Education

KORAIL provides customized training for employees so that they can sufficiently develop the skills and qualities necessary for their duties by position. KORAIL has greatly expanded the job training period for new employees from nine days to 21 days, and strengthened the mentoring program with technical experts to support new employees to adapt quickly and smoothly to the organization and work. Preliminary training was conducted for two nights and three days for the executive candidates before evaluating the promotion to develop the competency and qualifications of the executive candidates, and lectures focused on cultivating personality, such as leadership and core values, were included in the curriculum to present the direction for desirable growth. The curriculum for the executive candidates has been further strengthened. During the three-week professional job training for promoted executives, we operate a training course focused on practical cases in labor, accounting, etc., and we improve the problem-solving ability of the promoted. In addition, we are striving to continuously develop and improve the competencies of our members, such as expanding support for domestic and overseas professional training courses to cultivate key talents in each field.

Cultivating Railway Experts

KORAIL has established a specialized education and training platform to cultivate railroad experts who will lead the railroad industry. We have established training infrastructure for each field, installing and operating a training center and cutting-edge simulation training equipment. In order to enhance the expertise in railroad training, we established a dedicated department, reinforced specialized instructors, and enhanced the quality of training by designing courses and textbooks for each position. In recognition of its expertise and public interest in railroad education, KORAIL has once again enhanced its status as a specialized training institution, by being designated as the only railroad control and vehicle maintenance training institution in Korea.

Korean Railway. connects the family KORAIL Sustainability Report 2019-20



Work-Life Balance

Employees' Welfare System

KORAIL operates a reasonable and fair compensation system to support a stable living environment for employees, and operates an employee welfare system to improve the welfare experience and satisfaction of employees. We provide a welfare system that fully complies with the government's welfare guidelines, and we strive to improve employees' welfare by regularly identifying their needs, expanding non-monetary welfare services, and introducing point system for apparel. KORAIL applies the same welfare system to high school graduates and non-regular workers, without discrimination according to the type of employment. In the future, we will continue to operate a welfare system tailored to the expectations of the employees, and take the lead in creating a welfare environment that carefully considers the health and pride of each employee.

Employee Welfare System				
Industrial Safety	 Employee group insurance (Average of up to 300 million won in case of occupational accidents) 			
illuustiidi Salety	Employee health checkups (Once per year for field workers, once every two years for office workers)			
	Student tuition support (Free support for high school students, interest-free loan for college students)			
Daily Life Security	• Scholarships, dormitories and workplace childcare facilities operation			
	Operation of employee housing			
	Cash gifts, disaster relief expenses, and funeral supplies			
	Operation of training facilities (in Naksan and Muchangpo)			
Other Welfare Support	Support for sports events and in-house clubs			
	Support for statutory insurance: National pension, healthcare insurance, employment insurance, workers' compensation insurance			

Family-friendly Corporate Culture

KORAIL encourages employees to actively use the flexible working system and provides preand post-natal leave, parental leave, and childcare support in order to create an environment where employees can focus on their duties and work efficiently through a balance between work and family life. We have expanded the period of paternity leave from five to 10 days, improved the childcare leave under which employee can use it twice a year, newly adopted maternity protection hours, and operated a daycare center at work, strengthening the system to support the child caring. In addition, we are encouraging Persons to enjoy their personal life after work and to secure time to spend with their family by simplifying the application process for on-time leave on Wednesdays and Fridays, flexi-time work, and flexible work. As a result of improving the organizational culture focusing on the needs of employees, KORAIL has been certified as a family-friendly company for 10 consecutive years by the Ministry of Gender Equality and Family.

employees' desire to find work-life balance by eliminating long hours of work, was selected as an

Reorganizing Work System to Resolve Long Hour Working Issues

We reorganized the work system from the existing 3-group 2-shift system to a 4-group 2-shift system to resolve long-hour work issues for employees. By improving the working conditions, KORAIL has reduced the annual working hours by 101 hours (4.9%) year on year from 2,046 hours to 1,945 hours, and eliminated the continued night work that had been continued under the 3 group 2 shift work system, contributing to the relief of employee fatigue and securing safety. In addition, we created quality jobs by recruiting necessary manpower resulting from the reduction of working hours. KORAIL's work system reorganization, which supported the

excellent case by the Ministry of Employment and Labor.

SUSTAINABILITY ISSUES



Creating a Harmonious Labor-Management Culture

Labor-Management Strategies

KORAIL strives to realize win-win labor-management relations through harmony and cooperation, and to establish a role model for labor-management relations of public corporations. In 2019, we established and implemented three strategies, including 'reestablishment of standards for labor-management relations, strengthening of communication and consensusbuilding, and securing of labor-management relations management capabilities' — in order to establish a new foundation for labor-management relations. To this end, we reviewed the effectiveness of labor-management councils, such as collective bargaining, and improved operational methods to establish a standard for rational labor-management relations, and strengthened a horizontal communication culture by promoting two-way communication channels. Furthermore, we secured management capabilities to effectively manage the changes in labor-management relations, such as changes in labor conditions. As a result, we have made achievements in reducing labor costs, securing safe working hours, signing wage agreements in compliance with government guidelines, reasonably improving the remuneration system, and converting 6,584 non-regular workers into regular workers.

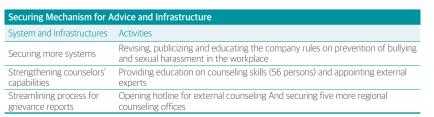
abor-Management Strategies Reestablishing standards for labor-management Discussing ways to develop railway · Completing mid- to long-term labor-• Eliminating cumulative conflict factors management strategies Securing labor experts for field workers Presenting new directions for competency Strengthening communication and consensus-building building Securing labor-management relations Establishing data-based management system management capabilities Direction · Reviewing effectiveness of labor-management Analyzing capabilities and identifying required Promoting two-way communication channel council Operating programs for empathy and physical capabilities Improving operation of council Nurturing capabilities to perform labor-management Adopting criteria for reasonable labor-Strengthening horizontal communication channel Securing mechanism for advice and infrastructures Increasing personal capabilities of labor officers management relations Complying with the criteria for labor-Strengthening strategy workshops, and occupational 2019 Tasks management relations and personnel competencies





Labor-Management Communication

KORAIL operates a program for empathy and physical contact to create a win-win labormanagement culture. To this end, we created and aired a video program on 'Job Empathy, Generational Empathy, and Organizational Culture' to provide an opportunity to empathize with and understand the differences between generations and positions. In addition, we shared the success experiences at the site level through an expanded physical contact program between labor and management, and we are striving to create consensus within the organization by enhancing horizontal communication channels such as the CEO's on-site inauguration ceremony, event for better understanding between CEO and KORAIL families, meetings with new employees, and employee surveys. In addition, we are building a system under which employees can report grievances easily, by revising the company rules on prevention of bullying and sexual harassment in the workplace, opening a hotline with an external counseling for reporting grievances, and expanding the number of local counseling offices to five locations. KORAIL will continue to strive to ensure efficient communication between labor and management through a communication system in which all members can actively engage.



Resolving Long-term Working Issues and Realizing Work-Life Balance

Awarded Best Award by the Minister of Employment and Labor



Korean Railway, connecting the local communities



Warm sharing with the local communities

Eco-friendly railway for the next generation

SUSTAINABILITY DSSUES

Warm sharing with the local communities

Business & Social Context

KORAIL considers it a social responsibility to develop and grow together with the local communities. We expect that the value of KORAIL will also increase as we lay a foundation for sustainable growth and create positive social values by creating a healthy community together with local communities. In this regard, KORAIL has carried out social contribution activities that contribute to the long-term development of local communities based on the characteristics of the railway industry. In addition, we take the lead in solving community issues in the local community and contribute to revitalization of the local economy, promote public interest as a public enterprise and realize social values.

Progress

- Promoting local tourism through new tourism product development and concessionary fare policy
- Revitalizing the local economy by attracting tourists through collaboration with the central government and local governments
- ▼ Continuously pursuing three core social contributions
- Expanding Happy Train benefits

Future Plan

- **♥** Enhancing the welfare of the underprivileged by strengthening cooperation with local communities
- tailored to the characteristics of the business
- ✓ Implementing a culture of fulfilling social responsibility through employee participation and joint labor-management project operation
- Continuing specialized social contribution programs
 Continuing social contribution activities through external partnerships

2019-2020 Key Performance



Per-Capita Hours Spent for Social Contributions

9.46 Hours



Cumulative No. of Happy Train Beneficiaries

Breaking the Record of **150,000** Persons



Effect of Inducing Production for Local Communities

KRW 100 Billion

Link to SDGs

Related Stakeholders

Related Department











Local communities / Persons

Office of Future Planning and Innovative Strategy / Passenger Transport HQs / Marketing & Customer Service Division

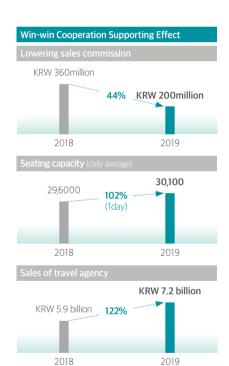
Korean Railway, — connecting the local communities

KORAIL Sustainability Report 2019-20

Railway tourist 2.5 million Persons transported Production inducing effect KRW 735.1 billion

Employment inducement effect

9,630Persons



Revitalizing the local economy

Revitalizing the local economy through local railway tourism

KORAIL has contributed to revitalizing the local economy by launching a special discount product, 'Korea Discount!' providing dramatic concessionary fares, spurring efforts to attract users. In addition to the special discount that offers up to 50% discount on fares via the Internet, we introduced small group discounts for four Persons to use the entire KTX section at 99,000 won, Liberation Special Discount in commemoration of Liberation Day, and 10% discount for foreigners — receiving positive responses from customers. In 2019, the number of Internet special discount customers reached 308,000, an increase of 17.2% from the previous year, and the e contribution-effect to the local economy with the launch of KTX special discount products amounted to 8.96 billion won.

In addition, we launched the 'Paldo Rail Pass,' which allows unlimited use of KTX and regular trains for three days so that the user can travel freely by region. The 'Paldo Rail Pass,' linked to local government tourism products, is expected to be expanded nationwide in the future, starting with the Honam line. We released the 'Spring Season Rail-ro' running through the spring travel week of each region aiming at promoting use of the 'Rail-ro Pass,' a symbol of youth travel. We are continuously developing models through which we can pursue win-win with the local communities, such as adding 20 sales kiosk of 'KORAIL Pass,' which is designed for foreigners, and increasing the operation frequency of foreigner-only trains.

In addition, the Rural Development Administration and local governments cooperate to launch the 'Nong Tour Rail' product for rural experiences and tourism products in fishing villages. We developed and operated the Paldo Market Train and local theme train in collaboration with the Ministry of SMEs and Start-ups, contributing to local traditional market revitalization. In addition, we developed the 'Pass n Pass,' a pass for test takers in collaboration with the Ministry of Education, and we are attracting railroad tourists, revitalizing the local economy.

Revitalizing domestic travel in collaboration with the small and medium-sized travel agencies

KORAIL promotes a win-win relationship with small and medium-sized travel agencies, and carries out a B2B business that supplies tour packages that have been designed to revitalize awareness of the railroad tourism industry among travel agencies. In March 2019, KORAIL signed a business deal with the Korea Association of Travel Agents (KATA) to revitalize local tourism and attract foreign tourists, and held three regular meetings to come up with a cooperation plan.

In response to demand for domestic travel of foreign tourists, we launched a new concept-travel product, 'Dream Tour Youth,' which combines the ITX-Youth Train and a tourist taxi exclusively for foreigners and operated tour packages allowing foreign tourists to freely travel around the attraction sites in Chuncheon city in collaboration with the travel agencies in 2019. In addition, we jointly developed representative train travel products such as Jeongdongjin Sunrise Train, Jeongseon 5-Day Market Train, Hwansan Snowflakes Train, and Bicycle Train, contributing to the vitalization of domestic travel.



61 — SUSTAINABILITY ISSUES

Concessionary fare for volunteers

435 Persons

30% discount for KTX

538,000 Persons

Head (CEO)

Office of Future

Planning and

Innovative Strategy

(Secretariat)

Regional and affiliate

volunteer teams (26)

Regional and affiliate

volunteer groups (395)

KORAIL lowered the sales agency commission for railway tourism product from 4% to 2% to reduce the management burden of small and medium-sized travel agencies, and provides advertisements on the KORAIL website free for excellent travel agencies. In addition, we are maintaining a partnership with travel agencies by awarding appreciation plaques and rewards to 30 excellent employees of 15 travel agencies to encourage long-term services of key employees at small and medium-sized travel agencies. KORAIL was awarded an appreciation plaque by KATA in June 2019 in recognition of such efforts.

Supporting forest-fire damaged areas

KORAIL has provided various kinds of support such as discount for KTX on the Gangneung Line and concessionary fares for volunteers in order to contribute to the economic recovery of the Gangwon region, which suffered from a large scale forest fire. In order to prevent further damage to the Gangwon area, which was concerned about the economic downturn, such as a decrease in tourists after the forest fire, we reduced the fare by 30% on all KTX sections of the Gangneung Line from April 10 to 30, 2019 (we supported 540,000 Persons bringing economic effect of 44.7 billion won in the local communities), and reduced the fare of all trains nationwide temporarily for volunteers who used trains for relief from forest fires. In addition, we made every effort to help the victims at the company level by providing the Naksan Training Center for displaced Persons and donating 100 million won in disaster relief donations so that residents who lost their homes due to wildfires can regain stability.

Social Contribution Activities

Carrying Out Social Contribution Activities

Carrying Out Activities

As Korea' representative public corporation, KORAIL fulfills its social responsibilities and carries out social contribution activities through win-win cooperation with local communities. Under the social contribution slogan of 'A Happy World Connected by Railways', KORAIL is making social contributions based on three main strategies of 'Sharing Talent,' 'Sharing Happiness,' and 'Regional Contributions.' And in order to enhance our implementation competence for social contributions, we are operating 'KORAIL's volunteer team' that is consist of our employees and managing employees', and managing volunteer activity performances by operating a social contribution portal site.

In addition, we are enhancing our expertise in social contribution activities through close collaboration with external partnerships with the Community Chest of Korea and the Children Fund Korea, etc.

Goals and Directions

KORAIL's Volunteer Team

Steering Committee

(each senior manage

external member)

Each volunteer teams

(15) at headquarter

Headquarter volunteer

groups (16)

Making KORAIL contribute to the local communities and grow together



Local Contributions

Operating Happy Train/Creating KORAIL Village/Supporting the socially disadvantaged

Sharing Talent

Supporting environmental protection and response/ Making donation in IT and education for employments/Operating railway experience field Value Creation

Project to solve social issues (Impact Investment)/Realizing handicap-free welfare

Basic Direction

Promoting welfare of the underprivileged and creating social value by strengthening cooperation with the local communities/Realizing culture of implementing social responsibilities through the project in which employees participate and which is operated jointly by the labor and management

Korean Railway, connecting the local communities

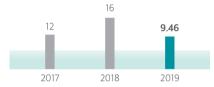
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nancial resources for Social Contribution



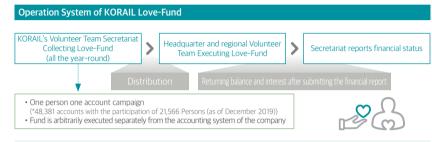


r-Capita Hours Spent for Social Contribution



Financial resources

Employees of KORAIL have launched the 'KORAIL Love-Fund, One Account Campaign' from January 2006 to raise financial resources for social contribution activities. Through the campaign, employees voluntarily donate some amount of money from their monthly salary. The donations collected with small money are used for projects supporting beneficiaries such as the underprivileged, and KORAIL discloses related data to operate the fund transparently. In addition, we introduced 'Matching Grant,' which is supported by the company budget by matching one on one with the Love-Fund, to use it as an important resource for social contribution activities.



Happy World connected by the Rail: Sharing Talent

Rail-House

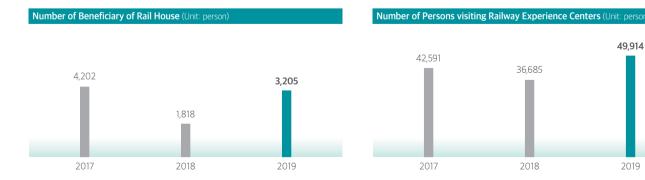
Rail House is an activity to improve living spaces of the underprivileged and the socially disadvantaged living around the railroads nationwide. Employees of KORAIL visit the residential facilities of such Persons to improve them by sharing their technical skills and talents. In order to revitalize the stagnant KORAIL Village project, we changed the name of project to 'Rail-House,' and employees in diverse positions and categories conducted wall reinforcement, boiler replacement, and floor construction works to improve poor residential environments. We are promoting it as another representative social contribution program of KORAIL.

Railway Experience Centers

KORAIL provides youths with opportunities to have a variety of experiences, such as job and cultural experiences, and career counseling by utilizing the abundant infrastructure of the railroad. We designate railroad experience centers in 18 locations nationwide so that youths who are the leading players of the future can actively explore their career paths through various experiences at train stations, vehicle maintenance depot, and museums. In order to raise the interest of future generations in the railway industry, which is turning into an eco-friendly high-tech industry, we are holding events such as education fairs. In addition, we support job experience and career counseling in connection with the free semester system. In 2019, a total of 10,267 youths visited the railway experience centers to have various experiences.

49,914

2019



SUSTAINABILITY ISSUES



KORAIL Symphony Orchestra

For the culturally marginalized Persons who cannot fully enjoy the culture, we are delivering various performances in major stations such as Seoul Station, Yongsan Station, and Busan Station, as well as in specialized art centers such as the Seoul Arts Center, providing opportunities for them to enjoy classical cultural performances. To this end, we founded the Talent Sharing Orchestra in 2012, and we are practicing community sharing and donating talents with members selected through auditions.

Focus Issue Holding the 'Puff-puff Train School' program, a culture and art education program

For two days from October 30, 2019, the KORAIL Museum invited more than 100 children from Gyeonggi Province to a culture and arts education program called 'Puff-puff Train School.' During the event held under the theme of the meeting of railroads and science, children had time to understand the scientific common sense and principles contained in trains through science experiment shows and train driving experiments tailored to their level. In addition, the event provided the KTX Trick Art photo zone and uniform-wearing experience, and exhibited the actual steam locomotive, the presidential train, and the next-generation high-speed train of real size, satisfying the curiosity of children and attracting good responses. The event was designed to fulfill its role as a cultural space in the region by providing customized educational programs to children in the community. The Railway Museum will continue to serve as a hub for local culture and art by realizing the social value of the venue as a cultural attraction visited by 200,000 Persons annually.









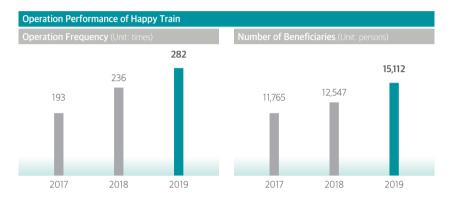
Korean Railway, connecting the local communities

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Happy World connected by Rail: Sharing Happiness

Happy Train

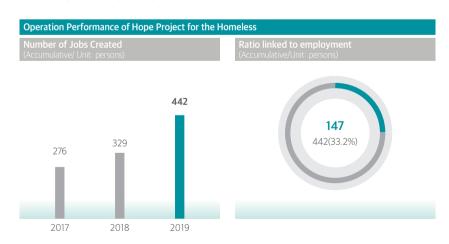
Happy Train is a representative social contribution program of KORAIL that provides train travel opportunities to the underprivileged, such as nursery center children, the elderly living alone, the disabled, and North Korean refugees who have few opportunities to travel by utilizing the transportation infrastructure of KORAIL. As of 2019, the cumulative beneficiaries of this program exceed 150,000. In 2019, KORAIL held the 'Happy Train Contest' and supported a total of 45 million won worth of train travel expenses for 30 institutions supporting the socially disadvantaged. In addition, we held events for students with disabilities and the underprivileged children, and 15,112 socially disadvantaged Persons participated in the events over a total of 282 occasions.



Hope Project for the Homeless

KORAIL is carrying out self-support and self-sufficiency recovery programs and vocational skills improvement projects to support the economic independence of the homeless and to raise their labor motivation. The Hope Project for the Homeless, which started in 2012, has provided short-term jobs and secured employment opportunities for the homeless residing in station squares who are willing to support themselves. As of now, we have created jobs for 442 homeless persons (cumulative), of which 147 have successfully been employed by social enterprises. KORAIL will boost willingness of the homeless for self-support and contribute to the recovery of social life by introducing stable jobs.





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Happy Railway Foundation

Happy Railway Foundation was established in February 2016 for the first time in the public sector jointly by the labor and management under the core values of "Sharing Talents, Sustainability, and Local Contributions," and has implemented various social contribution activities such as supporting the underprivileged and providing opportunities for experiencing railway culture. The Foundation explores social contribution activities taking into account the characteristics of each region, and systematically conducts social contribution activities such as the Unification Dream Tree Support Project and the Unification Train experience targeting the underprivileged, multicultural families, children from migrant families, and North Korean displaced Persons. In 2017, we implemented a joint labor–management social contribution project that delivered hope to the Persons by collecting small amount of money from the salaries of employees, and since April 2017, about 13,000 employees have raised about 6.5 million won per month on average. This fund has been used for sharing activities for the underprivileged, and 1,842 Persons have benefited from the activities over a total of 48 occasions.

A Happy World Connected by Railways: Local Contribution

Launching and Operating Public Products

KORAIL provides affordable travel packages customized for low-income brackets, the disadvantaged and the socially vulnerable. We are operating diverse public products such as 'Love Travel,' which provides a DMZ Cheolwon tour in cooperation with local nursery schools for the children, 'Dreaming Children, a job experience program for youth from low-income families, 'Happy Train to the Forest,' a forest healing program for juvenile delinquency, and 'Culture Sharing Rail Pass,' which provides free travel passes to the public aid recipients, strengthening our public role as a public corporation, and practicing warm sharing that adds warmth to the local community.

Regional Contributions Volunteering Activities Customized for Each of the Region

Every year, during the Lunar New Year and Chuseok holidays, KORAIL provides holiday festivities and donates money to the underprivileged to share love. In addition, upon occurrence of an area affected by natural disasters, we are striving to share the difficulties of the local community through active relief activities and donations. In addition, we supply briquettes and oil to the low-income families, and conduct Kimchi-making volunteering activity for neighbors in need. The number of volunteer activities of local volunteer group reached 3,860 times in 2019, and the total volunteer work hours recorded 70,672 thousand hours.





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Eco-friendly Railways for Future Generations

Business & Social Context

Railroad is an eco-friendly means of transportation that can protect nature and the environment as more and more Persons use it KORAIL conducts eco-friendly activities in order to take advantage of the outstanding energy efficiency of railroads to join forces in the global climate change action and fulfill its responsibility for environmental preservation as a public corporation. In order to hand over a sustainable environment to the next generation, KORAIL has established and implemented a mid- to long-term roadmap for environmental management which will be continued till 2025 and in order to minimize the emission of environmental pollutants from our business sites, we have installed environmental pollution prevention facilities and actively invest in renovation projects. In addition, we are actively implementing eco-friendly management through stricter management than government regulations by reducing greenhouse gas emissions and strengthening comprehensive measures to reduce fine dust.

Progress

- Advancing smart environment management according to the new climate regime
- Reinforcing comprehensive measures to reduce fine dust
- Installing and renovating environmental pollution prevention facilities
- Achieving the government's GHG and energy reduction targets

Future Plan

- Establishing environmental management goals higher than environmental regulation standards and advancing management
- **♥** Expanding the eco-friendliness of railroads by obtaining external certification
- ▼ Reinforcing public interests of railroads by expanding environmental facilities
- Actively exploring green new deal environmental projects

2019-2020 Key Performance



Reduced **620,000 tons of GHG** compared with the Government's goal of reducing GHGs (government's target: 220,000 tons, emission of 1.6 million tons)



Obtaining 'Carbon Footprint' for KTX Gangneung Line



Designated as the 'Year's Green Product' for eight consecutive years

For the first time among public corporations

Link to SDGs

Related Stakeholders

Related Department







Local communities / NGO

Safety Administration HQ

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Environment Management System

Vision and Strategies

KORAIL fulfills its responsibility for environmental preservation by selecting three strategies and 14 tasks with the goal of 'strengthening public value of railroads through smart environmental management' under the environmental vision of 'Realization of an eco-friendly green railroad.' In addition, we have established a mid- to long-term roadmap for environmental management which will be continued till 2025, and we are implementing strategic goals and detailed tasks. Moreover, in line with the government's New Deal policy, KORAIL is making its best efforts in smart environmental management so that the status of the KORAIL can be reinforced by further expanding the eco-friendly policy of railroads and actively contributing to the GHG reduction policy.



Strategic Organizations

In order to smoothly advance the environmental management and enhance implementation competence, KORAIL has an office dedicated to handling environmental issues within the headquarters' Safety Administration HQ and is establishing organic and cooperative networks with 12 regional divisions involved with current projects, four rolling stock maintenance teams, two express railroad divisions, and five affiliates. By actively utilizing the networks with the external institutions, we are strengthening our business communication and managing the environment efficiently and proactively. In addition, we are striving to proactively respond to the changing environment by conducting our own OJT training and training commissioned by the Ministry of Environment to strengthen the expertise of the persons in charge.



Korean Railway, connecting the

local communities

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nstalling waste storage facilities







tablishing soundproof walls for noise reductio



Managing noise through noise measuremen



Investment in Environmental Facilities

For smart management of environmental facilities that can minimize the emission of environmental pollutants at stations and business divisions, KORAIL installed facilities to prevent the emission of environmental pollutants such as facilities for waste, water quality, air, indoor air quality, and noise and vibration, and conducted renovation projects continuously. Through such activities, we are taking the lead in preventing environmental risks by thoroughly complying with environmental pollution source management and related laws. In addition, we are reinforcing human and physical infrastructure to realize eco-friendly railroads by steadily improving environmental facilities and enhancing expertise of the managers.

Minimizing Environmental Impact

Managing Indoor Air Quality

KORAIL operates a fine dust management task force to manage its monthly performance aiming at establishing a pleasant railway environment, and it is making its best efforts to manage indoor air quality, such as preparing a comprehensive plan for fine dust reduction and management and carrying out specific implementation plans.

To manage the air quality within the stations, we are implementing various measures, such as renovating air conditioning facilities, replacing filters, installing windshields, and increasing cleaning cycles. We plan to effectively control the fine dust by installing smart air quality management systems in all underground stations by 2020. In addition, we are measuring and managing air quality on a regular basis to improve the air quality within trains, and operating comfortable trains by cleaning the air conditioning and heating filters of trains, cabin ventilation facilities, and toilets more than recommended standards of the Ministry of Environment. In addition, KORAIL has strengthened the air conditioning system inspection by intensively inspecting the air conditioning system filters of all trains and replacing the defective filters to ensure pleasant air circulation in the trains. As a result, in 2019, the result of measuring fine dust of the entire station and vehicles through an accredited agency certified by the Ministry of Environment showed that that the trains are managed comfortably within the criteria.

Best Practice

Promoting the installation of 'Smart Air Quality Management System'

that reduces fine dust

KORAIL plans to establish a 'Smart air quality management system' in all underground stations by 2020 to reduce and manage fine dust in underground stations. This is a system that removes fine dust by automatically operating the air purifiers according to the measured value of the ultrafine dust concentration of a sophisticated automatic air quality measuring device. KORAIL plans to improve the air quality in the stations to a level where users can feel the improvement by actively utilizing an automatic control system that can effectively reduce fine dust in the station.

Managing Noise and Vibration

Railway noise means mechanical noise caused by the propulsion device of the train, electric noise caused by rail rolling, aerodynamic noise caused by the front of the train and pantograph, and other noises generated during operation (whistling, alarm sound, etc.). In order to minimize the noise and vibration generated during train operation, KORAIL introduced low-noise vehicles that applied the recommended indoor and outdoor noise standards from the train production stage, and restricted the use of train whistles except in urgent cases.

SUSTAINABILITY ISSUES

In addition, we continue to install long and large-size rails and vibration-proof fasteners, and actively consult with the Korea Rail Network Authority on the installation of sound-proof and vibration-proof facilities when constructing and improving railroad tracks to reduce noise along the tracks. In addition, we are managing the Ministry of Environment's railway noise measurement network at 40 locations that have the most railway noise in urban areas, and improving long and large-size rails and inspecting soundproof facilities at locations where noise is expected to exceed the standard. Furthermore, we are continuing our preemptive efforts to reduce railroad noise by introducing a management card, reinforcing on-site inspection and monitoring at locations where noise complaints occur regularly.



Managing soil

KORAIL implements the 'Ministry of Environment Soil and Groundwater Environment Survey in Pollution Concerned Areas (Railway Facilities)' to conduct in-depth soil inspection on railway sites with high probability of soil contamination, and voluntarily restore the soil when the pollution standards are exceeded. In order to prevent recurrence after soil restoration, we conduct autonomous soil contamination inspection every two years and carry out systematic facility improvement activities such as ground installation of underground piping. In addition, we are actively striving to preserve the soil environment by providing on-site instruction and consulting on facilities subject to specific soil pollution management. As a result, all 21 locations included in the railway site soil measurement network designated by the Ministry of Environment to understand the soil pollution trends are kept within the standards for soil pollution.

On the other hand, KORAIL has adopted internal regulations on the use of soil environment evaluation for rented sites within the railroad site to preemptively respond to the risk of the responsibility to clean up soil pollution generated from the railroad site. And we promote early detection and purification of soil contamination through activities for enhancing understanding of soil management practices by creating and distributing checklists for the environment managers.

Soil Contamination Cleaning Up Process



















Issuing order to take actions

Submitting soil cleaning up plan Conducting soil cleaning up

Verifying soil cleaning up

Establishing verification plan

Verifying the process

Verifying the completion

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Managing water quality

Water pollutants discharged from KORAIL are divided into: wastewater generated during repair. washing, and cleaning up of railway rolling stock; sewage generated from train toilets; and domestic sewage generated from vehicle inspection facilities and station operating facilities. Sewage and wastewater generated from train maintenance sites and business sites are removed through physicochemical treatment at the water pollution prevention facility, and thus the concentration of major pollutants is managed within the wastewater effluent limitations. Meanwhile, we are measuring and managing water pollutants through our own environmental technicians or external companies in order to check the proper operation status of water pollution prevention facilities and wastewater discharge facilities, and in case of unexpected environmental problems, we are closely managing it through prompt on-site support from environmental managers. In addition, among the major chemicals used in wastewater treatment facilities, we stopped using sodium hydroxide (more than 5%), which is regulated as a hazardous chemical, and use alternative purification chemicals to establish an eco-friendly wastewater treatment processes. As such, we are continuing our proactive and systematic activities in water quality management.

Managing waste

KORAIL installs and operates waste separation and storage facilities at all business sites to appropriately treat and reduce waste generated from trains and stations. We designate waste managers at each station and set waste reduction targets and enhance the expertise of waste managers through outsourced training. In addition, we actively identifies recyclable waste, treat waste according to legitimate procedures such as reporting the waste discharger, registering in the 'All Baro System' of the Ministry of Environment, and reporting the performance of generated waste — and we fulfill the obligation of discharger, such as separating, storing, and disposing of workplace waste by appearance. We are sorting out the recyclable domestic wastes generated from trains and stations, contributing to waste reduction, and actively taking the lead in recycling waste resources by separating waste air filters and scrap metal scraps, and providing the use of waste wood fuel. On the other hand, KORAIL implements sustainable growth through eco-friendly activities such as a company-wide campaign to reduce disposable items to 'reduce the amount of waste plastic generated by 50% by 2030' with the goal of 'an eco-friendly green railroad leading the reduction of disposable items.'

System to Reduce Disposable Items

Eco-friendly Green Railway Leading Disposable Item Reduction

Reducing amount of waste plastic generated by half by 2030

Reducing the use of disposable items by 35% by 2022

Sectors	Changing system	Cooperating with the stores rented (inducing voluntary participation)	Reducing plastic use within the train (changing packaging material of gifts and thoroughly separating the wastes)	Campaign to use personal cups and handkerchief	
Detailed tasks	Inducing participation of stores rented (KORAIL Retail)	Refraining from use of plastic bags (KORAIL Retail)	Changing packaging material for gift items in train *Changing free gift	Campaign to use personal cups and handkerchief	
	Inducing participation of stores rented (specialized shops) Procurement division refrain from purchasing the	Refraining from use of plastic straws	wrapping paper (plastic-paper) Changing the material of	Actively using multi-use items during meetings	
		(material change and use suppression)	the bottled water cover	Expanding installation of umbrella rainwater	
	disposable items Thoroughly recycling the	Prohibiting use of disposable items	Publicizing for customers (video display,	removers Giving recycled gifts as	
	waste	in the store	broadcasting, etc.)	event souvenirs	

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Best Practice

Gangneung KTX Line

Certified as eco-friendly line

Obtained 'Carbon footprint'

KORAIL has acquired the 'Carbon Footprint' certification for 'Gangneung KTX Line,' which connects Seoul and Gangneung. When traveling between Seoul and Gangneung with KTX, the carbon emission per person (16.0kgCO₂) is half of that of a passenger car (29.91kgCO₂), which testifies to the high ecofriendliness of KORAIL. Carbon Footprint is a certification given by the Ministry of Environment to low-carbon eco-friendly goods and services.

GHG Reduction Targets of KORAIL (Unit: t CO ₂ -eq)					
	Expected emission:				
202	2,451,873	3 2,378,317	73,556		
202	2,510,518	3 2,436,203	74,315		
202	2 2.633.766	5 2.554.753	79.013		

GHG Emission by Energy Source (Unit:

1,433,511 1,392,397 1.370.736 2017 2018 2019 237,944 233,799 214.783 2017 2018 2019 1,671,455 1,607,180 1,604,535

2018

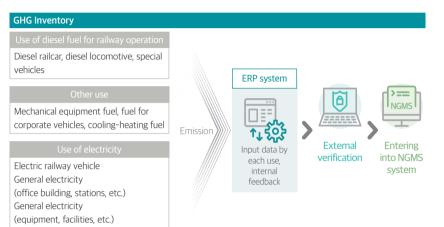
2019

2017

Climate Change Response

GHG Management System

The KORAIL's major sources of energy emitting greenhouse gas include vehicle operating energy and living energy for the operation of railroad facilities. KORAIL has established and operated a 'greenhouse gas inventory' to identify and manage greenhouse gas emissions for all business sites. In addition, we are striving to achieve the government's GHG reduction targets by collecting and managing feedback on monthly and quarterly GHG consumption and mid- to long-term GHG reduction targets.



GHG Reduction Status

Greenhouse gases emitted from KORAIL business sites include greenhouse gases for railroad operation and greenhouse gases from the use of safety and convenience facilities by internal and external customers. Of which, greenhouse gases for railroad operation account for 87% of total greenhouse gas emissions by KORAIL. In 2019, total GHG emissions of KORAIL were 1,604,515 tCO₂-eq, which was 27.95% (622,667tCO₂-eq) lower than the government emissions target (2,227,202tCO₂-eq), thereby actively responding to the government's efforts to reduce GHG emissions.

GHG Reduction Status (Unit: tCO ₂ -eq)					
	Emission allowance	Emission	Reduction	Reduction rate (%)	
2017	2,000,571	1,607,180	393,391	19.66	
2018	1,941,126	1,671,454	269,672	13.90	
2019	2,227,202	1,604,535	662,667	27.95	

GHG Emissions by Energy Source

KORAIL strives to reduce GHG emissions and reduce emissions by replacing and converting the energy used for railway vehicles operation with a high energy consumption rate and living energy (cooling and heating) to indirect emissions (power use) with a low GHG conversion factor. As a result of these efforts, we are complying with greenhouse gas emissions through efficient energy management, despite the projects increasing energy consumption every year, such as the opening of new lines and the construction of new stations and extensions and renovations.



Board Members

Status of the Board of Directors

KORAIL's BOD, as the highest decision–making body, makes decisions on major strategies and policies, and supervising and supporting the business management for the corporation. The BOD consists of 15 members including seven executive directors including the CEO and eight non-executive directors and secures the independence of its governance as a senior non–executive director serves as the chairperson. KORAIL appointed a female chairperson for the first time, and appointed three non–executive directors to increase the representativeness of women.

Calling BOD Meetings and Making Decisions

KORAIL holds regular board meetings on a monthly basis and temporary board meetings when requested by more than one-third of the registered board members. For a fair operation of the BOD, we pass decisions made by a majority of the registered BOD members. And, we have stated the prohibition of directors with special stakes and interests related to agendas of the BOD from participating in the relevant decision-making process in the articles of association.

Procedures for Appointing Directors

KORAIL is fairly appointing directors in accordance with Article 25 (Appointment of Directors of Public Institutions) of the Act on the Management of Public Institutions and internal regulations set by the Director Recommendation Committee. Director Recommendation Committee consisted of non-executive directors and external members make decisions on recommendation of director candidates, and the director candidates are transparently and publically recommended, candidates recommended by any of the stakeholders are excluded and meeting minutes are disclosed in order to secure the fairness and reliability of the director position.

cedures of Appointing Directors Executive Auditor Senior Non-Executive Director Non-Executive Director The Director Recommendation Committee The Director Recommendation Committee Deliberation and Decisions The Director Recommendation Committee by the Public Institution Operation (Plural Recommendations) (Plural Recommendations) (Plural Recommendations) Committee Deliberation and Decisions by the Public Deliberation and Decisions by the Public Deliberation and Decisions by the Public Institution Operation Committee Institution Operation Committee Institution Operation Committee Recommendations by the Minister of Recommendations by the Minister of Land, Strategy and Finance Infrastructure and Transport Appointment by the Minister Appointment by the Minister Appointment by the President of Strategy and Finance Appointment by the President of Strategy and Finance

Status of the BOD Members (As of July 2020)					
Executive Direct	tors		Non-Executiv		
Name	Gender	Job title	Name		
Son, Byeong Seok	Male	President and CEO	Kim Jeong-seor		
Kang, Sung soo	Male	Executive Auditor	Kim Jeong-geur		
	Wang-guk Male Vice President		Oh Geon-ho		
Jeong, wang-guk			Lee Chung-nam		
Jeon, Chan ho	Male	Vice President (Management Planning)	Park Gong-woo		
			Kim Hyun-min		
Cho, Dae-sig	Male	Vice President (Metro)	Kang Joo-eon		

*2 vacant for executive directors

Karig Joo eon	I CITIAIC	I/C3Cai C
*One vacancy for no	n-executiv	e director

Gender Major career Female CEO of Neo Cross Structural Engineering Senior Non-Executive Director Chairperson of the BOD Male Chairperson of the World Labor Movement Non-Executive Director History Initiative Male Co-Head of My Welfare Country Non-Executive Director Vice president of Sankyung energy newspapers/ ım Male Non-Executive Director o e Male CEO of SeeWoo, a legal firm Non-Executive Director Female CPO of Anse Accounting Firm Non-Executive Director Female Researcher of Communication Consulting and Clinic Non-Executive Director

2017 2018 2019 37 29 22 2017 2018 2019 95.9 93.2 90.2 2017 2018 2019 2018 2019 100 Pre-deliberation rate 3 Resolution modified 4.5 8.1 13.8 9 11 Reporting agenda Cases

Board of Directors' Operation Performance

Operating the Board of Directors

Operating the Board of Directors

The BOD is making major decisions and managing risks on KORAIL's business management, policies and environmental issues. We are keeping the business management in check, coming up with practical policies and encouraging the BOD members to actively participate in meetings and express their opinions under the goal of 'supporting decision-making processes for vitalizing the BOD and realizing social values.'



Committees within the BOD

By activating sub-committees within the BOD, we are carrying out professional discussions on core agendas by sectors and preventing business risks. KORAIL has a total of three subcommittees, and we established the 'Railway Safety Subcommittee' in 2019 to strengthen expertise in the safety field. In 2019, we held a total of 24 subcommittee meetings, thereby enhancing the BOD's ability to make reasonable decisions on asset development and budget proposals.

Committees within the BOD					
Classification	Roles	Members			
Railway Safety Sub Committee	– Discussing Issues on Safety Policy, Business, Railway Safety Enhancement, etc.	Two Non-Executive, Directors and One Executive Director			
Strategy and Finance Sub- Committee	Discussing Issues on Business Goals, Organizations, Budgets and Other Policies	Three Non-Executive, Directors and One Executive Director			
Project Sub- Committee	Discussing Issues on New Projects, Sales & Transport Policies, Safety and Other Project Operations	Five Non-Executive, Directors and One Executive Director			

Strengthening Roles and Utilizing Expertise of Non-Executive Directors

To enhance the expertise of non-executive directors and expand management participation, we conduct job training, report on management issues, reinforce the agenda preliminary review system, and on-site management activities. In addition, we hold meetings of non-executive directors for regular reporting sessions on management issues other than major agendas, and actively respond to data requests and inquiries about overall management issues by establishing regular channels such as social networks. Furthermore, we have introduced the KPI to evaluate the individual performance of non-executive directors and to select the outstanding non-executive directors on a quarterly basis, by motivating active participation in management. In addition, we are making various efforts to promote communication between non-executive directors and employees, such as providing special lectures for internal employees by utilizing the expertise of non-executive directors.



Systems for Advancing Ethical Management

Strategies

In order to advance as an outstanding organization in terms of ethical management system that Persons can recognize, KORAIL has set up an enhanced system of pursuing ethical management under the goal of 'achieving the 1st grade in overall integrity by 2020.' In addition, we are presenting an ethics charter, a code of ethics, and a code of conduct for employees and other rules to ensure employees follow voluntary ethical behaviors. We are working hard to realize ethical management by concentrating the corporation-wide capabilities on the creation of an anti-corruption and integrity culture.

Ethical Management	Systems						
Slogan	Fast and safe railway! Fair and ethical KORAIL!						
Goals	Advancing to become a leading public corporation in terms of integrity management (Achieving the 2nd Grade in Overall Integrity in 2020 and Achieving the 1st Grade in Anti-Corruption Initiative Assessment)						
	Strengthening integrity management system	Improving unfair practice in economic activities			Spreading whistle blower protection and integrity culture		
Strategies	Detailed tasks		Strateg	es	Detailed tasks		
		ement by reinforcing responsibility of				sparency and fairness in its own public contest	
	high-ranking employees 2. Creating consensus on CEO three-Zeros management philosophy 3. Strengthening the performance system for job integrity for high-ranking employees 4. Carrying out company-wide integrity innovation activities for integrity management				14. Introducing public architect system for fair design competition review		
① Strengthening the			3 Improving corruption-		ncy in public fund execution projects		
integrity management system				prone areas preemptively		ng transparency by improving the accounting	
System			and voluntarily	system			
					17. Preventing the dea	d zone of corruption in the safety field	
	Improving the evaluation system to improve integrity Easing unreasonable and unfair regulation for customers				18. Establishing the order of fair railway use by preventing illegal		
					rides		
② Improving unfair practic	7. Ensuring equal opportunities for participation through deregulation for railroad business				19. Promoting corrupti protection	ion reports by strengthening the whistle blower	
in economic activities	8. Complying with fair trade cult	ure in signing contracts	_			s that hinder public interest such as	
	9. Realizing win-win market eco	system with railway partners		ading whistleblower ection and integrity	interference with customer satisfaction surveys		
	10. Preventing unfair trade in the	e private sector	cultu			grity education for public officials	
3 Improving corruption-	11. Improving the system for fair	employment	Culture	22 Making efforts to e	<u> </u>		
prone areas preemptive	12. Enhancing transparency and	fairness of the internal review				ty of public-private governance activities	
and voluntarily	committee				24. Spreading a culture	e of integrity in the private sector	

Organizations Implementing Ethical Management

In order to enhance the implementation competence on ethical management, KORAIL is operating an ethical management implementation organization that is led by the Office of Future Planning and Innovative Strategy and consists of others such as the Audit & Inspection Office, Office of Human Resources Management and Safety Administration HQs. At the same time, we are securing the expertise of ethical management by establishing the Ethical Management Committee and the Transparent Management Committee so as to expand ethical management throughout our businesses, improve internal check systems, and focus on incorrupt work. The Ethical Management Committee will be further developed into a committee where civic groups and external experts are included.



SUSTAINABILITY MANAGEMENT SYSTEM



Ethical Management Activities and Performance

Activities Internalizing Ethical Culture and Performance

In order to establish transparent ethical management and internalize an ethical culture within the organization, KORAIL established a dedicated division for ethical management in 2019, and has further upgraded the ethical management system. In addition, we improve the ethical level of all employees through differentiated ethics training provided by position. We have reinforced the anti-corruption index in the KPI of high-ranking employees, and added indicator that gives disadvantage upon detection of power abusing behavior, and distributed the integrity webtoon leaflet created by the employee based on actual cases of corruption to the employees to underline the necessity of ethical standard improvement. As a result, in the 2019 anti-corruption awareness survey, the corruption level of high-ranking employees decreased by 14.1%p compared to 2018, and the level of anti-corruption awareness rose 0.8 points compared to 2018. We are also striving to enhance transparency in organizational and personnel management. To ensure fair recruitment, we established the Recruitment and Personnel Committee, randomly assigning test supervisors and interviewers, and providing employment opportunities to victims of corruption in employment to increase public credibility through a transparent employment system. As a result, the overall integrity level announced by the Anti-Corruption and Civil Rights Commission increased 0.18 points from 8.24 points in 2018 to 8.42 points in 2019, and we were selected as an Excellent Case in HR Innovation in employment sector hosted by the Ministry of Interior

Endeavoring to Activate Reports

In order to create a culture of integrity by promoting voluntary reports of employees, KORAIL has become the first public corporation to introduce a 'Safe Report Attorney System that has been designed to block the information of a reporter from the beginning as an external attorney makes a report by proxy, thus enhancing anonymity. In addition, we have established a compensation system for victims of corruption under which compensation is paid when victims of corruption are suffering from disadvantages such as trauma. As a result, the number of reports of unethical conduct in 2019 increased by 35% compared to 2018. And we are encouraging employees' voluntary participation in establishing an ethical culture by introducing rewards for participants in diagnosis of ethical standards and holding an internal integrity idea contest.

Operating Counseling Channel for Ethics and Compliance

KORAIL is operating various counseling channels for ethics and compliance to improve accessibility for reporting corruption. We have established internal reporting channels such as the Corruption Eradication Center, Barmi Reporter, and Safe Report Attorney System, and operate the Audit Policy Advisory Group and Integrity Citizens Auditor as an external counseling channel to receive advice on audit and integrity policies. In addition, we are contributing to the eradication of corruption by establishing open counseling channels, such as operating a real-time counseling center for the Improper Solicitation and Graft Act, which provides real-time counseling through social network.

Counseling Channel for Ethics and Compliance

Corruption Eradication Center, Barmi Reporter, Audit Policy Advisory Group and Integrity Citizens Real-time counseling center for the Improper and Safe Report Attorney System

> Advice on audit (13 times)/Policy consultation meeting (2 times)/System improvement (3 cases)/ Proposals for integrity policy (5 times)/ On-site audit (2 times)

Auditor

Solicitation and Graft Act

Private-Public Integrity Society Council/Integrity Culture Activities for Persons

Counseling and reports on power abuse. corruption, and violation of code of conduct (68) cases)/ Legal counseling (13 cases) and proxy report (1case)

Instant counseling and answer using social network such as 'KakaoTalk Plus' (68 cases)

Integrity council for public corporation (4 times) and Daeieon Integrity council (2 times)/Children Integrity Railroad Traveling (45 persons)/ Integrity Campaign for Customers (5 times)

Human Rights Management

KORAIL Sustainability Report 2019-20

- SUSTAINABILITY MANAGEMENT SYSTEM

Employees Human Rights Respect System

Rules of Employment HR regulations Article 5 (Equal treatment)
Article 51 (Gender equality and maternity protection)
Article 52 (Arrangement and promotion)
Article 652 (Arrangement and promotion)
Article 6 (Equal treatment)
Article 23 (Employment of employees)
Article 46 (Personal information collection and protection)
Agreement Article 47 (Human rights protection and anti-

Human Rights Management System

Pursuing Human Rights Management

In order to practice human-right-friendly management and prevent human rights violations that could be caused by a company, we have established and operated the human rights system. In addition, we have established a four-stage roadmap to realize human rights management and formed the Human Rights Management Committee making the CEO the chairman, adopting guidelines on human rights management, enacting the charter of human rights, conducting human rights effect evaluations, providing relief procedures, and carrying out other human rights activities. In this way, we have laid the organizational, legal and institutional foundation for human rights management.

Four Stages of Pursuing Human Rights Management

rticle 80 (Gender equality and maternity protection)



Establishing Human Rights

- Designating Divisions and Persons in
- Charge

 Establishing Guidelines on Implementing
 Human Right Management
- Forming and Operating the Human Rights Management Committee
- Proclaiming and Internally and Externally Spreading Human Rights Management

Stage 2

Conducting Human Rights Effect Evaluations

- Evaluating Effects Corporate Operations Would Have on Human Rights: Evaluating Comprehensive Effects Corporate Activities Would Have on Human Rights
- Evaluating Human Rights Effects on Main Projects: Finding out and Analyzing Negative Effects Specific Projects Would Have on Human Rights

Stage 3

Implementing and Disclosing Human Rights Management

- Establishing and Implementing Measures to Prevent High Risks Detected after Evaluating Effects on Human Rights
- Making and Disclosing Final Reports on Human Rights Management including Human Rights Management Systems, Human Rights Surveys, Human Rights Effect Evaluation, Measures and Projects to Prevent Negative Effects on Human Rights and Other Improvements

Stage 4

Providing Relief Procedures

 Providing Relief Organizations, Procedures of Reporting Damages, Relief Procedures and Relief Measures

Forming the Human Rights Management Committee

ClassificationMembers

CEO, Head of the Future Innovation
Office, Head of Administration Planning Office,
Members Head of the Audit Office, Head of Passenger
Transport HQ

External Members The Labor Union* (1), Human Rights Experts (2), Customer (1), Partner (1), One Representing the Disadvantaged** (1)

- * Considering the interests of the labor union, it is included in the external members
- ** A child human rights expert has been invited

Forming and Operating the Human Rights Management Committee

KORAIL has organized a Human Rights Management Committee composed of the management including the CEO and four external experts to discuss and deliberate on major policies related to human rights management. Various stakeholders, including human rights experts, customers, suppliers, and representatives of the underprivileged are involved in the Human Rights Management Committee to have in-depth discussions on issues related to human rights management. According to the recommendations of the National Human Rights Commission of Korea, the committee is composed of a majority of external members, holding regular committee meeting once per year, and irregular meetings when necessary. The Human Rights Management Committee, held in 2019, deliberated the results of the human rights impact assessment conducted for the first time by the corporation and discussed measures to eradicate power abuse and expand employee grievance handling services. As such, the Committee is striving to realize responsible human rights management.

Human Rights Management Promotion Activities

Carrying Out Human Rights Impact Assessment

KORAIL conducted a human rights impact assessment to protect and promote the human rights of its stakeholders. In order to improve the employees' understanding of the human rights impact assessment, we conducted a visiting briefing session and supplemented a total of 156 questions with advice from external experts on the evaluation checklist. In addition, we adopted objective evaluation criteria by preparing the 9th grade evaluation formula. The results of the human rights impact assessment have been reviewed and verified by the human rights division, external experts, and the Human Rights Management Committee. As a result, it was found that 91% of the items assessed revealed a low negative impact on the human rights environment. KORAIL plans to reinforce its human rights protection policy by specializing in and upgrading the human rights impact assessment by expanding the evaluation category to major business evaluations in addition to institutional operation evaluation.

Recruitment irregularities such as recruitment solicitation detected in 2019

Ocases

Human Rights Education Customized by Position (2019)

4,852 persons

Sexual Harassment Prevention Education (2019)

29,527 persons

Labor Union Status of KORAIL (As of Dec. 31, 2019

Korean Railway Workers' Union				
Number of union members	Date of establishment	Umbrella organization		
21.498persons	Nov. 11. 1945	KCTU/KPTU		

Korean Railro	ad Labor Unic	on
Number of union members	Date of establishment	Umbrella organization
2,408persons	Feb. 14, 2017	FKTU/Korea Public Society Union

KORAIL Labo	r Union	
Number of union members	Date of establishment	Umbrella organization
11nersons	Dec 31 2012	_

Railway Unio	on	
Number of union members	Date of establishment	Umbrella organization
159persons	Oct. 11, 2012	-

Number of union members	Date of establishment	Umbrella organization
203persons	Sept. 23, 2019	_

Reinforcing Effectiveness of Human Rights Remedies

In order to ensure the effectiveness of human rights remedies within the organization, we are striving to implement a grievance handling system trusted by victims. In line with the enforcement of the Workplace Harassment Prevention Act, KORAIL revised its rules of employment, diagnosed harassment within the organization, and included relevant matters in the on-site tour training and labor-management newsletter to raise awareness of employees on human rights remedies in 2019. In addition, we expanded the reporting channel to include phone, Internet, mobile, and face-to-face reports, and introduced a Chatbot service that enables 24-hour counseling so that the processing of reports on harassment and sexual harassment can be proceeded more quickly and systematically. Furthermore, by establishing a grievance counseling office served by professional counselors by region, we have established a system that allows immediate notification of damage. In addition, KORAIL makes various efforts to improve employees' human rights awareness and to create a human rights-friendly organizational culture, such as broadcasting human rights remedies related programs through the in-house TV broadcasting system, and providing customized human rights education and sexual harassment prevention education for each position.

Human Rights Violation Reporting System

KORAIL operates a human rights violation reporting system as a channel to report violations of human rights and discrimination by the corporation and its employees. Employees and any stakeholders of KORAIL whose human rights are violated related to the management activities or who are adversely treated in the employment can make a report. Reports can be made online or by mail, and upon receipt of the report, the relevant information is notified to the remedy organization, and then the remedy organization or the audit office conducts an investigation. If violations of human rights or discrimination are recognized, we recommend the violator or the head of the relevant division to implement remedies, such as correction and improvement and we thoroughly keep the information confidential.

Guaranteeing Freedom of Association and Collective Bargaining

KORAIL guarantees employees' freedom of association and collective bargaining rights. We provide timely information required for labor activities to trade union representatives, and refrain from intervening in union management to ensure employees' legitimate union activities.

Prohibiting Discrimination

KORAIL prohibits any discrimination based on gender, education background, and career, and preventing employees from receiving any unfair or irrational treatment in terms of recruitment, wages and welfare due to the physical defect, race, culture, and so forth. In addition, in accordance with the rules of employment and HR regulations, we are ensuring fair evaluations and equal opportunities for all employees through a blind recruitment system and giving feedback on the entire recruitment process by establishing the Recruitment Committee, and applying fair rules to any types of recruitments. Regardless of the hiring type, the same standards are applied without discrimination to new hires, high school graduates, and college graduates and we have secured equality and fairness by providing irregular workers with the same level of wages paid to regular workers doing similar jobs in similar industries. Meanwhile, KORAIL is enhancing the status of female workers within the organization by nurturing female managers to overcome the glass ceiling of hiring women due to the characteristics of the railway transport industry. In order to create a corporate culture of gender equality, we are supporting the establishment of an external female leaders' network, implementing programs to enhance the capability of female leadership and striving to increase the number of female managers.

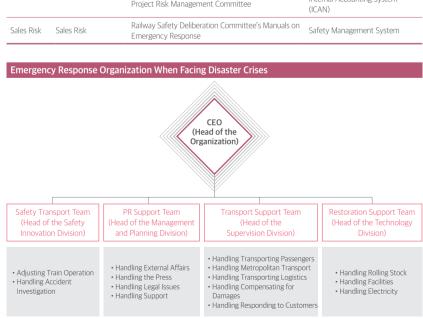
RiskManagement

Risk Management System

KORAIL aims to lay the foundation for sustainable growth by systematically managing risks arising from the uncertain business environment and management activities. In consideration of the characteristics of the railroad business, we divide the risk types into business crisis risk and disaster-related risk, and strive to minimize damage caused by risks through preliminary management and prompt follow-up response to risk factors. We designate a dedicated division for an efficient response system, and operate an emergency response mechanism with the CEO as the head of the division for a disaster crisis. Meanwhile, we have established and operated a management system to ensure efficient investment management by identifying financial and non-financial risk factors in advance. In addition, we are operating various committees such as the Management Strategy Committee, Financial Risk Management Committee, Investment and Business Deliberation Committee, Overseas Business Risk Management Committee, and Railroad Safety Deliberation Committee to strengthen the stability of railway operation.



Managomo	ont/Einancial Crie	sis Control Systems		
Risks	Targets	Institutions and Regulations Controlling Systems	Controlling Systems	
	Market Risk	Regulations on Financial Risk Management/ Manuals	Sales Information System (BS)	
	Liquidity Risk	on Response to Crisis /	Corporation-Wide Resource Management System (KOVIS)	
Financial Risk	Investment Risk	Financial Risk Management Committee/ Investment and Project Deliberation Committee / Overseas Project Risk Management Committee	Comprehensive Financial Information System (KoFIS) Internal Accounting System (ICAN)	
Sales Risk	Sales Risk	Railway Safety Deliberation Committee's Manuals on Emergency Response	Safety Management System	



Stakeholders' Inclusiveness

SUSTAINABILITY MANAGEMENT SYSTEM

Communications with Stakeholders

Communication and collaboration with stakeholders are most important to enhancing the future value of KORAIL. KORAIL has divided its stakeholders into four groups based on the level of their interests and influences: the public/customers, employees/labor union, national assembly/government/media, competent authorities/partners and overseas railway, and shared sustainability management issues through the group-tailored communication channel. In 2019, we established a communication and feedback system to carefully examine the needs of stakeholders and to actively reflect their opinions. KORAIL will continue its sustainability management activities through smooth communication and cooperation with various stakeholders and build sound relationships of trust.

Stakeholders	The public/customers	Employees/labor union	National assembly/ government/media	Competent authorities/ partners	Overseas railway
					000
Matters of	Increasing convenience	Self-development	Transparency, accuracy	Strengthen collaboration	Preparing Continental railway
Interest	Request for participation	Work and life balance	Strengthening public value	Win-win growth	Advancing into overseas railway markets
Communication	KORAIL TALK app. SNS, VOC Online	Intranet KORAIL TV Online	KORAIL website Online	Railway Win-Win Platform E-Procurement System Online	iRaTCA Online
	Offline Citizen engagement innovation group Customer evaluation group	Offline Junior Board Labor Relations Council	Offline Current issue presentation meeting Press conference	Offline Competent authorities meeting Meeting with customers	<mark>Offline</mark> OSJD KOTRA
Systemized Communication Channel	Expanding VOC reception desk	Expanding operation of	Participating in government/	Establishing the Joint Railroad	Establishing permanent OSJD
	(PC-Mobile) • Establishing media articles and SNS analysis website • Adding social network	Junior Board (136 persons-168 persons) • Operating labor/management councils (56 times)	public agency consultative bodies • Holding presentation for media on railroad site	Facility Safety Innovation Group (KORAIL-KRNA) • Renewing Railway Win-Win Platform (cooperation and	cooperation system (employee dispatch) • Expanding cooperation system with KOTRA
Major Communication	channel (Instagram)		(4 times)	communication platform between partners and KORAIL)	
Performance in 2019	Enhancing accessibility to VOC report and reinforcing feedback Conducting national awareness survey (quarterly), detecting real-time issue Increasing frequency of participation by strengthening two-way communication	Executing communication activities between job titles and generation Appointing irregular workers to regular workers 96,584 persons)	Preemptively implementing government policy (support for Gangneung forest fire-affected area) Creating consensus on railroad issues	Strengthening cooperation between KORAL and KRNA (81 cases of improvement of industrial accident and accident prevention system) Developing parts localization, and expanding purchasing from partners (8.4billion in 2018)-13.6 billion won in 2019, increasing 62%)	Holding a Conference of General Directors of OSJD Railways Partners successfully advance into overseas markets (signed contract worth 6 billion dollar)



Interviews with Stakeholders



Sustainable growth requires enhanced competitiveness of railway logistics business



KORAIL is losing competitiveness in the logistics sectors due to poor performance. In terms of the administrative system and decision-making process, it is somewhat regrettable that KORAIL is overly emphasizing the public value, and lacks business thinking in the logistics sector. Accordingly, in order to achieve sustainable growth, KORAIL should enhance its competitiveness in the railroad logistics sectors and innovate human resources and make material investment in the logistics sectors. By clearly separating passenger transportation and logistics, it has to maintain and reinforce public value for passenger transportation, while seeking economies of scale and efficiency for logistics sector, enhancing competitiveness and creating profits. In addition, manpower management needs to be arranged in a balanced manner among regions, headquarters and branch offices. In this regard, the Sustainability Report of KORAIL needs to present a feasible and long-term vision for the logistics sector in implementing its social responsibility.



Presenting KORAIL's efforts and plan for the socially underprivileged

Park Yong-hoon, Director of Daejeon Community Chest of Korea

KORAIL is a large-scale public corporation that most actively participates in social welfare community fundraising in the Daejeon area, and local public institutions also have very high expectations for KORAIL's local community activities. In particular, the idea of contributing to the local community using its own business content (Happy Train, etc.) is highly desirable. I hope that KORAIL's activities to contribute to the community centered on cultural contents will be conducted in various ways. In addition, the provision of CS training for employees in the social welfare field by KORAIL's employees who provide face-to-face services may be considered as an activity for the socially underprivileged. I hope that the Sustainability Report of KORAIL will present KORAIL's efforts and plan for the socially underprivileged. It is a very commendable example of providing free tickets for medical personnel and volunteers when the nation is suffering from the Coronavirus pandemic. In addition, it would be great if support for firefighters, sanitation workers and other social workers are included.



Customer safety is the first priority, and the organization needs to internalize the core technologies needed for the future and innovate its business model.

Lee Yong-sang, Professor of Railway Management at Woosong University

In fact, KORAIL has a long history of more than 100 years, and is a company with sufficient heritage and value to grow into a global railroad company. It is believed that KORAIL can be sustainable if it strengthens the safety of railroads and expands new growth businesses. It is judged that the safety awareness of KORAIL is high. However, I hope that KORAIL puts safety first in all operating activities and makes all divisions and organization fulfil their responsibilities for safety, internalizing safety awareness, and considers safety as a kind of culture and investment rather than expenditure. Currently, KORAIL boasts world-class competitiveness in the passenger sector, but as the era of the inter-Korean railway and even the Continental railway arrives in the future, KORAIL should be equipped with global competitiveness to realize sustainable management. The Sustainability Report needs to put safety at the highest level in the value chain of KORAIL, and it should highlight what efforts KORAIL has made for safety. In addition, I hope that the Report also includes strategies and plans for strengthening safety in the future. Moreover, in the era of continental railroads, I hope it shows the long-term vision and examples of innovation for KORAIL to be competitive.



Strengthening engagement in and contribution to local communities utilizing historical and cultural contents focusing on the railway



Actively implementing localization of rolling stock parts and components for the growth of local SMEs

KORAIL is the representative domestic railroad operator, and it has well organized regulations, procedures, standards, and logistics information, providing high reliability and transparency. KORAIL needs to promote the growth of SMEs that manufacture parts through localization of rolling stocks parts, thereby revitalizing the domestic economy and supporting entry into the overseas markets. KORAIL encourages technology development through national R&D projects commissioned by the Ministry of Land, Infrastructure and Transport and the Ministry of SMEs and Start-ups, and its own R&D support called the 'Railway Technology Commercialization Support Project.' KORAIL shares the R&D results with participating companies through the 'Standard Contract for Performance Sharing System.' Localization of parts will improve the safety and affordability of KORAIL by reducing costs through localization of parts and enabling timely maintenance of railroad vehicles with a faster procurement lead time compared to overseas manufacturers. When developing R&D technology, if domestic parts manufacturers can commercialize the parts that lead to purchases by KORAIL, they can devote themselves to technology development. These policies are essential for sustainable win-win growth between KORAII and SMFs

Hwang Hye-jin, Representative Director of Daejeon Public Arts Research Institute

Although the headquarters of KORAIL has been located in Daejeon for a long time, it is somewhat

regrettable that KORAIL's historical and cultural understanding of and contribution to the Daejeon

area is insufficient. Compared to the public institutions located in the Daejeon area (Research complex,

Techno park, CNCITY energy, Daejeon Metropolitan Railway Corporation, various government-

supported organizations) which make a considerable level of effort to contribute to the local

community, KORAIL's efforts and contributions are somewhat insufficient. Only a few local residents

are aware of the activities KORAIL is conducting. Accordingly, it is necessary for KORAIL to lower

administrative barriers to frequently communicate with local residents and activists to enhance

understanding of the local community, to collect various opinions and to conduct activities centered

on cultural contents. In this regard, I hope that the Sustainability Report of KORAIL summarizes the

120-year history of KORAIL, which reveals the history and culture of railways, and reflects the value of

railway in Daejeon, where the headquarters is located. Through this, KORAIL needs to present a long-term vision whereby contribution activities to the local community will continue, focusing on historical

and cultural contents.



Preparing for increased employment of the disabled and actively considering the safety of customers, the disabled and employees

Kim Hyun-iong, Head of Korea Employment Agency for Persons with Disabilities

KORAIL seems to be doing relatively well in hiring the disabled by adopting audio guiding devices for the visually impaired, seats reservation for the disabled, information on employment for the disabled, call taxis for the disabled, and socially equitable employment. KORAIL currently shows higher compliance with the mandatory employment of the disabled than other public corporations. However, with respect to the recent increase in the mandatory employment rate for the disabled by public corporations (3.6% in 2022 -> 3.8% in 2024) and the increase in the management evaluation (quantitative and non-quantitative) related to the employment of the disabled, KORAIL is required to preemptively secure jobs for the disabled. At the same time, it is necessary to preemptively consider creating jobs that are innovative and expand and spread social values, such as the current project to expand jobs for the disabled using idle spaces in railway stations. In addition, KORAIL needs to improve the various constraints that passengers with disabilities who use railways face when transferring to other means of transportation, and to train crew members to improve their awareness of the disabled. The Sustainability Report should present KORAIL's efforts to create jobs for the disabled and provide community space in the stations in the section on community participation activities of the report.



Materiality Evaluation Process

KORAIL has investigated important issues for its sustainability management by conducting materiality evaluation based on the principles of sustainability context, materiality, completeness and stakeholder inclusiveness, all of which are recommended by ISO 26000 and GRI Standards. The table and contents of this report have been structured based on important issues for KORAIL's sustainability, and we have also worked hard to faithfully incorporate relevant data in this report.

STEP 1. STEP 2. STEP 3. Identification Prioritization Validation **IDENTIFYING ISSUES FOR SUSTAINABLE** DECIDING PRIORITY OF IMPORTANT MANAGEMENT BY ANALYZING INTERNAL **VERIFYING EFFECTIVENESS** ISSUES THROUGH MATERIALITY EVALUATION AND EXTERNAL ENVIRONMENT Global Standard Analysis Relevance Evaluation Checking to see if 17 issues are important for KORAIL's sustainable management through Reviewing standard report requirements set by GRI Sorting out 29 related issues by evaluating the related TF discussions Standards, ISO 26000, UNGC, DJSI relevance of issues for sustainable management,

Media Analysis

Analyzing KORAIL-related news articles to check external views on KORAIL

Benchmarking

Identifying issues considered important by analyzing similar corporations' sustainability reports at home and abroad

Stakeholders' Interviews

Conducting interviews after selecting six persons who can represent core stakeholder groups to reason out detailed issues for sustainable management Prioritizing relevant issues and selecting 15 major issues by conducting online surveys of KORAIL's stakeholders from May 20 to June 15, 2020

which were evaluated from the analysis of internal

and external environments

Materiality (Significance) Evaluation

Materiality Evaluation Result

KORAIL's stakeholders have evaluated the materiality of various issues for KORAIL's sustainable management and selected 15 of them as important issues for KORAIL's sustainable management. Such issues — closely related to safety and human rights upon occurrence of coronavirus such as 'customer safety and health', 'safety and health at the working place', and 'indoor air quality and sanitary'— are considered important by KORAIL's employees and stakeholders for KORAIL's sustainable management in 2020. Respect for human rights, work-life balance, and governance, which were at the top of the list last year, were ranked downward this year, and 'stability and soundness of financial structure' and 'improving railway environment and energy management' were selected as new issues this year.

Deciding the level of the report in terms of the

scope, boundary, period and others and

establishing the plan to draw up the report

SUSTAINABILITY MANAGEMENT SYSTEM



	3.40 3.60	3.80
	Sustainable Management in General	Socie
Evi	ternal Stakeholders	
NO.	. Issues	
1	Securing safety and health for customers (safely operating railways, securing the safety of trains and facilities)	
2	Complying with ethics and laws	
3	Improving customer satisfaction (Including smart services, universal services, convenient services, etc.)	
4	Making fair contracts and procurement agreements (prohibiting price collusion and other unfair trading, making for fair-pricing bidding, etc.)	
5	Securing safety and health in the workplace	
6	Improving indoor air quality and sanitary	
7	Expanding future new growth businesses (Internalizing future core technologies, innovating business model, etc.)	
8	Managing economic/social/environmental risks	
9	Reducing greenhouse gases and managing air quality (Reducing fine dust, etc.)	
10	Securing information security and protecting personal information	
	In Little	
Int	ernal Stakeholders	
No.	Issues	
1	Securing safety and health at workplace	
2	Work and life balance	
3	Complying with ethics and laws	
4	Securing safety and health for customers (safely operating railways and securing the safety of trains and facilities)	
5	Respecting human rights and prohibiting discrimination	
	6 1 1 1	

Securing governance transparency and expertise

Managing economic/social/environmental risks

10 Pursuing win-win labor-management relations

opportunities

Respecting employees' diversity and providing equal

Expanding future new growth engines (internalizing

future core technology, innovating business model, etc.)

No.	Major Issues	Report TOC	Report Boundary	Priority in
1	Securing safety and health for customers (safely operating railways, securing the safety of trains and facilities	Safe Railroad	Internal	1
2	Complying with ethics and laws	Ethical Management	Internal	2
3	Securing safety and health at workplace	Happy Workplace for Members	Internal	3
4	Making fair contracts and procurement agreements (prohibiting price collusions and other unfair trades, making fair-pricing biddings and others)	Growing Together with Partners	Internal	11
5	Improving customer satisfaction (Including smart services, universal services, convenient services, etc.)	Convenient Railway for Customers	Internal	8
6	Improving indoor air quality and sanitary	Providing Eco-Friendly Railroad for Future Generations	Internal/ external	7
7	Expanding future new growth engines (Internalizing future core technology, carrying out overseas and inter-Korean railway projects and implementing multiple projects)	Future Railroad	Internal	13
8	Managing economic/social/environmental risks	Risk Management	Internal/ external	9
9	Securing governance transparency and expertise	Governance	Internal	6
10	Securing information security and protecting personal information	Safe Railroad	Internal	10
11	Respecting human rights and prohibiting discriminations	Human Rights Management	Internal	4
12	Work-life balance	Happy Workplace	Internal	5
13	Stakeholders' Inclusiveness (Expanding communication channel and responding to the matter of interest)	Stakeholders' Inclusiveness	Internal/ external	14
14	Safety and soundness of financial structure (Managing profitability)	Business Portfolio	Internal	New
15	Improving railway environment and energy management	Providing Eco-Friendly Railroad for Future Generations	Internal	New

Top-10 Issues Selected by Stakeholders

Through a survey, we analyzed issues that internal and external stakeholders value for KORAIL's sustainability. External stakeholders selected 'customer safety and health' while internal stakeholders selected 'safety and health in the workplace,' which means both internal and external stakeholders consider 'safety and health' as an important issue for KORAIL's sustainability management, considering the recent social circumstances.



Sustainability Performance

APPENDIX

Economic Performance

Summary o	of Consolidated Financial Statement				
Classification		Unit	2017	2018	2019
	Current Assets	KRW 100 Million	17,134	16,267	23,82
Assets	Non-Current Assets	KRW 100 Million	181,649	204,901	202,785
	Total Assets	KRW 100 Million	198,783	221,168	226,606
	Current Liabilities	KRW 100 Million	28,545	38,558	26,077
Liabilities	Non-Current Liabilities	KRW 100 Million	120,262	116,974	137,22
	Total Liabilities	KRW 100 Million	148,807	155,532	163,298
	Paid-in Capital	KRW 100 Million	102,510	103,215	103,957
	Loss	KRW 100 Million	(92,279)	(93,479)	(94,510)
Capital	Other Capital Components	KRW 100 Million	38,348	54,289	52,162
	Non-Controlling Shareholders' Equity	KRW 100 Million	1,397	1,611	1,699
	Total Capital	KRW 100 Million	49,976	65,636	63,308

Summary of Consolidated All-Inclusive Income Staten				
Classification	Unit	2017	2018	2019
Sales	KRW 100 Million	57,867	63,268	64,014
Cost of Sales	KRW 100 Million	59,177	60,101	61,439
Gross Profit	KRW 100 Million	(1,310)	3,167	2,575
Sales and Administrative Expenses	KRW 100 Million	3,389	3,506	3,658
Operating Profit	KRW 100 Million	(4,699)	(339)	(1,083)
Other Profit	KRW 100 Million	146	233	665
Other Expenses	KRW 100 Million	901	709	588
Other Profit (Loss)	KRW 100 Million	(1,402)	1,140	1,397
Financial Revenue	KRW 100 Million	1,324	645	572
Financial Cost	KRW 100 Million	5,285	4,530	3,789
Profit from Associates and Joint Ventures	KRW 100 Million	(811)	205	339
Net (Loss) on Continuing Operations before Income Tax	KRW 100 Million	(11,628)	(3,355)	(2,487)
Income Tax Expenses	KRW 100 Million	(3,073)	(2,305)	(2,018)
Profit (Loss) from Continuing Operations	KRW 100 Million	(8,555)	(1,050)	(469)
Profit (Loss) from Discontinued Operations	KRW 100 Million	-	-	-
Net Income (Loss)	KRW 100 Million	(8,555)	(1,050)	(469)
Net Income (Loss) Attributable to Owners of the Parent Company	KRW 100 Million	(8,744)	(1,267)	(566)
Net Income Attributable to Non-Controlling Shareholders' Equity	KRW 100 Million	189	218	97
Other Comprehensive Income (After Tax)	KRW 100 Million	9,453	16,007	(2,557)
Total Comprehensive Income (Loss)	KRW 100 Million	898	14,957	(3,026)
Capital Attributable to Owners of the Parent Company	KRW 100 Million	716	14,735	(3,114)
Non-Controlling Shareholders' Equity	KRW 100 Million	182	221	88



Creating and Distributing Eco	nomic Values				
Classification	Unit	2017	2018	2019	Notes
Creating Economic Value (A)	KRW 100 Million	52,853	58,690	59,901	
Sales	KRW 100 Million	50,572	55,545	56,027	
Financial Income and Profit on Assets Sold and Others	KRW 100 Million	2,281	3,145	3,874	
Distributed Economic Value (B)	KRW 100 Million	52,535	53,732	55,168	
Employees	KRW 100 Million	26,499	24,824	26,614	Wages, Benefits, Welfare Expenses, Severance Payments , etc.
Partners	KRW 100 Million	24,219	26,352	26,017	Facility Utilization Expenses, Consignment Fees, etc.
Investors	KRW 100 Million	3,880	3,714	3,258	Interest Expenses
Government Bodies	KRW 100 Million	(2,914)	(6,011)	(1,682)	National Taxes, Income Taxes, Local Taxes , etc.
Customers/Local Communities	KRW 100 Million	851	911	961	Social Contributions, KTX Public Discounts , etc.
Surplus Economic Value (A-B)	KRW 100 Million	318	4,958	4,733	

Social Performance

Classification			Unit	2017	2018	2019
Employees						
	No. of Total Employees		Persons	26,352	26,983	29,281.5
	No. of Fixed-Term Worke	ers (Male/Female)	Persons	70(2)	55(1)	55(1)
		Under 25	Persons	186	309	722.5
		25-34	Persons	2,604	3,824	5,736.25
	No. of Employees in Each Age Bracket	35-44	Persons	6,677	6,040	6,455.375
Employment	III Lacii Age Diacket	45-54	Persons	12,619	12,634	12,810.75
		55 or above	Persons	4,266	4,176	3,556.625
	Employment of the Disab (Mandatory Employment		Persons (%)	858(3.1)	920(3.2)	971(3.1)
	Employment of the Elderly (Mandatory Employment Rate of 6.0%)		Persons (%)	5,521(19.7)	4,191(14.5)	5,287(16.8)
	Average Years of Service		Years	18.6	17.8	16.1
	No. of Newly Employed Workers		Persons	1,059	2,185	3,965.5
	New Recruitment in Each Age Bracket	Under 20	Persons	106	91	63
		21-25	Persons	416	648	417
		26-30	Persons	436	976	1,869
Recruitment		31-35	Persons	75	210	361
Recruitment		36-40	Persons	18	138.5	265.5
		41 or above	Persons	8	121.5	990
	New Recruitment	Metropolitan Area (Seoul, Incheon, Gyeonggi)	Persons	531	1,053.5	1,553.5
	by Region	Non-Metropolitan Area	Persons	528	1,131.5	2,412
Retirement	Retirement Rate (%)		%	2.0	4.8	4.8
	No. of Operations		Persons	2,974	3,230	3,454
Female Employees	Employment of Females (Mandatory Employment Rate of 9.97%)		%	10.64	11.16	12.21
	No. of Female Managers	(Rate)	Persons (%)	288(8.58)	322(9.37)	365(10.48)
	No. of Newly-Employed	Females (Rate)	Persons (%)	218(20.6)	402.5(18.4)	595(15)

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Classification			Unit	2017	2018	2019
	Staggered Office Hours System (Conv	version)	Persons	183	271	184
Flexible Work System	Flexible Work System (Staggered Hou Work System)	urs System + Intensive	Persons	2,297	4,326	4,633
Parental Leave	Status of Maternity Leave		Persons	414	399	374
System	Status of Paternity Leave		Persons	147	190	244
	Education Budget		KRW 1 Million	8,051	8,373	8,582
	Per-Capita Training		KRW1,000	306	303	301
Education	No. of Regular Trainees		Persons	78,094	53,686	62,547
	Curriculum		Numbers	507	530	671
BOD						
	No. of Times of Holding Meetings		No. of Times	12	13	11
	Agendas to be Voted		Cases	22	37	29
Operation	Attendance		%	90.2	93.2	95.9
Performance	Preliminary Deliberations		%	100	100	100
	Agendas to be Revised (Rate)		Cases (%)	1(4.5)	3(8.1)	4(13.8)
	Agendas to be Reported		Cases	9	11	13
	No. of Times of Holding Meetings		No. of Times	13	15	24
Sub-Committee	No. of Agendas to be Presented		Cases	29	38	38
Non-Executive Directors	Speeches Made by Non-Executive Di	rectors	%	57.0	65.0	79.7
Labor-Manageme	nt Relations					
Cooperation	Level of Labor-Management Coopera	ation	Scores	3.35	3.52	3.70
Ethics and Human	n Rights					
Anti-Corruption	Evaluating Measures to Prevent Anti-	Corruption	Grade	1	2	2
Human Rights	Internal Reports		Cases	30	51	69
Integrity	Comprehensive Integrity Level		Scores	8.18	8.24	8.42
Customers						
Communication	Status of Collecting Complaints from '	VOC	Cases (%)	13,373(28.7)	11,941(29.8)	12,195(29.3)
Punctual Operatio	n Punctuality Rate of High-Speed Train	Operations	%	99.76	99.79	99.8
Rate	Punctuality Rate of Regular Train Ope	erations	%	98.14	99.30	99.5
Partners						
	Purchasing Products made by SMEs		KRW 100 Million	8,014	7,269	7,224
	Rate of Purchasing Products made by	/ SMEs	%	76.0	80.8	86.4
Supports	Performance-Sharing Project Outcom	ne	Cases	16	64	50
	Cooperative-Profit-Sharing Project (Ir	mplemented from 2018	B)Cases	-	1	3
Local Communitie						
	Social Contribution Fund		KRW 1 Million	603	588	580
Raising Funds	Matching Grants		KRW 1 Million	589	639.7	603
	Local Volunteers' Service Hours		1,000 hours	246,964	194,878	70,672
Volunteer Hours	Per-Capita Volunteer Hours		Hours	12	15	9.46
	No. of KORAIL Village Beneficiaries		Persons	4,202	1,818	3,205
	No. of Persons Experiencing Railway E Zones	Experiencing & Learnin	g Persons	42,591	7,705	10,267
	No. of Times of KORAIL Orchestra Pe	rformances	No. of Times	11	8	9
Social Contributions	No. of	Times of Operations Train- No. of Times	No. of Times	193	236	282
	парру паш	Beneficiaries-Persons	Persons	11,765	12,547	15,112
		jobs-No. of Jobs	Cases	40	45	75
	the Headless	yed- Persons	Persons	59	56	113
		, 54 1 5130113	. 0130113		30	113

Sustainability Performance

KORAIL Sustainability Report 2019-20

Classification			Unit	2017	2018	2019
	The Elderly	No. of Persons	1,000 Persons	7,375	7,858	8,322
	THE EIGENY	Discounted Amount	KRW 100 Million	331	361	390
	Children	No. of Persons	1,000 Persons	3,728	3,792	2,700
Pubic Discount	Children	Discounted Amount	KRW 100 Million	464	476	313
Services	The Dischlad	No. of Persons	1,000 Persons	3,927	3,946	3,984
	The Disabled	Discounted Amount	KRW 100 Million	307	309	307
	Men of National Merit	No. of Persons	1,000 Persons	341	348	360
	MELLOL MATIONAL MELL	Discounted Amount	KRW 100 Million	71	70	70
Safety	Safety Management		Case/1 Million Km	1.565	1.404	1.982
Management	Human Error Rate		Case/1 Million Km	0.388	0.342	0.571
Investment	Safety Investment		KRW 100 Million	7,291	8,343	10,033
		Compulsory Training on Disaster Safety Management	Persons	62	47	45
	Training on Job Competence	Integrated Training on Initial Responses	Persons	61	90	51
		CDP Training for Those in Charge of Safety Matters	Persons	88	160	167
		Training on Safety Jobs	Persons	161	198	193
Education		Individual Psychological Counseling Services	Persons	324	176	113
	Mental Health and psychological Counseling Services	Visit-Based Psychological Counseling Services	Persons	253	70	254
	Jei vices	Personality-Finding Family Program	Persons	153	143	156
	Aptitude Test on Railway	Initial Test	Persons	2,718	3,565	5,627
	Safety	Regular Test	Persons	1,904	1,058	2,521
Safety Culture	Safety Culture Level Evalua	tion*	Scores	79.6	80.4	82
	Passenger and Non-Passen	ger Casualty Accidents	Persons	66	52	33
Accident	Personal Information Leaka	ge Accidents	Cases	0	0	0
	Cyber Infringement Accidents		Cases	0	0	0

^{*} The evaluation of safety culture level was previously conducted biannually, but it has been now conducted annually since 2018.

Environmental Performance

Classification			Unit	2017	2018	2019
Investment						
	Water	Cases (Newly Established)	Cases	23	23	31
	vvatei	Amount	KRW 1 Million	278	270	177
	Air	Cases (Newly Established)	Cases	7	15	18
Investments in Environmental		Amount	KRW 1 Million	23	114	82
Facilities	Land	Cases (Newly Established)	Cases	7	9	5
		Amount	KRW 1 Million	330	966	1,265
	Waste	Cases (Newly Established)	Cases	5	9	3
	vvaste	Amount	KRW 1 Million	180	412	13
Purchasing Green	Amount of Purchasing Green Products		KRW 1 Million	2,589	7,126	1,707
Products	Rate of Purchasing Green Products		%	93.74	89.15	91.47

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Internal Education	Classification				Unit	2017	2018	2019
Education Deems Deems Education Deems	Education							
External Education	Education	Internal Education				3(90)	3(105)	3(110)
Disself for Railway Operation	Education	External Education				15(78)	17(135)	20(148)
Energy Usage	Environmental Eff	ect Management						
Energy Usage		Diesel for Railway Operation	1		TJ	4,223	4,207	3,990
Conting and Heating Fuels TJ 278 324 289		Electricity for Railway Opera	ition		TJ	21,908	22,780	21,834
Cooling and Heating Fuels TJ	Energy Heage	Electricity for Other Ordinar	y Purposes		TJ	4,012	4,439	4,378
Total	Ellelgy Osage	Cooling and Heating Fuels			TJ	278	324	289
Diesel for Railway Operation		Business Vehicles			TJ	72	73	83
Electricity for Railway Operation		Total			TJ	30,493	31,823	30,574
Electricity for Other Ordinary Purposes CO ₂ eq 194,870 215,583 212,640		Diesel for Railway Operation	1		tCO₂eq	328,384	327,131	310,303
Cooling and Heating Fuels CO _c eq 14,859 17,197 15,335 Emission Suesses Welfelds CO _c eq 5,054 5,164 5,824 Total CO _c eq 1,607180 1,671455 1,604555 Emission Reduction Emissions CO _c eq 2,000,571 1,941,126 2,227,202 Emission Reduction Emissions CO _c eq 1,607180 1,671,454 1,604,555 Rate of Reduction % 19,66 13,90 27,95 Handling Waste Water m' 189,041 232,935 208,233 Amount of Waste Water m' 189,041 232,935 208,233 Amount of Waste Water m' 8,058 7,1879 7,0502 Handling Waste Coordinate Tons 3,696 3,144 4,228 Designated Waste Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Amount of Waste Water Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Amount of Waste Water Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Amount of Waste Water Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Amount of Waste Water Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Amount of Waste Water Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Amount of Waste Water Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Amount of Waste Water Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Amount of Waste Water Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Every Amount of Waste Water Tons 2,653 2,023 1,815 Environmental Effect Wanagament Every Every Every Amount of Waste Water Tons 2,653 2,023 2,023 Amount of Waste Water Every Every Every Every Every Amount of Waste Water Tons Every Every		Electricity for Railway Opera	ition		tCO₂eq	1,064,013	1,106,380	1,060,433
Business Vehicles		Electricity for Other Ordinar	y Purposes		tCO₂eq	194,870	215,583	212,640
Total State Stat		Cooling and Heating Fuels			tCO₂eq	14,859	17,197	15,335
Total Tota		Business Vehicles			tCO₂eq	5,054	5,164	5,824
Emission Reduction Emissions LCO ₂ eq 1,607180 1,671,454 1,604,535 Rate of Reduction % 19.66 13.90 27.95		Total			tCO₂eq	1,607,180	1,671,455	1,604,535
Rate of Reduction		Emission Reduction	Emission Allov	vances	tCO₂eq	2,000,571	1,941,126	2,227,202
Analoling Waste Amount of Waste Water rm' 189,041 232,935 208,233 208,23			Emissions		tCO₂eq	1,607,180	1,671,454	1,604,535
Marker Amount of Waste Water from Passenger Cars m' 82,058 71,879 70,502			Rate of Reduc	tion	%	19.66	13.90	27.95
Handling Waste General Waste Tons 3,696 3,144 4,228	Handling Waste	Amount of Waste Water			m³	189,041	232,935	208,233
Pandling Waste Tons 2,653 2,023 1,815	Water	Amount of Waste Water from Passenger Cars			m³	82,058	71,879	70,502
Designated Waste Tons 2,653 2,023 1,815	Llandling Wasto	General Waste			Tons	3,696	3,144	4,228
Noise Day Leq dB(A) 56 58 56 Noise Night Leq dB(A) 54 53 53 Paperted Maximum Level Day Leq dB(A) 59 59.5 59 Indoor Air Quality Image: Paperted Maximum Level Day Leq dB(A) 59 59.5 59 Indoor Air Quality Image: Paperted Maximum Level Day Leq dB(A) 59 59.5 59 Image: Paperted Maximum Level Day Leq dB(A) 57 58.5 57 Image: Paperted Maximum Level Day Leq dB(A) 59 59.5 59 Image: Paperted Maximum Level Day Paperted Maximum Level Paperted Maximum	nanuling waste	Designated Waste			Tons	2,653	2,023	1,815
Noise Architect Architec	Environmental Eff	ect Management						
Noise		Cround	Day		Leq dB(A)	56	58	56
Expected Maximum Level Day Leq dB(A) 59 59.5 59 Night Leq dB(A) 57 58.5 57 Night Leq dB(A) 57 58.5 Night Leq dB(A) 57 58.5 57 Night Leq dB(A) 57 58.5 Night Leq dB(A) 57 Night Leq dB(A) 57 58.5 Night Leq dB(A) 57 Night Leq dB(A) 57 58.5 Night Leq dB(A) 57 Night Leq dB(Noise	Ground	Night		Leq dB(A)	54	53	53
Night Leq dB(A) 57 58.5 57	Noise	Evaceted Maximum Loyal	Day		Leq dB(A)	59	59.5	59
Fine Dust Underground μg/m' 69 78 72.4 Ground μg/m' 61 59 65 Carbon Dioxide Underground ppm 523 527 509 Ground ppm 488 571 579 Formaldehyde Underground μg/m' 9 24 18 Ground μg/m' 12 18 14 Carbon Monoxide Ground ppm 1 1 1 Fine Dust Metropolitan Railways μg/m' 66 77 105 General Trains μg/m' 55 60 61 Amaliana Metropolitan Railways μg/m' 55 60 61 Amaliana Metropolitan Railways μg/m' 55 60 61 Amaliana Metropolitan Railways μg/m' 1,048 1,241 1,251 Amaliana Metropolitan Railways γg/m' 1,263 1,394 1,062 Amaliana Metropolitan Railways γg/m' 1		Expected Maximum Level	Night		Leq dB(A)	57	58.5	57
Fine Dust Ground \(\rho g/m'\) 61 59 65 65 65 65 65 65 65	Indoor Air Quality							
Ground µg/m² 61 59 65 Carbon Dioxide Underground ppm 523 527 509 Ground ppm 488 571 579 Formaldehyde Underground µg/m² 9 24 18 Ground µg/m² 12 18 14 Carbon Monoxide Underground ppm 1 1 1 Ground ppm 1 1 1 1 Metropolitan Railways µg/m² 66 77 105 General Trains µg/m² 55 60 61 Metropolitan Railways µg/m² 55 60 61 Railways Normal ppm 1,048 1,241 1,251 Normal ppm 1,263 1,394 1,062 Carbon Dioxide General Trains Crowded ppm 1,225 1,163 1,509		Fine Duct	Underground		μg/m³	69	78	72.4
Carbon Dioxide Ground ppm 488 571 579			Ground		μg/m³	61	59	65
Railway Stations Ground ppm 488 571 579 Formaldehyde Underground µg/m² 9 24 18 Ground µg/m² 12 18 14 Carbon Monoxide Underground ppm 1 1 1 Ground ppm 1 1 1 1 Fine Dust Metropolitan Railways µg/m² 66 77 105 General Trains µg/m² 55 60 61 Metropolitan Railways Normal ppm 1,048 1,241 1,251 Railways Normal ppm 1,263 1,394 1,062 General Trains Crowded ppm 1,225 1,163 1,509		Carbon Diovida	Underground		ppm	523	527	509
Formaldehyde	Railway Stations		Ground		ppm	488	571	579
Ground μg/m' 12 18 14	Kaliway Stations	Formaldehyde	Underground		μg/m³	9	24	18
Carbon Monoxide Ground ppm 1 1 1 Rolling Stock Fine Dust Metropolitan Railways \(\mu g\)/m' 66 77 105 General Trains \(\mu g\)/m' 55 60 61 Metropolitan Railways \(\mu p\)/m' 1,048 1,241 1,251 Railways \(\mu rowline)\) \(\mu p\)/m 1,263 1,394 1,062 General Trains \(\mu rowline)\) \(\mu p\) 1,225 1,163 1,509			Ground		μg/m³	12	18	14
Ground ppm 1 1 1 1 1 1 1 1 1		Carbon Monovide	Underground		ppm	1	1	1
Fine Dust General Trains µg/m' 55 60 61		Ground			ppm	1	1	1
General Trains		Fine Dust	Metropolitan F	Railways	μg/m³	66	77	105
Rolling Stock Carbon Dioxide Carbon			General Trains	i	μg/m³	55	60	61
Carbon Dioxide Carbon Dioxide Normal ppm 1,263 1,394 1,062 Crowded ppm 1,225 1,163 1,509	Rolling Stock			Crowded	ppm	1,048	1,241	1,251
Crowded ppm 1,225 1,163 1,509 General Trains		Carbon Dioxide	Railways	Normal	ppm	1,263	1,394	1,062
		Carbon blonide	General Trains	Crowded	ppm	1,225	1,163	1,509
			General Halls	Normal	ppm	1,351	1,365	1,309

Third Party
Assurance Report

To the Management of Korea Railroad

The Institute for Industrial Policy Studies (hereinafter "Auditor"), hereby presents the following statement of assurance, upon the request for auditing the 2019–2020 Sustainability Report (hereinafter "Report") of Korea Railroad (hereinafter "KORAIL") as a licensed sustainability assurance provider.

Responsibility & Objective

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

Assurance Type & Level

The Auditor referred to AA1000AP (2018)¹⁾, ISAE3000²⁾, and GRI Standards³⁾ for the assurance of the Report.

Assurance Scope	Economic, environmental and social dimensions of the report's performance measures and objectives
	performance measures and objectives
Assurance Type & Level	Type II - Moderate level
	• "IPS Assurance Manual™" to verify compliance against the foc core principles of AA1000AP (2018)
Assurance Criteria	 "IPS Performance Indicators Assurance Criteria™ to assess th reliability of performance indicators based on ISAE3000 GRI Standards: The compliance of the "Core Option" criteria

Assurance Process and Activities

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

- Review of KORAIL's critical issue drawing process and following results
- Review of the stakeholder engagement process
- Review of data samples, other than financial statements, used as sources for economic, social and environmental quantitative performance measures
- Review of reference materials underlying economic, social and environmental qualitative performance measures
- Review of the Report's compliance with GRI Standards

The Auditor conducted written correspondence with the reporting management and staff, within KORAIL, in the process of assurance measures.

Assurance Findings

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

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

The Auditor confirmed that KORAIL recognizes the importance of communication and collaboration among various stakeholders in promoting sustainable management and establishes a process to reflect this in actual management activities. In particular, the Auditor has identified that the KORAIL is working to further classify overseas railways as new stakeholders and to provide appropriate communication methods for the characteristics of the five groups, and to reflect them in sustainable management activities. The Auditor has not found any important stakeholders left out from this process.

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

The Auditor confirmed that KORAIL is identifying material issues affecting both stakeholders and management activities of the Authority and is appropriately disclosing the management status of those issues. In particular, the method of identifying new sustainability issues through 'assessment of ISO 26000 implementation level' and stakeholder interviews in preparation of the report every year, and prioritizing them through the task force team meetings in charge is considered to be a standardized 'materiality analysis process' adopted by the KORAIL. No omissions were discovered by the Auditor, in terms of sustainability management information important to stakeholders.

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

The Auditor confirmed that KORAIL is operating diverse engagement channels appropriate for each key stakeholder and is identifying material reporting issues through those opinions collected in the process. "Overcoming COVID-19, KORAIL Together", "Safe Rail", "Ethics Management", "Business Portfolio" were found to be areas of high stakeholder interest. It has been found in this process that KORAIL has appropriately responded to stakeholder demands and interests.

> [Impact] Does KORAIL identify and measure economic, social, and environmental impacts on stakeholders and disclose the results through the Report?

The Auditor confirmed that the KORAIL is properly measuring and disclosing the economic, environmental and social impact by presenting the results of the "soil environment assessment", "safety culture level assessment", "an analysis of the effects of employment inducement", and "an analysis of the effects of revitalizing the local economy" in the process of implementing the unique project in the Report. In addition, in the process of promoting human rights management, the KORAIL conducted an assessment on the human rights of employees and business partners

to confirm that KORAIL is analyzing social, environmental impacts and risks to stakeholders in the operation of KORAIL and major projects.

> GRI "In Accordance" Criteria

The Auditor has recognized that the Report is in accordance with the "Core Option" criteria with General Disclosures of the GRI Standards.

> Reliability of Performance Indicators

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

Category Issue		Performance Indicators		
Business Portfolio	Convenient railway service for customers	22 minutes shorter commute time for wide-area railways		
Vision & Strategy	Observance of ethics and regulations	Operation status of transparent management ethics committee		
Safe Rail Customer safety and health(safe railway management, secure facility and vehicle safety) Vehicle failure rate: 0.074(number(of cases)/ train rate) Facility failure rate: 1.333 (number(of cases)/ train rate)		Safety control rate: 1.967(number(of cases)/ train mileage 1 million km) Vehicle failure rate: 0.074(number(of cases)/ train mileage 1 million km) Facility failure rate: 1.333 (number(of cases)/ train mileage 1 thousand km) Status of operation of the railway safety management committee		
Shared Growth with Partner Companies Fair contract and procurement Status of inspection of		Status of inspection of unfair practices in 94 construction sites nationwide		
A Happy Workplace for Members	Workplace safety and health	• Labor-management communication index : 3.60 • New recruits : 3,966		
Governance Structure Transparency and expertise in governance structure		Non-executive director performance management operation status		
Future Railways Representing Expansion of future new growth business(Internalization of future new growth business(Internalization of future new growth business (Internalization of future new growth business). * Overseas operating income: Annual average 6% growth future core technologies, business model innovation, etc.) * Attraction of national growth-based items: 970,000 tons		Overseas operating income : Annual average 6% growth Attraction of national growth-based items : 970,000 tons		

^{* 17} Qualitative and 23 quantitative performance indicators with regard to 40 material issues were reviewed, but only a few are presented in this assurance report.

Recommendations

The Auditor highly values the Report's endeavor to ① reflect the core themes of the KORAIL's "management value system", "sustainable management value system", "social value realization strategy system", and "environmental management system"; ② report performance related to sustainability from a balanced perspective; ③ try to properly reflect the major issues of interest inside and outside the KORAIL through the stakeholder participation process; ④ transparently disclose the Authority's economic, environmental, and social performance improvement based on internal and external sustainability agendas including social value realization, human rights management, the UN SDGs, and the Ten Principles of UNGC.

Recommended in future Reports with that KORAIL considers followings:

- Clarity: Explaining the basis for calculation of various impacts, effects, etc. as a result of management and the basis for arithmetic or coefficient of use
- Accuracy: Securing a system to manage basic data including the number of employees which are subject to change due to source, gathering criteria, and disclosure condition
- Comparability: Providing comparable benchmark data of public corporations under the Ministry of Land, Infrastructure, and Transport or peers when presenting performance indicators
- Reliability: Disclosing the results of the Customer Satisfaction Survey, a major indicator of the performance of public institutions, in a transparent and accurate manner

Independence of the Auditor

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

Qualifications of the Auditor

The Institute for Industrial Policy Studies is a "Third Party Assurance Provider" engaging in sustainability report assurance for corporations and public organizations nationwide. The auditing team participating in the assurance of this report consists of experts specialized in disciplines of business administration, economics, environmental studies, and accounting, and also with many years of accumulated experience and professional training in the fields of ethical management, social responsibility management, and sustainable management.

August 2020

Dong Sung Cho Chairman

Chairman
The Institute for Industrial Policy Studies







¹⁾ AA1000 - AccountAbility Principles 2018: One of the sustainability report assurance standard series established by the non-profit organization AccountAbility based in the UK, in order to audit corporate social responsibility and sustainability development, thus explaining a set of auditing principles. It was revised with the addition of the "Impact" principle to the existing AA1000APS (2008) in 2018.

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

³⁾ The Global Reporting Initiative (GRI) is a non-profit organization established in 1997, by the Coalition for Environmentally Responsible Economies (CERES) and the United Nations Environment Programme (UNEP), releasing a sustainability reporting framework in 2000 for multinational enterprises. Following the revised G4 version focused on supply chain, governance, ethics & integrity, anti-corruption, GHG emissions & energy disclosures, the GRI released the GRI Standards in 2016, a new guideline with modular structure to ensure more systematic reporting proces

ISO 26000 Index

KORAIL Sustainability Report 2019-20

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	205-2	Communication and training about anti-corruption policies and procedures	78	
	205-3	Confirmed incidents of corruption and actions taken	78	
GRI 206 ANTI-COMPETITIVE BEHAVIOR	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	N/A	
GRI 300 Environmental topics				
GRI 302	302-1	Energy consumption within the organization	92	
ENERGY	302-2	Energy consumption outside of the organization	92	
	103	Management Approach	67	
GRI 305	305-1	Direct (Scope 1) GHG emissions	72	
EMISSIONS	305-2	Energy indirect (Scope 2) GHG emissions	72	
	305-5	Reduction of GHG emissions	72	
GRI 306	306-1	Water discharge by quality and destination	92	
EFFLUENTS AND WASTE	306-2	Waste by type and disposal method	92	
GRI 308	103	Management Approach	67	
SUPPLIER ENVIRONMENTAL ASSESSMENT	308-2	Negative environmental impacts in the supply chain and actions taken	69-70	
GRI 400 Social topics				
CDI 401	401-1	New employee hires and employee turnover	55, 89	
GRI 401 EMPLOYMENT	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	57	
	401-3	Parental leave	57, 90	
	103	Management Approach	26	
CDI 402	403-1	Workers representation in formal joint management-worker health and safety committees	27	
GRI 403 OCCUPATIONAL HEALTH AND SAFETY	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	27	
7110 3/11 2 1 1	403-3	Workers with high incidence or high risk of diseases related to their occupation	27	
	403-4	Health and safety topics covered in formal agreements with trade unions	58	
GRI 404 TRAINING AND EDUCATION	404-2	Programs for upgrading employee skills and transition assistance programs	56	
GRI 405 DIVERSITY AND EQUAL OPPORTUNITY	405-1	Diversity of governance bodies and employees	75	
	103	Management Approach	79	
GRI 412 HUMAN RIGHTS ASSESSMENT	412-1	Operations that have been subject to human rights reviews or impact assessments	79	
HOIMAIN KIGH I 2 A22E22INIEIN I	412-2	Employee training on human rights policies or procedures	79	
GRI 413 LOCAL COMMUNITIES	413-1	Operations with local community engagement, impact assessments, and development programs	61-62	
GRI 416	103	Management Approach	26	
CUSTOMER HEALTH AND	416-1	Assessment of the health and safety impacts of product and service categories	12, 22, 26, 28, 30, 9	91
SAFETY	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	N/A	
GRI 418	103	Management Approach	44	
CUSTOMER PRIVACY	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	30	
GRI 419 SOCIOECONOMIC COMPLIANCE	419-1	Non-compliance with laws and regulations in the social and economic area	N/A	

Implementation Status

UN SDGs

Sustainable Development Goals (SDGs) are a comprehensive action and global cooperation agenda established by the UN to mitigate and eliminate threats to sustainable development. It aims to combat polarization in the economy and society, intensified social inequality, and destruction of the global environment, and it consists of 17 goals and 169 detailed goals that the international community should achieve by 2030. KORAIL actively supports the UN SDGs for sustainable development, and is committed to achieving the SDGs together in the process of conducting business.



Healthy Life and Welfare

- Promoting flexible work system Creating a culture of work-family
- balance • Operating a reasonable welfare



Clean water and sanitation

- Managing water pollutant
- Reusing wastewater treatment facility water



Establishment of Infrastructure, Sustainable Industrialization

· Safety first management



Sustainable Consumption

- Purchasing SME products
- Purchasing eco-friendly products



Realization of Peace and Justice

- Ethical management system Anti-corruption system and
- education · Personal information protection
- and information security



Poverty Eradication

- Rail House(Improving living space for the underprivileged)
- Public concessionary fare



Quality Education

- Education and training of employees
- Designating Day of company safety day



Provision of Sustainable Energy

- Introducing new and renewable
- · Responding to the carbon emission trading system

- Energy saving activities



- Reducing greenhouse gases

Creating and distributing economic value

Resolution of Inequality

- Recruitment and HR without discrimination
- Enforcing socially equitable employment



Prevention of the Impact of Climate Change

- Establishing greenhouse gas inventory
- · Operating Greenhouse Gas Energy Committee
- · Acquiring 'low carbon certification for the carbon footprint of the environmental label



Protection of the Terrestrial Ecosystem

Fighting against Poverty and Food Security

Promotion of Gender Equality and Women's Rights

Sustainable Economic Growth and Decent Jobs

Creation of Sustainable Cities and Residential Areas

Operating a Love-Fund

· Recruitment and HR without

• Implementing gender equality

• Expansion target system for female managers

Advanced labor-management

• Social contribution activities

· Promoting local economy

in local communities

Creating jobs in the private sector

Happy Train

discrimination

· Open recruitment

culture

- Managing sewage and
- Protecting the ecosystem



8 DECENT WORK AND ECONOMIC GROWTH

Global Partnership

- Joining and supporting UNGC
- UIC (International Railway Federation) regular member country activities
- OSJD (International Railway Convention regular member country activities
- Japan-Korea railroad exchange cooperation (Ministry of Land, Infrastructure and Transport, JR Kyushu, JR East Japan)



Joining and **Supporting UNGC**



KORAIL has been complying with 10 principles in four main areas of UNGC since joining UN Global Compact in May 2007. UNGC's 10 principles regarding human rights, labor, environment and anti-corruption stem from the Universal Declaration of Human Rights (1948), the United Nations Convention against Corruption (2003), and other declarations and treaties. The UN is recommending companies comply with the 10 universal principles. KORAIL is committed to systemically managing various issues related with human rights, labor, the environment and anticorruption in the course of performing its business.



Principles	Report Page			
Human Rights				
Principle 1 Companies should advocate and respect internationally declared human rights protection. Principle 2 Companies should do all they can not to be involved with human rights violations.	78~79			
Labor Standards				
Principle 3 Companies should advocate the practical acknowledgment of freedom of association and collective bargaining rights, Principle 4 Companies should exclude all types of forced labor, Principle 5 Companies should efficiently root out child labor Principle 6 Companies should prohibit discrimination over employment and duties	79			
Environment				
Principle 7 Companies should advocate preventive approaches to environmental issues, Principle 8 Companies should take measures to improve environmental responsibilities, Principle 9 Companies should promote the development and spread of eco-friendly technologies.	67~71			
Anti-Corruption Anti-Corruption				
Principle 10 Companies should oppose any types of corrupt acts including illegal gains and bribes.	76~77			

Awards and Memberships

KORAIL Sustainability Report 2019-20

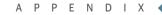
Status of Awards

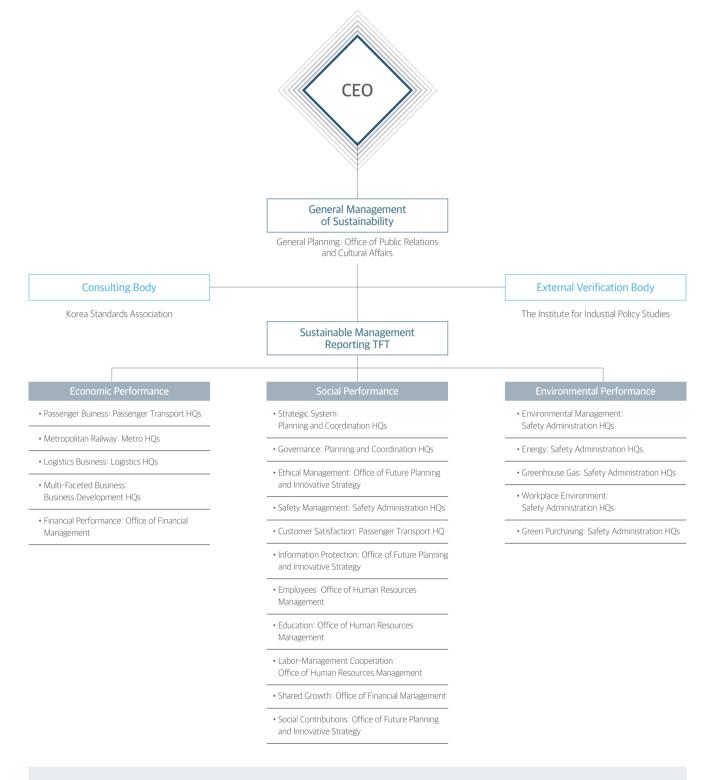
Year	Details	주관	
	Green Product of the Year (ITX-Saemaeul)	Green Purchasing Network	
	Award for excellent institution for integrated public disclosure	Ministry of Strategy and Finance	
	Excellence Award at the 19th Korea Brand Awards	The Institute for Industrial Policy Studies	
	Gold Prize in 2017 Bangkok International Intellectual Property Invention Innovation Technology	National Research Council of Thailand	
	Awarded safety together award at the Korea Safety Photo Award	National Research Council of Thailand	
	Gold Prize in 2017 Bangkok International Intellectual Property Invention, Innovation, and Technology Exhibition	National Research Council of Thailand	
2017	Best Institution for 'Practical Training on Control System for Cyber Attack Response'	Korea Industrial Safety Association	
	Special award for public sector cyber security contest	Cyber Safety Center of Ministry of Trade, Industry and Energy	
	Minister prize in 2017 Republic of Korea Sharing Awards	Ministry of Health and Welfare	
	Special award for Korea Communication Awards (KORAIL Newsletter)	Korea Business Communicators Association	
	Gold Prize in International Business Awards	IBA (International Business Awards)	
	Grand Prize in National Land Transportation Education and Training Contest	Ministry of Land, Infrastructure and Transport	
	Special award in CDP Climate Change Response and Carbon Management (4 times)	CDP	
	Green Product of the Year (V-Train)	Green Purchasing Network	
2018	2018 Safety & Health UCC Grand Prize	Korea Occupational Safety and Health Agency	
	Presidential Award for the Best Example in the Government's Contest of Excellent Cases for Innovation 2018	Ministry of Interior and Safety	
	Prize of the Minister of Health and Welfare in the Part of 'Suicide Prevention & Love Life' at the Ceremony of 2018	Ministry of Health and Welfare	
	Gold Medal at 2018 International Business Awards (KORAIL's Internal Newsletter) for Two Consecutive Years	International Business Awards	
	Grand Prize and Special Award at UCC Contest of 2018 Safety & Health Examples	Ministry of Employment and Labor, CBS	
	Best Prize in Facility Safety Part at 2018 Smart Construction Technology & Safety Contest	Ministry of Land, Infrastructure and Transport	
	Minister Prize Awarded by the Government to a Company Respected by the Public	Ministry of Trade, Industry and Energy	
	Award in the Sustainability Part at 2018 'CEO Hall of Fame'	The Institute for Industrial Policy Studies	
	Award Certificate from the Ministry of Employment and Labor for 'Rationalizing Labor-Management Relations as a Public Corporation'	Ministry of Employment and Labor	
	2018 Prize awarded by the President to a Company Contributed in Hosting Pyeongchang Winter Olympic and Paralympic	Ministry of Culture, Sports and Tourism	
	Appreciation plaque from the Head of Korea Social Enterprise Promotion Agency	Korea Social Enterprise Promotion Agency	
2019	2019 Grand Prize for Social Contribution (Awarded by the Education Minister)	and Korea Social Contribution Award (Grand Prize Organizing Committee)	
	2019 Green Product of the Year (Honam Line-KTX)	Green Purchasing Network	
2020	Gold Prize in 2020 IF Design Award	IF Design	

Status of Memberships

Home		Abroad		
Korean Standards Association UN Global Compact Korea The Korean Society for Railway Korea Railway Electrification Tech	Korean Productivity CenterKorea Management Association	Korea Integrated Logistics Association Korean Productivity Center Railway Industry Committee	OSJD(International Railway Convention) UNGC(UN Global Compact) CCTT (Siberia Transit Coordination Council)	UIC (International Railway Federation)

Sustainability - Reporting Bodies





"We, at KORAIL, extend our sincere thanks to everyone concerned for assisting us in the compilation of this Sustainability Report.."