

2016-10302-003





About This Report

Purpose of report

This report details the results of Korea Rail Network Authority's (hereinafter "KR") sustainable management activities implemented to fulfill its economic, social, and environmental responsibilities. This report is intended to enable KR's stakeholders to understand KR's sustainable management activities.

Report overview

Following its first sustainability report in 2008, KR has been publishing annual sustainability reports from 2010 in order to transparently disclose and communicate the activities and results of its sustainable management activities with shareholders. This year's report aims to enhance stakeholder participation and communication by including interviews with representatives from key stakeholders group in an effort to reflect the various opinions and expectations of different stakeholders.

Reporting period

This publication covers the period from January 1, 2015 through December 31, 2015. Information from prior periods has been included when historical trend analysis was deemed necessary. This report also includes key activities and results from 2016.

Scope of report

This report primarily covers the sustainable management activities of KR's head and regional offices. This report also contains information on KR's business partners' sustainable management activities. Monetary amounts in this report are denominated in Korean Won (KRW).

Reporting standards

This report has been prepared in accordance with the GRI (Global Reporting Initiative) G4 guideline's Core Option. Detailed DMA (disclosure on management activities) is also provided for material issues.

Verification

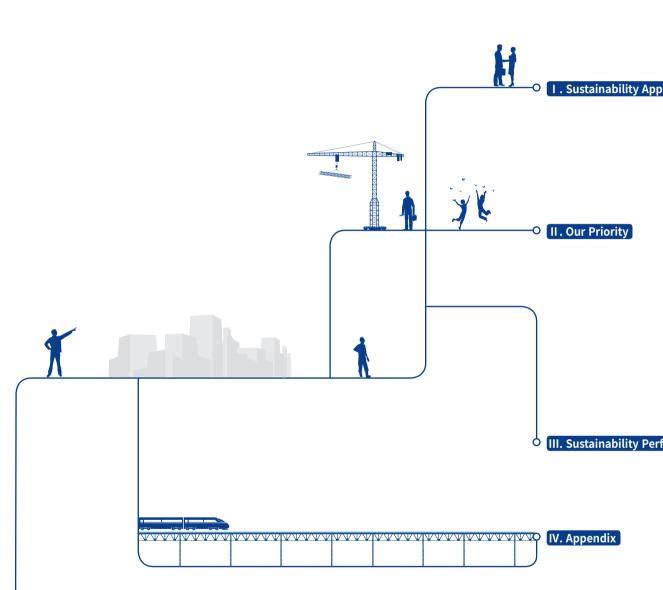
This report has been verified by an independent third party expert in order to provide assurance over its preparation process, fairness of data and contents, and overall credibility. The assurance statement can be found in the appendix to this report.

Distribution and feedback

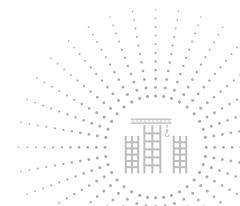
This report is published in Korean and English. An electronic copy of this report is available on the KR website. This report is also listed in the GRI and UN Global Compact. Stakeholders may provide feedback on this report via e-mail, post, fax, and KR website.

Homepagewww.kr.or.krAddress242 Jungang-ro, Dong-gu, Daejeon Metropolitan City, 34618Mailcsr@kr.or.krPhone1588-7270Fax042-607-3629Point of contactNanagement Strategy Team, Performance Management Division,

Planning and Finance Headquarters



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🗠 CEO Message 🗠



KR, in cooperation with its stakeholders,

will create a faster, safer, and more convenient rail network to pioneer the future of railway and ensure KR's sustainable growth.

Dear stakeholders,

I would like to express my sincere gratitude for all of your continued support for KR. It is my great pleasure to present to you KR's 8th sustainability report.

As an agency specializing in railway construction and facility management, KR took initiatives to cultivate the railway industry and improve transportation convenience. KR pioneered Korea's high-speed rail era in 2004, expanded Korea's national railways, improved railway safety and accommodation, carried out railway asset development activities, and initiated overseas railway project.

In addition, KR established mid/long-term roadmaps and annual implementation plans to fulfill its social responsibilities as a public company, including but not limited to government 3.0, equitable growth between large corporation and small/medium enterprises, correction of unjust practices, creation of youth employment opportunities, and social contribution activities.

KR will expand korea's high-speed rail network to connect the entire country within 2 hours.

KR opened the Gyeongbu high-speed railway, direct KTX connection to Pohang, and Honam high-speed railway in April 2004, March 2015, and April 2015, respectively. KR will complete its planned projects including the 2016 Suseo-Pyongtaek high-speed railway project, 2017 Wonju-Gangneung high-speed railway project, expansion of high-speed and non-stop railway in the Seoul metropolitan area and upgrading current railways in time in order to connect the entire country within 2 hours and enable access to faster rail transport for everyone.

KR will modernize korea's railway facilities to protect people's safety and provide a greater degree of transportation convenience.

KR will install platform screen doors in 139 platforms in 12 metropolitan lines with high accident occurrences. KR will also expand safety facilities in railway crossing, and renovate old tunnels and bridges to prevent accidents. In addition, KR will install waiting rooms in platforms, improve accommodations in stations, and install sound proof walls, thereby exerting every effort to provide a better railway environment and transportation convenience.

KR will improve its financial health through proactive asset development activities utilizing railway facilities.

KR will generate revenues through a diverse array of asset development projects utilizing stations, platforms, idle land in the vicinity of tracks and non-operational routes. Such projects include, but are not limited to multi-modal transfer center at Ulsan KTX station, hotels in the vicinity of Seoul station, utilization of nonoperational routes near Haeundae, rail bikes, and solar PV parks. Through these projects, KR will not only be able to generate revenues to reduce its debts but create new job opportunities as well.

KR will expand its overseas footprint by leveraging its superb railway technology and know-how.

KR expanded its overseas footprint, previously limited to small scale service contracts such as audit and technical survey. In 2015, KR was awarded a KRW 42.1 billion contract for "business management of Lucknow metro in India". KR plans to expand its overseas business by implementing large projects, such as "Malaysia-Singapore high-speed railway project", through the strategic partnership with domestic and foreign companies based on Korea's cutting-edge railway technology, such as LTE based Railway Wireless Communication System (LTE-R) developed for the first time in the world.

KR will realize the organizational culture of anti-corruption and creativity, and fulfill the social responsibilities as a public company.

KR will continue to reinforce its organizational competence through creative innovation activities, such as finding new ideas et al, will realize the ethical management more substantially, such as a zero tolerance policy against corruption. Also, KR will cooperate with its business partners through solution of the unjust practices and regulatory reform, and realize the social contribution activities utilizing KR's competence, thereby growing alongside the local communities and protecting the socially disadvantaged in order to assume a leadership position in creating a sustainable society for everyone.

KR will continue to enhance competitiveness as a specialized railway agency and focus its organizational competence to achieve its mission of "creating happiness for the public by connecting the world with rail".

We would like to ask for your continued interest and support.

Thank you.

CEO, Korea Rail Network Authority Yeong-il Kang

2015 Sustainability Highlights —



With the opening of the Pohang KTX connection route in March and the Honam high-speed rail in April of 2015, KR was able to reduce travel times from Seoul to Honam and major hub cities in the Gyeongbuk east coast area by more than 1 hour. In August 2015, KR opened the Daejeon and Daegu intercity routes in the Gyeongbu high-speed rail, increasing drastically the railroad capacity of the Gyeongbu high-speed railway. Through nationwide expansion of the KTX network, KR is stimulating local economies and promoting balanced growth of the country.





Outstanding anti-corruption agency with installation of "anti-corruption DNA"

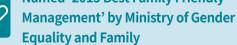
In the anti-corruption assessment conducted by Anticorruption and Civil Rights Commission in 2015, KR received the highest rating (2nd grade) among the affiliates of the Ministry of Land, Infrastructure, and Transport. KR also received the highest possible rating for the anti-corruption policy evaluation. Upon the appointment of KR's current CEO, KR overhauled its contract system to prevent corrupt practices in the bidding process, dispensed of preference to regional and education affiliation in order to align public and private interest, received consulting from the Anti-corruption and Civil Rights Commission, and provided tailored anti-corruption training throughout the company. Such efforts came to fruition as KR was named an outstanding anti-corruption agency, a complete turnaround from 2014 when KR was ranked last in terms of anti-corruption policies and practices.



'Lucknow Metro business management' contract in India

KR was awarded a KRW42.1 billion metro construction project management contract (22.9km) from Lucknow Metro Rail Corporation (LMRC). This project is carried out by the LMRC in order to improve public transportation infrastructure in the city of Lucknow, India. This is the first project in which KR formed an international consortium to award an overseas contract. KR will be responsible for railway systems including trains and vehicles as well as project management for quality, safety, testing, and trial runs. KR will continue to form strategic partnerships with domestic and foreign agencies to participate in large scale overseas projects, such as the 'Malaysia-Singapore high-speed rail project'.





In 2015, KR was named "Best Family Friendly Management" by the Ministry of Gender Equality and Family thanks to its various family-friendly programs including cultural experience events with employees' families, vitalization of the flexible work hour system including autonomous adjustment of the flexible commuting time, family days on every Wednesday, expanded nursery services, maternity leaves and parental leaves. KR will continue to effectively implement its work-family balance programs to create a happy workplace for all of its employees.



"Zero Late Payment" System for the first time among the public companies in Korea

KR established the KR "Zero Late Payment" System in order to prevent late payments by original contractors by automating payments to subcontractors and their employees. In 2015, KR implemented the system in three business areas and enhanced oversight on payments to secondary and tertiary subcontractors. As a result, KR was able to eliminate late payments to subcontractors. In 2016, this system will be implemented to all of KR's businesses. The KR "Zero Late Payment" System was recognized for its excellence as was selected as the standard payment model for the Ministry of Land, Infrastructure, and Transport.





'KR Debt watch ON'- turning today's debts into tomorrow's debits

KR installed an overhead 'KR debt watch' in its 1st floor entrance in order to enhance its plans to mitigate excessive debt levels and to instill a sense of urgency among its employees. The debt watch provides information such as financial liabilities and daily interest expense with the aim of encouraging mitigating measures to be taken by employees to reduce the company's debt and improve its balance sheet strength.







World's first LTE based railway convergence network technology

LTE-R is a system that optimizes LTE, the 4th generation wireless communication technology, to the railroad platform, enabling high quality audio service and data and video services with speeds up to 100Mbps. Previous railway wireless communication system was limited to low quality audio and short messages at speeds of 100kbps. The alignment of wireless communication and signaling systems enables information to be transmitted between vehicles, control centers, maintenance and repair personnel, operators, and government agencies via high-speed wireless communication networks, thereby improving safety and convenience of railroad operations. In 2018, KR will apply the world's first LTE-R* communication network in the route between Wonju and Gangneung in support of the 2018 Pyeong Chang Winter Olympic Games. By 2025, KR seeks to expand the LTE-R network up to 5,000km.

* LTE-R: LTE based Railway wireless communication system

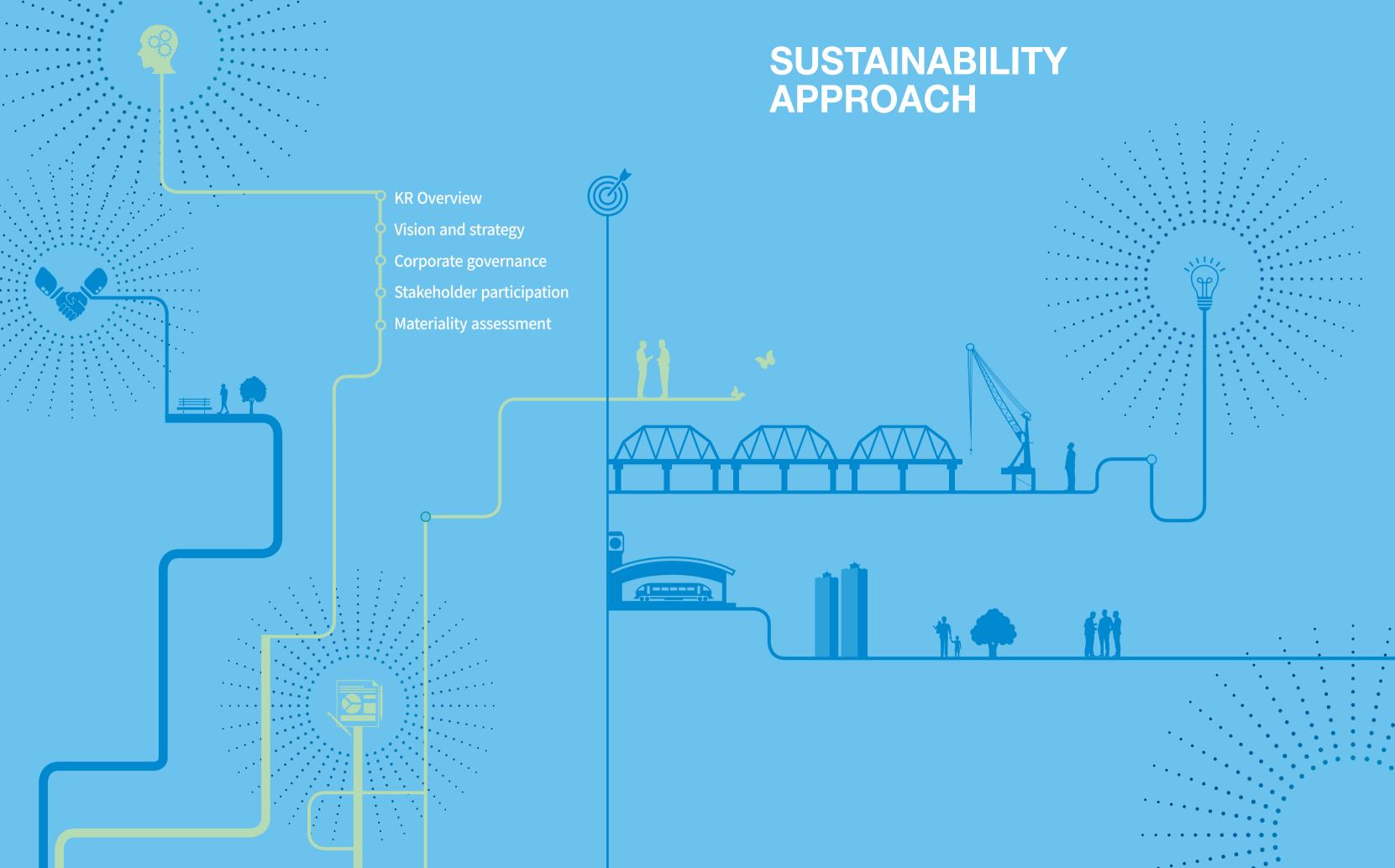






KTX Exhibition Hall in Malaysia

In November 2015, KR opened the "KTX Exhibition Hall" in a large shopping mall located in downtown Kuala Lumpur in support for its efforts to win the contract for "Malaysia-Singapore high-speed rail project". The exhibition hall features various cutting-edge visual media including a large 3D screen for promotion of Korea's railroad technology and a 4-D KTX experience theater. In addition, KR hired local guides to help visitors further understand Korea's high-speed rail technology and to raise awareness. KR will continue to proactively carry out marketing activities with the Korean consortium in order to successfully conclude this contract.





Maior business and roles

Structure of railway project

Korea Rail

Network Authority

Railway construction

facility

management

Railroad map

Mokpo

New businesses in 2015

Category Project name

Daegu

metropolitan

area railroad

area railroad

doubletrack

business Yeoju-Wonju

(4) double track

rail

rail

New

Gyeongbu high-speed rail
 Metropolitan area high-speed rail

Honam high-speed rail
 Pohang connection line

linistry of land

infrastructure, and

transport

Establishes railway

elated polici

Railroad

operators

Railway

transportation and

sales activities

Content of project

Construction of metropolitan area

in satellite cities near Daegu

Chungcheong Improved accessibility between Daejeon

metropolitan and adjacent cities through construction of

railroad in response to development

of housing sites and business complex

metropolitan area railroad in Chungcheong area

Transportation convenience through direct

connection between Seoul metropolitan area

and Gangwon area and uniform transportation

system through east-west railway connection

Connection between Incheon and

Gyeongbu high-speed railway

railway network between Seongnam and

Bundang area with Gwangmyeong station of

Opened double track rail

Opened double track rail

between Jaecheon and

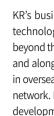
Dodam in Jungang line

Jeolla line

between Iksan and Yeosu in

Walgot-Pangyo southwestern Seoul metropolitan area and

Y





Railway manag







Railway te develo

Gveongbu (Seoul~Da Gyeongbu (Daegu~Bi Gyeongbu Gyeongb connect



2014 2015 2010 2011 2012 2013

Gyeongchun line Opened high-speed rail between Opened double track rail between Yongmun and

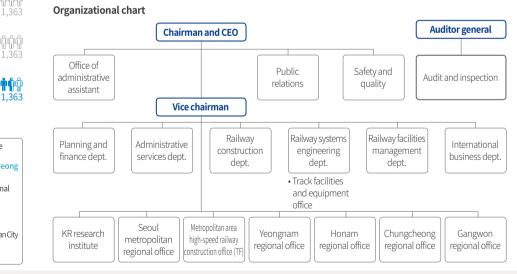




KR is a public company founded in January 2004 in order to enhance public transportation convenience and contribute to national economic growth by efficiently carrying out railroad facility construction, management, and related businesses. In accordance with the national rail network plan, KR is striving to create a railway network that connects the entire country in 90 minutes and metropolitan areas within 30 minutes. KR has conducted various railway projects including the phase 1 opening of Gyeongbu high-speed railway in 2004, the recent opening of Honam high-speed railway, construction of major railway networks and metropolitan railway networks in Korea and overseas businesses. KR will continue to carry out its railway projects and lead the public transport revolution in the 21st century and provide a positive stimulus to the national economy.

General informat	ion		(as of June 30, 2016)
Organization	Korea Rail Network Authority	Total budget	KRW 11,231.8 billion
Foundation data January 1 2004		Government contribution	KRW 5,817.7 billion
Type of organization	Semi-autonomous government agency	Credit rating	Domestic AAA, Moody's Aa2, S&P AA-
Basis for foundation	Framework Act on the Development of Railroad Industry,	Number of employees	1,413
Toundation	Korea Rail Network Authority act	Location of head	242 Jungang-ro, Dong-gu,
CEO	Yeong-il Kang	office	Daejeon Metropolitan City

head office (6 departments), one research institute, and five regional offices located jeon, Busan, and Suncheon in order to efficiently manage railway construction throughout Korea. KR is also successfully operating a subsidiary in China, where the periencing rapid growth. KR is efficiently managing its organization under the three principles of small giant, innovative organization creating future value, and an organization comprised of competitive technical experts.



2004 2005 2006 2007 2008 2009 Foundation of KR • First audit contract for · Electrification of entire • Outstanding rating in Opened double track railway Opened double track railway • Opened Gyeongbu Chinese railway Gyeongbu line Chinese railway audit between Cheonan, Onyang between Seongsan and high-speed railway (phase 1) Opened double track railway • Test run of Trans-Korean spring, and Shinchang, and Opened railway traffic Munsan in Gyeongeui line

- between Cheongnyang-ri and Deokso in Jungang line
- control center Opened double track railway between Euijeongbu and Dongducheon in Gyeongwon line

Commencement of the 300km/h high-speed era

- railway connection Underwater tunnel between Wangsimni and Seollung
 - Janghang line Opened double track railway between Paldang and Guksu in Jungang line KRW 10 billion in overseas contracts

Opened double track

railway between Guksu and Yongmun in Jungang line

闘

		foundation	Kore	
		CEO	Yeor	
		KR is comprised	of the	
-0 -	9	in Seoul, Wonju	ı, Daej	
		business and facilities		
	(unit: persons)	railroad industry	is exp	
omploymont	(unit: persons)	principles of sm	all giar	

Number of employees 🖞 Current employment 🕴 🛉 Full employment 2013 ********************************* 1.333 2014 1.330 2015 ***********************************

Main workplace information

Organization

information



Achieve 350km/h

• KRW 36.5 billion in overseas contracts (audits for Nanxi/ Yunnan, Guizhou routes) Opened Gyeongbu high-speed railway phase 2 Opened double track rail between Shinsangbong and Chuncheon in Gveongchun line Opened double track rail between Samnangjin and Masan in Gyungjeon line

10

KR's business is comprised of railway construction business, facility and asset management, railway technology development, and overseas business. In particular, KR is expanding its scope of business beyond that of railway construction to the development and operation of the areas in the vicinity of stations and along the railroads. KR is also assuming a leadership position in the railroad industry by participating in overseas businesses, connecting Trans-Korean railway and establishing linkage with the Eurasian railway network. KR is ensuring the advancement of the railway project and contributing to the creative economic development. KR will continue to strive for transparent and responsible business initiatives as a public company trusted and admired by the Korean people.

ilway truction	Key activities Business goals	Establish next-generation traffic network including high-speed rail, general railways, long-distance railways, tilting and magnetic levitation trains, etc. Connect entire country in 90 minutes, major metropolitan areas in 30 minutes
y facilities gement	Key activities Business goals	Safety diagnosis and repairs, installation of screen doors, improved safety in railroad crossing, enlargement of rails, improvement of obsolete facilities, including installation of sound proof walls, installation of convenient platform facilities Modernization of railway facilities to enhance users' safety and convenience
ay asset gement	Key activities Business goals	Development of stations and areas in the vicinity of stations, creation of ecological parks and bicycle roads, management and rental of state properties, utilization of non-operational tracks Efficient management of state properties, balance between profitability and public utility
as railway oject	Key activities Business goals	Develop overseas business, overseas EPC (engineering-procurement- construction) and audit contracts, official development assistance, establish public-private partnership network. Enhance competitiveness in global railway industry, increase profits
technology opment	Key activities Business goals	Development and implementation of next generation railway technology, domestic production of railway products Development of next generation technology, advancement of railway technology

High-speed routes

Speed (km/h)	Total length (km)	Completion rate (%)
300	281.6	In operation
300	24.2	In operation
300	40.7	opened
200	42.2	In operation
200	53.3	In operation
200	38.7	opened
300	183.8	opened
200	180.3	In operation
300	61.08	91.5
	300 300 200 200 200 200 300 200	300 281.6 300 24.2 300 40.7 200 42.2 200 53.3 200 38.7 300 183.8 200 180.3

Preparation for 400km/h

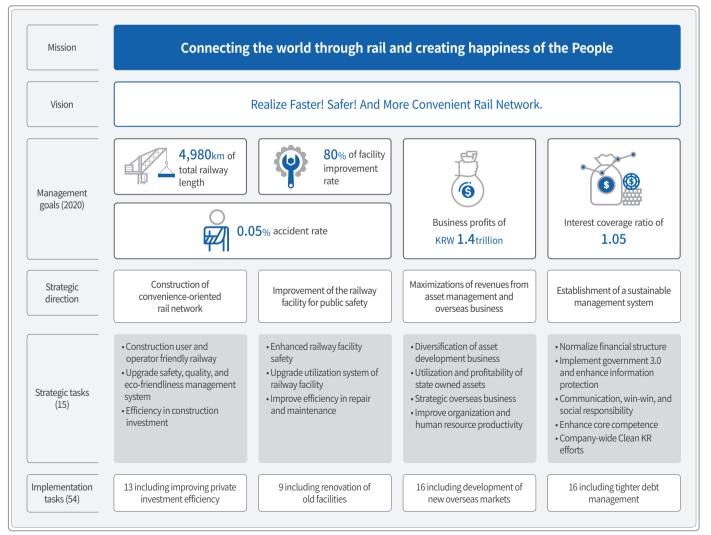
- Yongsan and Chuncheon in
- Iksan and Yeosu in Jeolla line
- Seowonju in Jungang line
- Opened high-speed rail between
 Relocated railway in flooded areas near Yeongju dam Opened double track rail between Jaecheon and
 - Ssangvong • Opened double track rail between Ori and Suwon
- Recognition for excellence in audit practice in China (Harbin-Qiqihar line)
- Audited high-speed rail between Beijing and Shenyang, China
- Opened Shingeongju and Pohang route in Donghae line
- Opened Honam high-speed rail phase 1 (Osong, Gwangju Songjeong)
- Opened Gyeongbu high-speed rail phase 2 (intracity routes in Daeieon and Daegu)
- KTX connection to Pohang

Vision and strategy ~

KR 2020 sustainable management strategy

KR, drawing on its achievements and knowhow to date, reorganized its implementation strategies, like strategic goals and tasks, and established new mission and vision through 2020 to prepare for another phase of growth in the upcoming 20 years. In particular, in reflecting the environmental change taking place in the global railway market growing focused on the future value and high-speed of the railway, which is the transport outstanding in eco-friendliness and energy efficiency, KR established its new vision of "Realize Faster! Safer! And More Convenient Rail Network." KR's four strategic goals are "Construction of convenience-oriented rail network" "Improvement of the railway facility for public safety" "Maximizations of revenues from asset management and overseas business" and "Establishment of a sustainable management system" In these goals, KR aimed for a balance between public utility and profitability by attaining a level of public utility fitting of the rail industry and cutting construction costs to increase profits for better management efficiency. KR's 2020 sustainable management strategy was formulated not only by its executives and employees, but also with stakeholder participation including public idea contests and consulting by external experts. KR seeks to create the best possible public service that all stakeholders will find satisfactory in order to positively contribute to national economic development.

KR 2020 sustainable management strategy system chart



KR core values

Sustainable

system

management

implementation







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	F۱	a	lu.	at	F

receptiveness of core values

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Performance Management Division of the Planning and Finance Department oversees KR's sustainable management activities and different divisions are responsible for carrying out diverse activities to fulfill their economic, social, and environmental responsibilities. In addition, decision making authorities in different areas such as social contribution committee and future development consultation committee provide additional support to KR's sustainable management.

Key Performance Indicators (KPI)

Area

Econor

Environm

Socia

KR strives to realize the vision and attain the management goals by internalizing its three core values of "sustainable management," "mutual trust," and "Professional mind" to ensure that these values are seamlessly integrated to KR's corporate culture and system. In order to internalize its core values, KR evaluates its potential new hires on the receptiveness of core values and included a course on core values in training programs for newly promoted employees. In addition, KR detailed action items for executives, managers, and working level employees and is striving to internalize core values through 12 core value action programs created at corporate culture workshop participated by all executives and employees. These programs include common-understanding concert and junior employee boards. KR will continue to work towards becoming a public company rooted in its core values and contributes to People's transportation convenience and national economic development.



а	Performance indicators	Unit	2013	2014	2015
	Total railroad length	km	3,649	3,651	3,927
	Electrification ratio	%	38.84	68.96	70.81
mic	Debt to asset ratio	%	111.3	111.1	110.9
	Asset and overseas revenues	KRW 100 million	1,039	1,106	1,253
nental	Environmental management index	Points	212.0	226.6	250.0
	GHG reduction ratio	%	24.4	27.5	25.8
	Renewable energy facility installation ratio	%	24.96	30.60	34.71
	National customer satisfaction evaluation	Points	94.10	94.25	94.80
al	National anti-corruption evaluation	Points	8.36	7.60	8.57
	Employee satisfaction	Points	78.50	80.65	81.90
	Accident rates in construction sites	%	0.102	0.087	0.083

BOD (Board of Directors) composition

KR's BOD, as the final decision making authority in KR's main business activities, is in place to strengthen transparency in management, support timely decision making, and improve managerial efficiency. To assure checks and balances and independence, as of June 2016, the BOD is comprised of six executive directors and seven non-executive directors. The non-executive directors who comprise the majority of the board are all experts in their respective fields. In addition, non-executive director meetings, subcommittees, and expert committees were added in order to enhance the BOD's review function, thereby establishing an equitable decision making process and efficiently leading KR's sustainable management.

Non-executive directors

Corporate governance ~

BOD members

Executive directors

Name Current position Career highlights Name Seong-min Lee Chairman, Jungnang Council Yeong-il Kang Chairman Korea International Peace Research Yeong-chan Oh Yeong-woo Kim Vice chairman Institute secretary general Eung-sun Lim Professor, Ansan University Head of Planning and Finance department In-seo Park Public relations head, National Dokdo Tae-gu Kim Soo-hyeong Lee Head of Railway Construction department protection alliance Sang-bong Kim Professor of economics, Hansung University Head of Railway Systems Engineering Sang-tae Kim Technology and safety director, Korea department Il-do Kim Elevator Security Agency Head of Railway Facilities Management Chief expert member, National Assembly Gye-eung Kim Gyeong-bok Guk denartment special committee on budgets and accounts

Selection process for directors

Appointment authority for KR board members

Position	Authority delegated to
Chairman of the boards	President of Korea
Auditor general	President of Korea
Executive directors	Chairman of the board
Non-executive	Minister of land, infrastructure,
directors	and transport

Vitalization of the **BOD** operation

KR's director recommendation committee implements an independent and transparent director selection process. The committee selects evaluation criteria and reviews the applications and interviews persons who applied for a position through an open application process. Afterwards, the committee recommends potential candidates to the appointment authority and the appointment authority selects the most qualified candidate. To enhance the transparency and objectivity of director selection, the representation of non-executive directors in the director recommendation committee has been increased from 3 to 7 persons. A company-wide acceptance procedure* takes place when a civilian committee member is recommended as a candidate.

* company-wide acceptance procedure: Two candidates are selected by a company-wide vote from two persons selected from a civilian candidate pool of 27 persons recommended by representative meetings and two persons recommended by the labor union. The committee selects the final candidate

The BOD is the final decision making authority responsible for reviewing and passing resolutions regarding KR's major policies. Monthly meetings are held to discuss and share KR's management activities, thereby enhancing BOD's actual decision making role.

In order to ensure proactive participation of BOD, regular meetings participated by the government agency chief are held and real-time mobile communication and notification services are provided. In addition, the board's role is enhanced by diversifying communication channels including mandatory non-executive director meetings seven days prior to the BOD meeting to discuss and share opinions about proposals.



Increased participation of non-executive directors



Number of resolutions and reports (Unit: items) number of resolutions number of reports



Prior review ratio

2014 2015 2013 100% 100% 100%



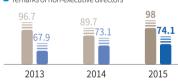
4 4

2015

(Unit·%)

Participation and remarks by non-executive directors

participation rate by non-executive directors remarks of non-executive directors



Com Fina

Overview of reflection of non-executive directors' management proposals

Management consulting Management proposals Proposals reflected 83



Evaluation and remuneration

KR, in accordance with the "Public Company Operation Act," concludes performance contracts with its executive directors and provides performance pay according to evaluation results. Executive director evaluation is comprised of government management assessment index (40%), evaluation results for the said director's department (40%) and CEO's leadership evaluation (20%). CEO's evaluation is based entirely on the government management assessment. Each constituent's salary and paygrade is determined by evaluation results and salaries of CEO, auditor general, and executive directors and disclosed to the public through management disclosure.





Mid/ financial

advisory

Budge screenir

KR is utilizing the knowledge and insights of its non-executive directors, comprised of experts, in its management activities to ensure equitable decision making on major business issues. In addition, KR provided independent and equipment space such as BOD rooms, BOD-only meeting room, thereby minimizing management risks in advance. Furthermore, KR reinforced the management consulting activities, such as director recommendation committee and budget review committee participated by non-executive directors, for the strategic management consulting activities. In order to further increase non-executive director participation, KR encouraged non-executive directors to comment at least twice on matters brought forth by the chairman. Such efforts resulted in an increase in non-executive director participation compared to the previous year. In 2015, non-executive directors provided 21 cases of management consulting, and 111 management proposals, of which 83 were reflected in the KR's management activities.

2015 committee overview

Committee	Key activities	Lead by
Director recommendation	Comprise and operate transparent director recommendation committee	Human resources division
Financial risk management committee	Evaluate financial risks to ensure financial stability	Financial strategy division
Audit and consulting	Enhance expertise and fairness of internal audit, review appropriateness of mid/long-term audit strategy and follow-up measures of internal audit	Auditor and inspection
Budget review committee	Management consulting for major budget related tasks including formulation, closing, execution	Planning and budget division
Facility subcommittee	Development of railway assets, review appropriateness of overseas construction projects and establishment of overseas branches	Facilities planning division
Management planning subcommittee	Review mid-term strategic goals, business plan, and proposed budget changes	Planning and budget division
Construction subcommittee	Review progress and quality management for Honam high-speed rail, Shingyeongju-Pohang and Wonju-Gangneung railway construction	Construction planning division
Accounting auditor appointment committee	Assuring the check and balance of the authority management and the transparent objectivity	Financial strategy division

Expert committee's proposals and management performance

mmittee	Major proposals	Content	Management performance
ancial risk nagement mmittee	Diversify short-term borrowing methods	Develop ground for short-tem asset backed bonds issuance, including revision of general provision of budget	Developed stable funding platform
/long-term I management ry committee	Diversify policy for mid/ long-term financial strategy	Convert existing high- interest debts, and postpone bond issuance for non-interest bearing liabilities	Saved financial cost by strategic bond issuance (KRW 19 billion)
et incentive ng committee	Exclude unnecessary budgeting, and eliminate annual and repetitive waste elements	Reorganize design standard for saving cost and reinvesting	Saved management fee (KRW 15.2 billion) and working expenses (KRW 726.1 billion)

└─ Stakeholder participation ↔

Definition of KR's stakeholders

KR defines its stakeholders as value influencers (national assembly, government, media), cooperative value creators (business partners and local community), value producers (employees and labor union), and value purchases (railroad operators and the general public) according to their role in KR's value chain. KR is utilizing various communication channels to ensure effective communication and mutual partnership as a companion in creating the future of railway industry.

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Stakeholder communication channel and points of contact

	Value influencers (business planning)	Cooperative value creators (design and construction)	Value pr (business m	oducers anagement)	Value purchasers (facility management)
Stakeholder	National assembly, government, media	Business partners, local community	Employees	Labor union	Railroad operators, general public
Required values	Public convenience, regional development	Mutual cooperation, fair play	Leading change	Increased esteem	Enhance competitivenes and safety
Communication strategy	Responsible growth through establishment of cooperative network	Partnership, such as communication, trust, socially responsible management, Win-win growth with partners	Establishment of creative and autonomous corporate culture through conversation and communication	Solidifying a relationship of trust through communication and cooperation	Increase brand value through conflict resolution and busines promotion
Major communication channels	 Policy discussion, public hearings Land, infrastructure and transport committee, railway industry committee Future development consultancy Press conference Anti-corruption Ombudsman meeting Test run of newly opened lines 	 Regulation reform proposal center On-site meetings Anti-unjust subcontracting center Conflict resolution conference Resident meeting Social contribution meeting 	Junior board Communication Messenger between employees in their 20-30s and executives KR dove Anonymous proposals Common understanding concert Venue for information sharing through internal/external experts, including culture, knowledge et al Reading relay Reading bucket list challenge between management and employees Management hot-line counseling CEO and executive director counseling (on-demand)	 Periodic labor management representative meetings Labor management conference Labor management meeting Lunch meeting, Hof day Grievance committee Labor-management win-win conversation 	 Voice of customer/ management disclosure system SNS/blogs Railway policy changes working level railway safety meetings Suseo high-speed rail conference
Point(s) of contact	Planning and Budget Division, Performance Management Division, PR	Planning and Budget Division, Construction Division, General Administration and Labor Division	Performance Management Division	General Administration and Labor Division	Transportation Divisior Facility Division, Plannir and Budget Division, Pl

Communication and information sharing to promote stakeholder participation

•

KR is identifying stakeholder needs by utilizing various communication channels tailored to the characteristics of its key stakeholders including the government, customers, business partners, and employees. Stakeholders' needs are proactively incorporated in KR's management activities and feedback is provided to the stakeholders, creating a virtuous cycle of communication and information sharing. KR will strive to create a relationship of mutual cooperation and trust by proactively adapting to the changing needs of its stakeholders.

Stakeholder needs

16

		Key needs	Incorporation in management policy
B	General public	Utilization of idle land near railways	Provided space for youth entrepreneurship community near Busan railway
	Government	Expansion of KTX network	Transitioned previous railway into semi-high speed rail (200 ~ 250 km/h)
161	Business partners	Improved construction safety	Established 24 hour railroad monitoring system (central control center)
2	Railroad operators	Creation of safe operating environment	Early installation of screen doors (6 years ahead of schedule)
8	Employees	Cost reduction	Improved tunnel lining design standards \rightarrow cost savings of KRW 75 billion

Examples of stakeholder communication



Jungbu Naeryuk (Icheon-Chungju) railway groundbreaking

ceremony

Utilizing the idle land

Communication with employees



Case 1

Case 2

future.

Case 3

a KR employee. In addition, the previous system was slow in producing documentation and applications had to be submitted for each request. Such inconveniences resulted in many instances of VOC that asked for the improvement of the documentation system. In response, in October 2015, KR developed a system that enabled automatic issuance of documentation with the click of a button. Now customers can receive documentation through various media including PC, tablets, and smartphones. Furthermore, KR added functions to collect and analyze information such as customer satisfaction and types of documentation requested in order to quickly respond to customer needs and provide tailored services.



corporate culture and productivity. The junior board is rooted in the belief that the "members of the junior board should go beyond simply proposing ideas and sufficiently review the issue and discuss with relevant points of contact whether their ideas are actionable." As a result of such proactivity, much was achieved to the credit of the KR junior board, including but not limited to revision of KR related regulations, preparation of job manuals, installation of KR Sports Park, creation of in-house messenger, KR dove, KR love-sharing HOPE, in-house broadcasting, and healthy stairs. KR will continue to develop various methods of communication to listen to the voice of its employees and create an environment conducive to mutual trust.

발급신청 실제발급신처음 8년 4 연수· 탈급중명서확인 진행상황조회 발급내역조회 발급내역을 조회하세요 Establishment of delivery documentation system





[Communication with the general public] Relocation of Gamgok station in Icheon-Choongiu line

Gamgok station, per basic design results (December, 2009), was originally to be located in Janghowoneup, Icheon-si, Gyeonggi-do. However, as the station's location was moved approximately 110m to Gamgok-myeon, Eumseong-gun, Chungcheongbuk-do, conflicts arose between residents of Janghowon-eup and Gamgok-myeon. The relocation of the station located on the boundaries of the two regions led to regional conflicts, resulting in construction delays of about one year and causing problems in meeting the entire construction deadline. In response, KR hosted three-party conversations with Icheon-si, and Eumseong-gun to reconcile each other's differences and create a mutually beneficial plan. Through these conversations, KR was able to resolve the conflict by locating Gamgok station in Wangjang-ri, Gamgok-myeon, Eumseong-gun and installing connecting passage ways in the direction of Notab-ri to improve accessibility for residents of Janghowon-eup.



[Communication with local community] Korea's first fashion entrepreneurship support community new deal in cooperation with Busan city

The idle land adjacent to the underpass in the vicinity of Busanjin market was a parcel of land with very little use. Civil complaints continued as the area, which was left idle for decades, became a site for illegal waste disposal and crime-ridden. In order to resolve these complaints, KR cooperated with Busan City to apply for the construction of a temporary building. After obtaining approval, KR and Busan city created an access road, conducted environmental maintenance activities and urban regeneration projects to transform an area of 316.87m² into a venue for communication and entrepreneurship support. This is Korea's first case of the construction of an entrepreneurship/ community center utilizing idle land next to railway. The previously idle land now is a hub for information sharing for fabric and fashion workers, providing support for young entrepreneurs, and developing new product designs. KR will expand its cooperation with local communities to create more hubs in the



[Communication with business partners] Updates to enable "one-click"

delivery documentation system

The KR delivery documentation system is a system that enables its major customers to receive service and goods delivery documentation from business partners. The previous delivery documentation system was capable of producing documentation only during working hours after confirmation by

[Communication with employees] KR junior board, a channel for internal communication

The KR junior board is a communication channel with the management and is comprised of junior employees from various positions and functions. The junior board is engaged in various activities to initiate change from the bottom-up, including creating a common understanding, improving

🕒 Stakeholder interview 🗠

cooperation (business partner)

66

What is KR's role in the advancement of the economy, society, environment, and the railway industry?

"

I believe KR should take various initiatives for joint development by expanding cooperation with business partners and win-win growth program to respond to customers' expectations and requirements. In particular, a business proposal platform should be created to enable new businesses with small and medium enterprises ("SMEs") in order to provide many companies with opportunities to cooperate with KR. I believe the resulting overseas business in cooperation with SMEs and business growth through new businesses will contribute to KR's financial health and competitiveness along with invigoration of local economy.

> Heon-il Park, Director **KP** Electric

Environmental management (national assembly, the government, media)

While KR is doing an excellent job in compliance with the government's policy and various environmental rules and regulations, there are more to be asked for in terms of R&D and new business development that will enable KR to become a leading eco-friendly company. I believe proper human resource development and joint R&D investments by the government, industrial, and academic sector for creating the future foods will enable KR to become a public company that fulfills its social responsibilities.

> Seong-uk Eo, Professor, Woosong Unversity

I think KR, as a public company, should contribute to the economic development by engaging in large national projects such as railway construction, solve the environmental problem by constructing railway which is the eco-friendly green transportation,

Value creation (employe

and network with local communities through continuous communication and exchange, thereby enhancing both economic value and social value. Furthermore, I believe KR should be reborn as a company specialized in railway construction with world leading railway technology by reinforcing its competitiveness as the professional railway construction and facility management institute through domestic and overseas railway construction and connection of Trans-Korean railway and by leading the development of the railway industry.

Hyeon-suk Jeong, Division Head,

어린이거

I think KR is one of the public companies that actively participate in fulfilling its social responsibilities. However, keeping in line with the increased public awareness in social responsibility, KR should become a leading CSR company that goes beyond focusing on profits and cooperate to solve social problems. In addition, it is very important for KR to implement the social contribution strategically and enhance communication with local communities for fulfilling sharing, thereby enabling both the public company and the local communities to advance equitably.

Overall economy (technology provider)

I believe KR should establish an

KR

economic, social, and environmental leadership position through proactive response to changing conditions. Especially, as a company specialized in railway construction and facility management, KR needs to thoroughly respond to auto-pilot and next-generation energy by forming the technological supplementation and cooperation relationship with other means of transportation and establishing sustainable positioning strategy. In order to enhance competitiveness in overseas business, KR should accumulate railway facility operation and repair and maintenance technologies, and take initiatives to produce railway parts domestically through development of parts industry and align with international standards. Finally, I believe KR should establish a lean organizational structure to proactively respond and maintain its competitiveness in a fast changing external environment.

> Doctor Jin-ki Eom, Korea Railroad Research Institute

Social responsibility (local community)

Yeong-shin Ham, Regional Head, Daejeon Region, Child Fund Korea Materiality

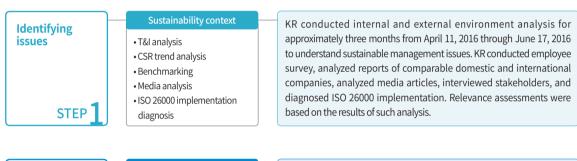
assessment

Materiality assessment ~

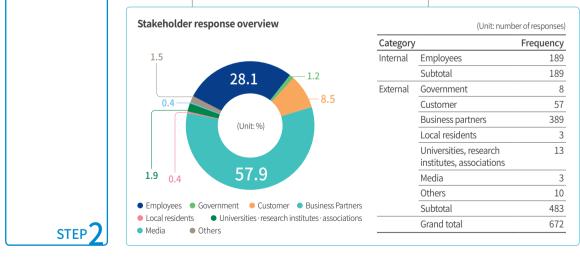
KR conducted the following materiality assessment to determine the contents of the 2016 sustainability report and identify sustainable management issues to be followed-up for one year.

KR conducted materiality assessments to understand the various expectations and interests of its internal and external stakeholders and identify issues for sustainable management. KR applied the materiality assessment criteria set forth in GRI G4 guidelines and prioritized sustainability issues by making reference to the methodology in ISO 26000 and IIRC. Such guidelines and methodologies were used in establishing mid/long-term sustainable management strategy and forming the contents of the report to ensure that the topics of stakeholder interest are duly reflected.

Process for determining materiality and reporting scope



Based on the results of relevance assessment, KR conducted an on-line stakeholder survey to prioritize the 34 issues identified as relevant to KR. A total of 672 people responded. A materiality assessment matrix was prepared for the issues based on internal significance and external stakeholders' influence.



Validation STEP **2**

Prioritization

Completeness • Confirm appropriateness of scope, boundary, and period covered

Materiality

Relevance assessment

Significance assessment

KR conducted an internal review to validate the key sustainable management issues identified as a result of materiality assessment. Stakeholder feedback relating to sustainability reports are reflected in this year's report.



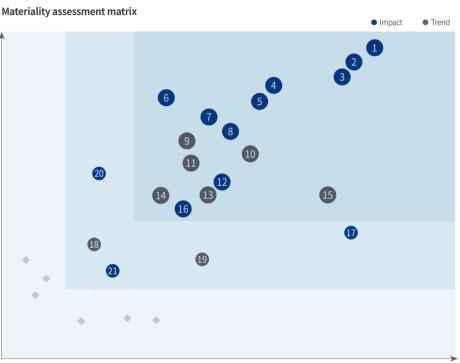


1 Compliance with social regulations 2 Anti-corruption 3 Customer safety and health 4 Customer information protection and security management 5 GHG, waste, and waste water emission 6 Compliance with environmental regulations 7 Indirect economic impact 8 Ratio of re-employment and continued employment after maternity leave 9 Increased demand for product and service safety 10 Increased demand for fair trade 11 Increased demand for transparent and ethical management 12 Compliance with domestic and international regulations regarding product and service warranty 13 Environmental pollution prevention 14 Improved government management evaluation 15 Increased demand for customer information security 16 Occupational health and safety 17 Anti-discrimination 18 Increased importance of win-win growth with business partners 19 Increased demand for fair competition and win-win growth 20 Employment 21 Employee training and competency development

Structure of report

Key issue B Environmental pollution prevention 3 Customer safety and health Increased demand for product and service safety **16** Occupational health and safety Indirect economic impacts 2 Anti-corruption Increased demand for transparent and ethical management 10 Increased demand for fair trade 8 Compatibility of work and home (Ratio of re-employment and continued employment after maternity leave by gender) 4 Customer information protection and security management **(15)** Increased demand for customer information security 12 Compliance with domestic and international regulations regarding product and service warranty Improved government management evaluation (social responsibility) 1 Compliance with social regulations **5** GHG, waste, and waste water emission 6 Compliance with environmental regulations

KR selected 21 key issues which scored above average 4.00 in KR's materiality analysis. In 2016, KR's employees and stakeholders were most interested in compliance with social regulations, anti-corruption, customer safety and health, customer information protection and security management.



Internal significance

Deport content	CDLC4 accounts	Reporting boundary		
Report content	GRI G4 aspects	Internal	External	
Issue 1. Customer centric rail network	-	0	0	
Issue 2. Safe, high-quality, eco-friendly railway	Customer health and safety Occupational health and safety	0	0	
Issue 3. Foundation for new growth	Indirect economic impacts	0		
Issue 4. Ethical management	Anti-corruption	0		
Issue 5. Win-win growth	Anti-competitive behavior	0	0	
Issue 6. Human resource management	Employment	0		
lssue 7. Customer satisfaction	Customer privacy Product and service labeling	0		
Issue 8. Social contribution	-	0	0	
Sustainability performance	Compliance (social) Compliance (environmental) Emissions Effluents and waste	0		

OUR PRIORITY

• ISSUE 1 Customer centric rail network

ISSUE 2 Safe, high-quality, eco-friendly railroad construction

• ISSUE 3 Expanding foundation for new growth

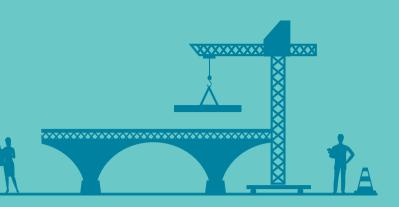
ISSUE 4 Ethical management

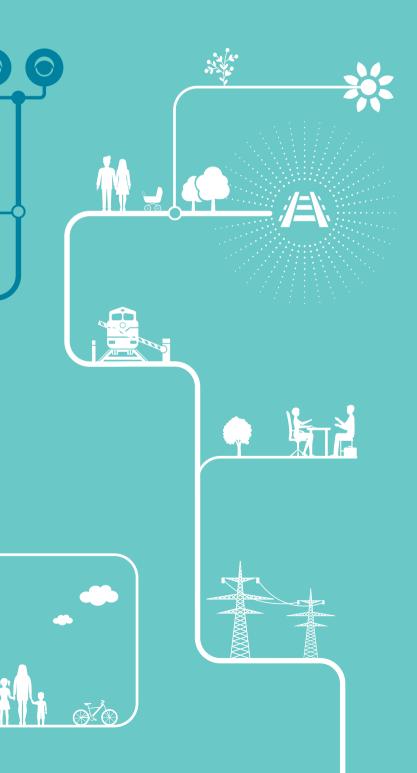
ISSUE 5 Win-win growth

ISSUE 6 Human resource management

• ISSUE 7 Customer satisfaction

• ISSUE 8 Social contribution







Background and impact

Key initiatives

ISSUE 01 🕈 🎲 📰 🎁

Customer centric rail network

Building railroads best suited for customers

Railroad is becoming an increasingly important mode of transportation as it is capable of preventing various environmental issues such as climate change and energy crisis as well as minimizing associated social costs. Railroad will continue to be one of the most important modes of transportation in the future. KR seeks to put customers first as it carries out plans to expand its current rail network of 3,927km to 4,980km by 2020.

I Strategy | Establishment of sustainable management strategy system in the rail industry environment

KR takes initiatives to create a rail industry environment that is conducive not only to KR's growth, but the growth of its business partners and railroad operators. In particular, KR enhanced its facility management activities and implemented strategies to improve railroad speed and safety in response to the expansion of KR's facility management authority to include all rail types (previously limited to high speed rail). KR is taking initiatives to construct railways that will improve the public's transportation convenience.

Process for identifying new rail business opportunities include prior planning, preliminary feasibility study,

and establishing master plans. KR improved its railway investment evaluation system through various

efforts including external consulting in order to ensure that more potential business opportunities pass the

preliminary feasibility stage. KR conducted studies to improve its investment evaluation system (July 2015

~July 2016) and improved the evaluation system by implementing changes. Some changes were reflected

immediately while others were included in the feasibility study instructions in phases. The application of

new construction methods in economic analyses resulted in cost reductions of 7~10%. A modification to the

In addition, economic feasibility was further improved by quantifying the benefits of reduced GHG and

atmospheric pollutant emissions through electrification. In 2015, totally five out of seven cases were

Activities 1 | Identifying new rail project opportunities

Improved railway evaluation system

Flowchart of identifying new rail business opportunities



Number of business cases passing

2014

(unit: cases)

2015

preliminary feasibility study

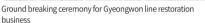
Business cases passing preliminary feasibility study and expected impacts

selected as the target project of the preliminary feasibility study.

calculation methodology also resulted in a 20% reduction of operating expenses.

Business case	Activities and expected impact		
• Direct KTX connection from Suwon	 Connection of metropolitan high speed rail (Jijae station) and		
- (budget/length) KRW 293.2 billion/ 4.7km	Gyeongbu railway (Seojeongni station) Expansion of high speed rail to southwest metropolitan area		
• Direct KTX connection from Incheon	 Connection of Gyeongbu high speed railway with		
-(budget/length) KRW 353.1 billion/ 3.5km	Suwon-Incheon line (Eocheon station) Expansion of high speed rail to west metropolitan area		
• Euijeongbu-Geumjeong intercity express railway	Relieve intercity traffic congestion through introducing 200km/h		
- (budget/length) KRW 3.996 trillion/ 45.8km	intercity express railway Expansion of high speed rail to northeast metropolitan area		
• Dongtan-Segyo double track railway -(budget/length) KRW 629.1 billion/ 8.6km	 Extend Indukwon-Suwon double track railway to Osan (Segyo new town) Relieve transportation inconvenience and traffic problems in the capital area by expanding intercity rail network 		
• Homaeshil-Bongdam double track railway - (budget/length) KRW 545.2 billion/ 7.0km	 Extend Sinbundang line (Gangnam-Gwanggyo-Homaeshil) to Bongdam Meet demands for intercity transportation in southern metropolitan area and relieve traffic congestion 		





Projects



railways.



Opening ceremony for Pohang KTX





Opening ceremony for Honam high speed rail



2013

Publicity activities to attract investments in railroad

KR analyzed the effects of railroad including opening of Honam high speed rail on local economy, culture, and tourism and conducted publicity activities through social media and major media. In addition, KR held policy discussions in connection with the national assembly and the academia to establish a support base for increased investments in railroad.

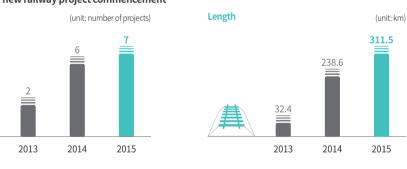
Connecting Trans-Korean railway

KR is systematically preparing for the reunification era by establishing roadmaps for integrated rail network for the Korean peninsula. KR commenced work on a 9.3km route between Baekmagoji and Woljeongni to reconnect railway between North and South Korea. KR is also taking the initiative to connect Trans-Korean railway by recommending restoration of Geumgangsan line and Donghae line to the government. In addition to KR raising KRW 3.6 billion reunification fund from public donation, KR is also forming a common understanding for Trans-Korean rail project by hosting policy seminars.

Activities 2 | Commencement and timely opening of new railroad project

Commencement of work for new rail projects

KR is commencing work on new rail projects in the western, central, and southern regions of the country to expand railroad coverage. In order to improve accessibility to Seoul, KR began work on connecting Danggogae and Jinjeob line. In addition, KR commenced work on Gyeongwon line restoration projects in order to prepare for reunification and promote development of the northern region of Gangwon province. KR also improved transportation convenience and promoted development in the central inland area through Dodam~Yeongcheon, Yeongcheon~Shingyeongju, Icheon~Mungyeong business. In addition, KR resumed the double track railway work in the western corridor and the Boseong~Imseongni line, previously suspended due to budget issues, to expand railroad coverage in isolated areas and promote balanced



Number of new railway project commencement

Timely completion and operation of high speed rail projects

KR established comprehensive plans to ensure timely completion and opening of high speed rail projects. In 2015, KR opened Honam high speed rail, Pohang KTX, and Gyeongbu high speed rail in Daejeon and Daegu brought the country one step closer to being connected in less than 6 hours.

The opening of the Honam high speed rail (April 2015) reduced travel time between Seoul and Gwangju Songleong by 66 minutes compared to previous railway transport and 117 minutes compared to bus, enabling travelers to travel from Seoul to Honam area in less than two hours. Honam high speed rail also enabled KTX service in the South coast region. Pohang KTX, by enabling early high speed service from Shingyeongju to Pohang within the Ulsan~Pohang route in the Donghae Nambu line, reduced travel time from Seoul to Pohang by 83 minutes. In addition, Pohang KTX improved transportation convenience through direct connection between Gyeongbu high speed rail and Pohang KTX which eliminated the need for customers having to connect to different routes.

The installation of 40.7km high speed route in urban areas in Daejeon and Daegu marked the opening of all high speed routes in the Gyeongbu high speed rail and eliminated bottlenecks. In addition, the opening of the high speed route provided additional transportation capacity and provided a base for installing intercity

Activities 3 | High speed routes to enhance railway competitiveness

Semi-high speed rail in five major artery routes

Semi-high speed rails operate at maximum speeds between 200~250km/h and is capable of reducing travel time between Seoul and Busan (442km) by approximately one hour compared to conventional rail which operate at maximum speed of 150km/h. In addition, semi-high speed rails are low-cost high-efficiency railways which can be constructed at 77% of the cost of high speed rails. KR is introducing semi-high speed rail in five major artery routes through tailored high-speed plans in order to reduce regional discrepancies in services provided and to meet demands for expansion of high-speed rail.

The expansion of semi-high speed rail will reduce the transportation time between major cities in Korea to 1~2 hours by expansion of the coverage area.

Details for semi-high speed rail

Category	Business
Completed	Pohang KTX 38.4 km (opened in 2015), Gyeongchun line 81.3 km, Jeolla line 90.2 km (opened in 2012)
In progress (5 major artery routes)	Pyeongchang Olympics 277.5 km, Cheongnyangni-Bujeon in central line 427.6 km, Daegok-Iksan in west coast line 233.1 km, Bujeon-Gwangju in Gyeongjeon line 251.2 km, Suseo-Gimcheon in central inland line 221.3 km

Metropolitan GTX route



	Route	Connections	Length (km)
		Kintex – Samsung	36.4
	А	Samsung – Dongtan	37.9
		Subtotal	74.3
	В	Songdo – Cheongnyangni	48.7
	С	Euijeongbu - Geumjeong	45.8

KR is taking initiatives to construct intercity express railway in metropolitan areas (GTX) in order to relieve traffic congestions and improve accessibility to Seoul. Scheduled speed* of such routes are increased from 35km/h to 105km/h by constructing straight routes through underground tunnels. The opening of GTX would reduce commuting time from Gyeonggido to Seoul to 30 minutes.

Construction work between Samsung and Dongtan is in progress (May 2015) and master plan for route between Kintex and Samsung has been established (December 2015). As of 2H 2015, preliminary feasibility study for route between Euijeongbu and Geumjeong is in progress. Business plans are being reestablished for route between Songdo and Cheongnyangni. Intercity railway construction for Daegu (Gumi~Gyeongsan 71.85km) and Daejeon (Shintanjin~Gyeryong 35.2km) economic regions will take place utilizing excess railway capacity after the opening of urban high speed rail in Gyeongbu line. Initiatives are being taken for intercity railway between Busan and Ulsan (scheduled to open in 2018) and Bujeon and Masan (scheduled to open in 2020) to provide service between Busan, Ulsan, and Changwon. These intercity routes are expected to promote development in their respective economic regions.

* Scheduled speed: average speed taking stops into account

Establishment of intercity and express rail network

Activities 4 | High efficiency railway through electrification

Electrification will take place for new and existing railways in order to enable electric locomotive transportation. Electrification ratio in 2015 was 70.81%, which ranks about 10th in the world. Electrification enabled the use of electricity as opposed to diesel as a power source, reducing operating costs and preventing environmental pollution from GHG and exhaust gas emissions. KR will continue the electrification of railways to achieve 82% electrification ratio (3rd in the world) by 2025.

Business name	Opened	Effects of electrification			
Business name	on	CO ₂ reduction	Cost reduction		
Honam high speed rail 183.8km	April 2	3.49ton $CO_2 \rightarrow 1.95$ ton CO_2 /trip	795kKRW → 295kKRW/trip		
Pohang KTX 38.4km	March 31	0.73 ton CO ₂ \rightarrow 0.41 ton CO ₂ /trip	167 kKRW \rightarrow 62kKRW/trip		
Gyeongbu high speed rail 40.7km	August 1	0.77 ton CO ₂ \rightarrow 0.43 ton CO ₂ /trip	176 kKRW \rightarrow 65kKRW/trip		



New connecting passage between Seoul Station and Airport Express

feasibility studies.

In addition, KR installed new accommodations including connecting passage between Seoul station and Airport Express and connecting center at Osan station to enable easy connection for railroad customers. KR minimized the distance between rail stations and other public transports (less than 180m or 3 minutes) and placed connections to other methods of transportation such as bus, taxi, and self-owned vehicles (in that order). KR is striving to provide one-stop transportation service by establishing connection system centered around rail stations for the convenience of railroad passengers.





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Activities 5 | Improved transportation services through establishment of connections

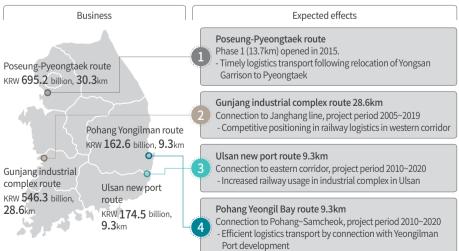
KR completed four direct connection projects including the Pohang KTX in 2015 in order to enable customers to reach their destination via high speed rail without having to connect to conventional rail. Direct KTX connection projects in order to improve accessibility to Incheon and Suwon also passed preliminary

KTX (2015)	Direct connection from Seoul to Pohang by connecting Gyeongbu high speed rail and Pohang KTX
irect connection (2014)	Direct connection from major cities to Incheon International Airport by utilizing Gyeongbu and Honam high speed rail
ngjin~Jinju (2012)	Direct connection from Seoul to Masan and Jinju by connecting Gyeongbu high speed rail and Gyeongjeon line
eosu (2012)	Direct connection from Seoul to Jeonju, Suncheon, and Yeosu by connecting Honam high speed rail with Jeolla line

Activities 6 | Increased volume and improved competitiveness of freight rail transport

In preparation of the Eurasian era, China and Russia are restructuring their railway operations and expanding investments in facility updates. However, freight rail transportation is decreasing in Korea and inefficiencies in transportation logistics are worsening year over year.

In order to promote railway logistics, KR actively participated in the Ministry of Land, Infrastructure, and Transport's "Railway Logistics Facility Investment Planning". KR also received feedback from freight rail transporters, consignors, and experts to establish mid/long-term railway logistics plan and to establish efficient operating system tailored to customers. Currently, KR is engaged in four projects that connect major industrial complexes and ports including Poseung-Pyeongtaek industrial rail. KR also included four additional cargo routes in the KRW 2.2 trillion "Phase 3 National Rail Network Plan" in order to establish its role in the previously overlooked logistics area. KR is seeking to promote further growth by utilizing railway logistics as a new growth driver.





Ainister award at the 2015 national VE competition

Sample construction VE cost cutting

Reduced cost by KRW 6.1 billion by replacing earthwork with bridges (Icheon – Choongju site 1 Jangpyeongni route) Before change earthwork (1,405m) + bridge (295m) Earthwork zone -----× After change earthwork (255m) + bridge (1.455m) Bridge zone Planned road Less banking between eongnam and (®) Road 1 Stream 46m 45m

Narrower site

• Site narrowed by 91m, reduction in land purchase price • 680,000m² less banking, reduction in earth and sand transportation expense Resolved civil complaints resulting from disconnection between villages

Narrower site

Activities 7 | Improved returns on investment through economic design and construction

Cost reduction in engineering phase

KR conducts value engineering (VE) and screening to review the economic feasibility and on-site applicability of engineered contents. KR prevented engineering changes through such practices and was able to reduce KRW 106.7 billion and KRW 122.4 billion of business costs through value engineering and screening, respectively. KR is utilizing in-house and national value engineering competition to improve construction site quality and reduce costs. In particular, KR's "Wonju-Gangneung railway construction VE" team won the Minister of Land, Infrastructure, and Transport award in the 2015 national VE competition. This marks the fifth straight year in which KR was recognized for value engineering excellence. In addition, KR utilizes in-house and Ministry of Land, Infrastructure, and Transport's system to register and share VE screening results with engineers and construction companies. KR also publishes case studies and guide books to provide continuous feedback and minimize duplications.

Cost reduction in construction phase

KR took various initiatives to cut project costs by implementing systematic cost cutting processes and identifying cost effective construction methods and materials tailored to individual sites. In order to increase motivation for cost cutting activities, KR awards exemplary cases of cost cutting performances and publishes case studies to successful cost cutting efforts and encourages application of such measures in all construction sites. In 2015, KR reduced project costs by KRW 315.1 billion through 618 cost cutting initiatives including value engineering and construction method change including but not limited to replacing earthwork zones with bridges, changing bridge construction methods, and using new materials. Reduction of KRW 315.1 billion corresponds to 104% of KR's target reduction of KRW 302.1 billion.

Activities 8 | Enhanced railway construction technology competitiveness through improved expertise and confidence

Increasing efficiency and standardization of railroad construction criteria

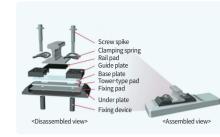
KR established and updated 105 items in the railroad construction criteria, reflecting various stakeholder feedbacks identified through on-site VOC and expert workshop. Timely establishment and update of various railroad construction criteria resulted in improved safety, cost cutting, and improved on-site application.

Area	Key updates	Expected effects
Civil engineering, track	7 including placement of safety manager	Improved safety
Construction equipment	22 including premium to relieve crowding	Improved customer satisfaction
Railway electric	32 including engineering/design clarification	Conflict resolution
Signal and communication	44 including design criteria revision	Improved customer convenience

KR expanded standards for railway articles from 38 items in 2014 to 134 items in 2014, thereby enhancing quality of railway articles and preventing problems resulting from using specific items or non-standard items. KR also established guidelines for station and platform design and standardized design drawings. KR also standardized quantities and unit cost of a total of 11,253 construction works (including 5,523 in architecture and 3,241 in railway electric strategy) in order to ensure consistency in calculating construction costs and prevent overdesign. KR also enhanced the expertise of KR technical committee by including 169 internal and external experts from 11 different fields. KR also designated 166 new codes for specific construction works of roadbed, construction et al in booklets and handbooks to facilitate usage by relevant persons.

Localization of core railway technology and reinforcement of on-site application

KR localized and commercialized core railway technology which had been dependent on foreign countries, thereby enhancing competitiveness and reducing foreign currency outflow. KR completed the localization of 350km/h electric tramway system, which it previously depended on French technology for 300km/h electric tramway system. In phase 1 of the Gyeongbu high speed rail construction, KR was 100% dependent on foreign technology. In phase 2 of the Gyeongbu high speed rail construction, local technology accounted for 69% of the construction work. In the Honam and metropolitan area construction, KR was able to use 100% local technology, reducing imports by KRW 58.7 billion.



KR style rail fastening system

KR commercialized LTE based Railway wireless communication system (LTE-R*) and Korea Radio Train Control System (KRTCS), which incorporates LTE technology, and secured world-leading technological competency in signal and communication. Previous communication technologies, which used three different methods (ETEC, ASTRO, and TETRA) were inconvenient as crew members had to carry three radios. In addition, new signal frequencies could not be set-up with the previous communication technologies. LTE-R is a system that optimizes 4th generation wireless communication technology (LTE) to railway environment. With LTE-R, all railway wireless communication can be integrated into a single LTE-R platform and large data can be transmitted even while traveling at 350km/h, making railway operations more efficient. In addition, LTE-R can be connected with the national public safety LTE, enabling immediate and effective response to minimize damage in case of disasters and accidents. KR completed the standardization of LTE-R (December 2015) and quality testing (February 2016) and finalized plans to commercialize LTE-R at speeds up to 250km/h. KR plans to set-up LTE-R system in all 5,000km of railways in Korea by 2025. * LTE-R : LTE based Railway wireless communication system

(December Define re

Set up sta

In addition, KR utilized LTE-R to create the Korea Radio Train Control System (KRTCS). KR localized radio train control system which had previously utilized four different methods (ETCS, CBTC, ATC, and ATS) through the development of KRTCS which is compatible with the European radio train control system. The consolidation of control system is expected to result in cost savings. In addition, KR is now able to operate mobile blocking* that moves the block section depending on the speeds and locations of trains compared to fixed blocking, which enables more flexibility in railway operations.

* Blocking : enabling operation of one train in a designated section

Evaluation and future directions



KR replaced Germany's concrete track cast-in-place construction method with domestically developed precast concrete track and applied it in the Jinju-Gwangyang and Pohang-Yongdeok projects, realizing a 4% reduction in construction costs and 22% reduction in construction time. In addition, in case of rail fastening, which was previously manufactured by two companies in the U.K. and Germany, KR procured original technologies and developed KR-type rail fastening. Subsequently, KR lifted its patent rights to the rail fastening to diversify suppliers and encourage open competition. Roughly 340,000 KR-type rail fastenings will be installed in the Wonju-Gangneung project and it is expected to result in KRW 15.1 billion reduction in imports. High speed turnouts and point machines, which resulted in numerous cases of malfunctioning in phase 2 of Gyeongbu high speed rail were also localized and 40 high speed turnouts and point machines were installed in 2015. 54 high speed turnouts and point machines were installed in the metropolitan high speed rail (2015) and 56 were installed between Wonju and Gangneung (2016), resulting in KRW 75.6 billion reduction in imports.

Development of high value added future technologies

LTE-R Development Plan

•			Phase 4
		Phase 3	(April 2017~December 2017)
	Phase 2	(June 2016~March 2017)	Finalize standard
hase 1	(August 2015~May 2016)	la stall and task and the	specifications
2014~July 2015)	Design and manufacture	Install and test system	 Field testing at speeds
equirements	prototypes	• Field testing at different	up to 350km/h
equirements	 Commercialize at 	speeds	
andards	speeds up to 250km/h		

KR opened high speed rails including the Honam high speed rail and Pohang KTX on time and reduced travel time between regions and contributed to balanced development among different regions. KR is also taking initiatives to build railway networks tailored to customers' needs including but not limited to the GTX which is expected to relieve traffic congestions in the metropolitan area. KR is efficiently constructing railroads through economic design and construction methods well suited for specific sites. Recently, the "Phase 3 National Rail Network Construction Plan," which lays out master plan for railway construction and expansion for the next decade, was finalized. KR will continue to strive to construct faster, safer, and more convenient railways tailored to our customers based on the rail network construction plan.

Background and impact

Key initiatives



Safe, high quality, eco-friendly railroad construction

building trusted railways

Public anxieties have been on the rise due to recent safety accidents and environmental damages and noise during railroad construction are causing social conflicts. KR established a comprehensive management system to minimize issues caused during railway construction and is taking various initiatives to resolve conflicts.

Strategy | On-site disaster and safety management system

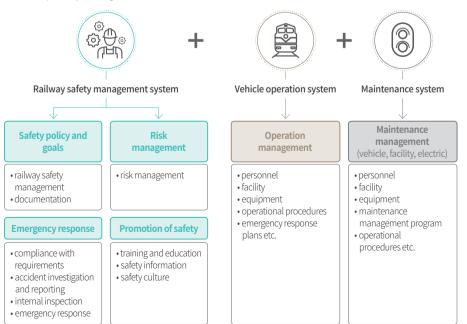
KR established on-site disaster and safety management system in order to respond to accidents taking place on different sites. KR is implementing tailored accident prevention activities. In addition, KR enhanced its quality management system in order to ensure high quality railway construction. KR is also reflecting feedbacks from a diverse array of stakeholders including environmental advocacy groups in order to construct eco-friendly railway with minimal environmental footprint.

Activities 1 | Innovative safety management system

Establishment and operation of railway safety management framework

In February 2015, KR established the railway safety management framework, comprised of railway safety management system, vehicle operation system, and maintenance system. The framework is currently operational. The railway safety management system is a system that manages railway safety policies, goals, and the roles and responsibilities regarding railway safety. Vehicle operation system manages the organization, personnel, and operation methods of trains. The maintenance system manages the repair and maintenance of railway vehicles, tracks, and signals. KR is systematically implementing preventive safety management activities through a system that clearly defines roles and responsibilities and providing a fast and safe public transportation method by continuously improving railroad operation safety.

KR railway safety management framework





Disaster response training

Safety centered management and enhanced on-site activities



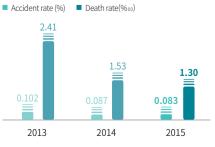
Number of sites inspected and safety improvements made

(November 2015)

(unit:cases) Number of sites inspected number of safety improvements



Yearly construction site accident rate and death rate



KR established innovative safety management plans for tracks in operation, which could result in a large scale accident (August 2015). Track safety management task forces, reporting directly to the heads of regional offices were newly established and "KR safety instructors", KR's in-house safety experts, were formed and operated year-round. In addition, a situation team was deployed to the Guro control center to establish a 24 hour monitoring system. This team was responsible for responding to incidents. Furthermore, KR applied stricter criteria compared to the provisions in the railway safety act for railway protection areas for all construction projects. KR also subdivided operation delays, previously 1 hour for all vehicle types, into three (20 minute for KTX, 40 minutes for regular trains, and 1 hour for cargo and other trains) to enhance accountability. KR's management visited and inspected high-risk sites (352 times in 2015) and set the tone at the top regarding construction safety. Efforts to expand the culture of safety, which included awarding exemplary cases of safety and quality management, resulted in a 25% reduction of construction site accidents (20 cases in 2014, 15 in 2015).

KR analyzed the season of occurrence and types of accidents for all incidents in the most recent decade in order to develop appropriate preventive measures for construction sites. The analysis indicated that new employees accounted for 50% of the incidents, 5 main accidents accounted for 92% of the total incidents, and 59% of the incidents were caused by personal negligence. KR proceeded to develop various responses. First, KR inspected the entirety of construction sites managed by two high-risk contractors that had accidents resulting in death. Weak points were identified and improvements were made based on diagnosis and consulting by external expert (Korea Occupational Safety and Health Agency). In addition, KR conducted prior inspections on 1,845 sites in different seasons and identified and removed 1,773 safety risks in advance. Drones were used in 3-D inspections for hazardous work areas to ensure efficient inspection and safety of inspectors. Due to these efforts, KR recorded a 0.083% accident rate at construction sites, down 0.004% from the previous year. In addition, death rate* also decreased in 2015. * Death rate : Death rate in this case is defined as the total number of deaths multiplied by 10,000 and then divided by the total workforce

Enhanced accident prevention for subsidiary construction work

KR enhanced safety management for subsidiary contruction work* in order to prevent accidents in subsidiary work processes which account for 74.7% of total accidents. Previously, subsidiary contruction work were conducted without separate construction planning documents. KR revised this process and made prior approval by inspectors before commencement of work mandatory. Furthermore, KR mandated the designation of at least one safety manager at each site in order to raise awareness and interest of original contractors and inspectors. KR also conducted year-round monitoring of all work processes by having construction companies report work plans for the next day to KR's regional offices.



Establishment and operation of emergency disaster response system

KR established and operates emergency response system to provide prompt and appropriate response within the "golden time" in case of a disaster. KR operates a disaster situation room throughout the year and established coordination systems with related agencies through the operation of disaster response headquarters. In 2015, KR conducted 431 emergency response training, up from 191 in 2014, in order to ensure timely situation awareness and appropriate response during times of disaster. KR also conducted various activities to detect risk factors in advance in high-risk construction work or areas with steep slopes in order to prevent accidents. KR conducted risk analysis and established and implemented risk mitigation activities in 605 sites. KR also subdivided high-risk areas according to degree of risk and conducted biweekly and bi-monthly inspections. In addition, KR increased the number of sites with CCTVs from 354 in 2014 to 391 in 2015 in order to monitor work process on a real time basis and made 277 safety improvements. Furthermore, KR developed and utilized the mobile "KR disaster notification" application which provides SMS service and real-time two-way communication enabling persons on-site to report cases of accidents real-time to related persons (Ministry of Land, Infrastructure, and Transport, KR, supervisory office, and construction companies) and share safety related information. Such measures enabled effective response to emergency situations.

Enhanced on-site safety management including tracks in operation

Activities 2 | Tailored prevention activities

Enhanced prevention activities for serious accidents

* subsidiary construction work : subsidiary work other than main construction work



Foreign employee safety education



Railway safety education



Safety inspection day poster

Activities 3 | Enhancement of on-site safety training

Tailored safety management for new and foreign employees

KR actively implemented accident prevention activities to fundamentally reduce accidents resulting from employee's mistakes. Considering that new employees accounted for 50% of the accidents, KR had new employees and foreign employees who are more susceptible to accidents wear yellow safety caps. KR also introduced the "Best Mix" system, which pairs new and foreign employees with more experienced employees. In addition, KR provided safety education and work instructions to foreign employees using their native language, thereby enabling foreign employees to better understand safety instructions.

Safety and quality managers to prevent accidents in small construction sites

KR designated 52 safety and quality managers for its business partners and enabled these managers to freely conduct safety inspections in order to prevent accidents in small construction sites. In addition, KR raised employee awareness on safety and the effectiveness of safety training and education by providing safety training and education to employees of KR's subcontractors given that these persons are more directly involved in safety accidents.

Safety education and training tailored to site specific tasks

KR improved accident response capabilities of employees as well as employee satisfaction on training programs by providing tailored safety training that reflects the frequency of accidents at specific sites.

Safety education and training	Disaster management 2trainees
	Disaster action items 13 trainees
40,898 trainees	Railroad worker 122
Safety experience 37,539 trainee	s Special safety 3,165 trainees
Operation management 9 _{trainee}	s Subcontractor management 48 _{trainees}

In addition, KR published and distributed various manuals and case books including safety management manual and "close call*" case books in order to improve training efficiency and understanding of related persons.

* close call: cases where accidents could have occurred due to on-site defects and/or employee mistakes (accidents did not occur in reality)

Activities 4 | Enhanced quality management system

Enhanced quality assurance system through improved work process

Through ISO-based internal and external screening, KR equitably and objectively confirmed and managed improvement activities. KR is continuously implementing improvement activities by identifying potential operational improvements and action plans through quality management system (QMS) operation evaluation by expert external agency (Korea Standards Association).

In 2015, KR identified 560 core achievements that differentiated KR from other agencies and received level 8 rating in the 2015 QMS evaluation results, up two levels from the previous year. This QMS rating far exceeds the majority of public companies rated at level 5~5+ and is comparable to leading global companies. Furthermore, KR received the presidential award for "optimization of concrete lining thickness in railway tunnels" at the 2015 national quality group competition. KR applied the contents of this presentation in nine projects including the Dodam-Yeongchun route and realized cost savings of KRW 75 billion.



KR is engaged in continuous facility improvement projects to improve the safety of old railroad facilities. KR improved the electric facilities in phase 1 of Gyeongbu high speed rail which has been in operation 10 years after the passage of its service life. KR also conducted safety upgrades for old facilities in conventional rail. Props and fluid dampers that mitigate shocks and vibrations were installed for bridges that do not meet the high speed rail seismic criteria. Such installations improved the seismic capacity of these bridges from 5.5 to 6.0 in the Richter scale. In addition, KR established monitoring system that automatically sends earthquake alerts in case of earthquakes, enabling immediate response in case of earthquakes. KR took initiatives to improve the overall safety of railroads in a total of 188 facilities (28 bridges, 64 retaining walls, 32 drainage facilities, and 64 land slide prevention) including but not limited to bridge improvements to secure appropriate flood elevation and addition of landslide prevention facilities. Such initiatives are expected to ensure safe operation of railways in all conditions.

Major railway improvement projects







Facility failures

2013

2014

(completed facilities)

2-year zero operational incidents in completed facilities due to systematic quality management

(unit : number of incidents)

2015



Quality management system evaluation Level 8

Activities 5 | Improved railway facility operation safety

Safety upgrades for old facilities

KR ensured safe vehicle operation through comprehensive quality tests at each phase of the project. KR was able to ensure railroad facility performance and quality through a series of process ranging from comprehensive test drive planning, prior inspection, facility verification, operational test drive, to opening. In particular, KR made improvements to 46 prior inspection items in the comprehensive test drive that were either unnecessary or duplicative, including but not limited to vehicle noise and bridge verification test. Through this improvement, KR was able to save KRW 60 million for each project.

Furthermore, KR revised the testing process to mandate prior inspection and comprehensive test drive for a period of approximately one year and resolved the issue of potential oversight due to short-term test driving. KR established cooperation system with related agencies in which operating agency (KORAIL) immediately notifies KR in case of facility failures. KR is discussing with related agencies to develop action plans to continuously reduce operational failures. KR established a timely response system by operating high speed rail opening emergency response team for high speed rail projects. KR continuously conducts inspections to ensure passenger safety. In addition, KR took initiatives including mid-year general inspections and corrective measures for 11 projects that commenced operations in 2013 through 2015. Such efforts resulted in zero facility failures for two consecutive years.

💋 | Activities 6 | Railway construction considering customers and environment

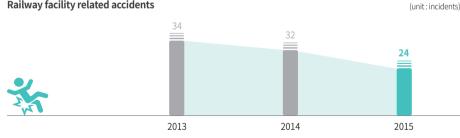
Expansion of safety and convenience facilities with real-life implications

KR established plans and working designs to install platform screen doors at 100% of the entrances at all 139 stations by 2017 in order to prevent accidents resulting from lack of platform screen doors and to enable people to use railway platforms safely. Initial plan was to fund platform screen door installations by 100% government funding and to complete installation by 2023. This plan was since modified to KR's advance payment (to be funded by bond issuance) and reimbursement by the government. As a result, this project is now scheduled to be completed 6 years ahead of its original schedule. In 2015, KR installed platform screen doors in 14 locations including Wondang station to relieve public anxieties about the recently common platform safety accidents.

KR is also striving to enhance convenience and accessibility of disabled, elderly, and pregnant women by continuously expanding accommodations including elevators and escalators (9 locations), connecting passages (11 locations), and platform roofs (14 locations). In addition, KR worked in concert with the Korea Railroad Research Institute to develop technologies to reduce noise near railroads and to reduce inconveniences caused by railway noises to residents living near railroads. KR and Korea Railroad Research Institute jointly developed sound proofing walls that can be installed near railways, and low-noise steel bridges. Sound proofing walls have been installed in 26 locations in the Gyeongbu high speed rail including the section from Sasang to Busanjin. Sound proofing walls are currently being installed in 15 additional locations. KR will continue to install sound proofing walls to minimize complaints regarding railroad noises.



Railway facility related accidents





Joint group meeting for researching the ecology of the Sobaek san Mountain passages from Dodam to Yeongcheor

34

Minimization of environmental footprint through cooperation with environmental advocacy groups

In order to minimize environmental damage while ensuring timely completion of projects, KR established inspection groups for projects where environmental civil complaints were expected and proactively responded to potential environmental complaints through joint site inspection with environmental advocacy groups. KR participated in joint ecology survey group and created alternative habitats for cranes in order to overcome the damages to crane habitat caused by the North-South rail construction project (Baekmagoji~Woljeong station). In addition, KR formed and participated in Baekdudaegan environmental advisory group in conjunction with Green Korea United and Baekdudaegan preservation committee to minimize potential damages to Baekdudaegan preservation area by the Daegwallyeong tunnel construction and preserve ecology.

Evaluation and future directions

Detailed environmental management results

KR established on-site disaster and safety system and conducted tailored accident prevention activities in order to prevent accidents from occurring on site. KR also improved its quality management in order to construct high quality railways. KR has no records of non-compliance with environmental laws and regulations and reflects the opinions of various stakeholders including environmental advocacy groups in an effort to construct eco-friendly rail with minimal environmental footprint. In the future, KR will implement mortality reduction goal management system for each regional office in order to further reduce construction related deaths. KR will also expand its accident prevention activities by paying more attention to high-risk construction work and small scale construction works in order to preclude safety related accidents. Furthermore, KR will minimize its environmental foot print and construct high quality, eco-friendly railways through improving its integrated management system.

Activities 7 | Eco-friendly Eco-rail construction

KR minimized construction waste and increased recycling with goals of constructing environmentally friendly Eco-rail. Through material management system, KR recycled 15,168 materials including PC sinker stock and transferred 16,227 materials to KORAIL, and utilized 1,662,000 tons of construction waste as compaction material for temporary roads or reinforced concrete pipes, back fill material for structures and retaining walls, and cover soil, thereby minimizing construction waste.

In addition, KR expanded its renewables initiatives to existing rail facilities in operation and installed solar panels on roofs of vehicle depot and platform roofs in Gwangju-songjeong station and Pohang station. These solar panels are capable of generating 1,797MW of energy per annum. Furthermore, KR allocated GHG emission targets for each regional office and encouraged compliance with indoor temperature guidelines and improving LED lighting facilities. Such efforts resulted in 1,494.5 tons of CO₂ emissions, which exceeded the original goal of 1,158.8 ton reduction by 5.8%. Through this reduction of CO₂, KR was able to meet the government policy initiative goal of 20% GHG reduction compared to average emissions from 2007 through 2009. KR also conducted general inspections (March ~ May 2015) on its construction sites to inspect the sites producing fugitive dust. KR inspected 158 sites and took corrective measures for all 105 items, thereby improving all of the 105 indications. Through these initiatives, KR scored 287.3 points in the 2015 "environmental management index" comprised of recycling rates of construction waste and GHG emission reduction and other environment related items, exceeding its goal of 250 points by 13.5%

Category	Unit	2014 results	2015 results	Y/Y change
Non-performance of environmental impact evaluation agreements	Number of incidents	6	1	-5
Corrections made on internally/ externally identified action items	%	100	100	0
Environmental education hours	Hrs/pax	1.89	1.55	-0.34
External recognition of environmental achievements	Points	84.3	83.8	-0.5
Ratio of sinker stock used	%	20.1	11.9	-8.2
Ratio of eco-friendly goods purchase	%	98.9	94.5	-4.4
Renewable energy ratio	%	30.6	34.71	4.11
Supply of LED light	%	53.1	62.8	9.7
Recycling ratio of construction waste	%	98.1	98.6	0.5
Sound proofing wall installation ratio	%	100	173	73
GHG emission reduction	%	27.5	25.8	-1.7

OUR PRIORITY

Overseas business

Background and impact

Kev initiatives



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Expanding foundation for new growth

leading tomorrow's change

With large scale railroad projects being carried out in various corners of the world including Asia, Middle East, and South America, the competitions between global railroad companies are intensifying. KR will actively make inroads to overseas markets in order to generate new revenue streams and fulfill its role as a public company by supporting private sectors' entry into foreign markets while leading the growth of Korea's railroad industry.

Strategy | Maximize overseas profits

Since its first overseas operations in 2005, KR's overseas business has experienced continued growth. Recently, KR entered the railroad markets in various countries including India and Nepal. Leveraging the experience and know-how accumulated to this point. KR is transforming its business paradigm to focus on its core competency. KR is seeking to enhance its mid/long-term project pipelines in order to change its position in the global market from a second mover to a key player.

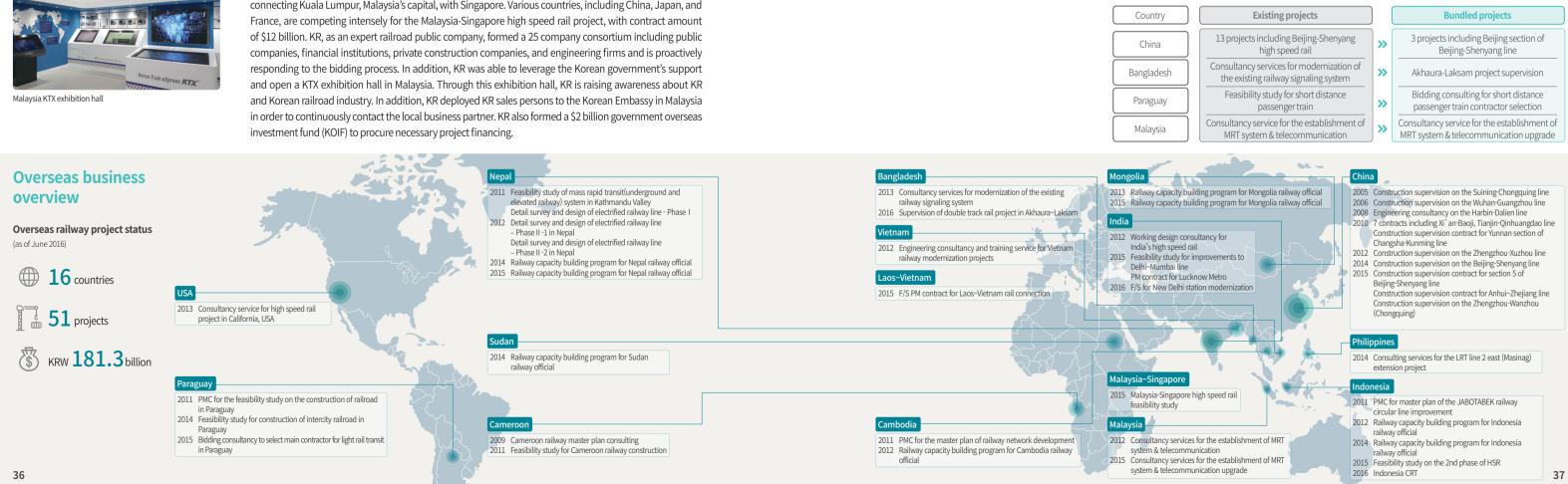
Activities 1 | Active involvement in government policy projects (Malaysia – Singapore high speed rail)

KR is actively engaged in sales activities for the Malaysia-Singapore high speed rail project(324km), connecting Kuala Lumpur, Malaysia's capital, with Singapore. Various countries, including China, Japan, and France, are competing intensely for the Malaysia-Singapore high speed rail project, with contract amount of \$12 billion. KR, as an expert railroad public company, formed a 25 company consortium including public companies, financial institutions, private construction companies, and engineering firms and is proactively responding to the bidding process. In addition, KR was able to leverage the Korean government's support and open a KTX exhibition hall in Malaysia. Through this exhibition hall, KR is raising awareness about KR investment fund (KOIF) to procure necessary project financing.



Presentation of "outstanding foreign supervisor selection" for China's high speed rail

	China
(
	Banglad
(
	Paragua
(
	Malays



Activities 2 | Effective sales operations through selection and focus

Maximizing competitiveness by generating synergy through public private partnership

Recently, overseas railroad markets have been transformed into a large scale complex project initiated through public private partnership (PPP). KR, staying current with these changes in market dynamics, is focusing its sales efforts on large PPP projects. KR's ability to leverage government support as a public company along with technological excellence and large workforces of the private companies in Korea worked to create a synergy which enabled KR to be competitive in the international railroad arena. As a result, in 2015, KR was able to consecutively win large contracts including the construction supervision contract for Akhaura~Laksam double track project in Bangladesh and general consultancy service for Lucknow metro rail project in India.

Tailored strategies to key countries

KR is establishing and implementing tailored sales activities to different strategic markets in order enhance its sales effectiveness. When entering new countries, KR established a local office in the target market, selected by considering various factors including market growth potential, and formed strategic partnerships with global companies already established in the said market in order to ensure competitiveness. As a result of conducting sales activities as a part of a multinational consortium with a well-established European company in the Indian market, KR was able to win a KRW 42.1 billion project management contract in 2015. In countries where KR already had experience, KR attempted to improve its operational efficiency by fully utilizing its existing human network and confidence. In particular, KR was recognized for its know-how and superior executive capacity it had accumulated in its 10 years of business in China. KR was recognized as the best foreign supervisor among the six supervisory companies in China and was recognized for its performance. KR was able to leverage the market's confidence to its advantage and win three additional contracts in China.

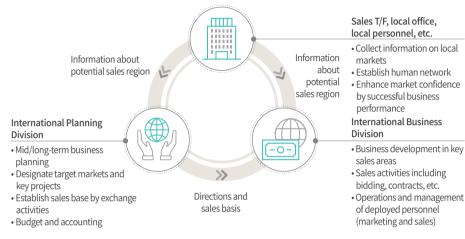
Enhancing bundling sales activities

Activities 3 | Strengthening mid/long-term sales base

Restructuring for strategic overseas business

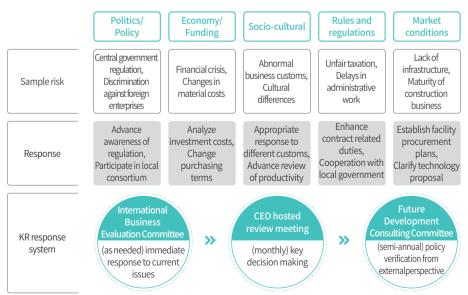
In order for a more strategic approach to overseas business, KR upgraded the status of the existing international business division to a department. In addition, KR newly established the International Planning Division in order to set up business plans and foundation for sales activities, thereby enhancing the strategic planning function regarding international business. Furthermore, KR established project specific T/F, local offices, and managed human resources accordingly in order to effectively carry out its major activities including the Malaysia-Singapore high speed rail construction project.

KR's overseas business engagement structure



Risk recognition and management system

KR established and is operating a risk management system capable of timely recognition and response to risks inherent in large overseas projects. Internal review meetings are hosted by the CEO to evaluate information provided by persons deployed to local markets and sales sites. This information is further assessed and verified by KR's Future Development Consulting Committee, comprised of external consultants. As an example, during a monthly meeting, a decline in profitability for China based supervision projects was identified. The International Business Evaluation Committee, which decides whether to participate in the Zhengzhou-Manzhou line supervision project, reflected the findings of the monthly meeting and decided against participating. This enabled KR to prevent a potential decline in profitability.





Nepal invitation training

Evaluation and

future directions

Invitatior

Railroad

KR recognizes that procuring expert human resources with executive capabilities is of utmost importance in ensuring continued international business expansion. As such, KR is conducting programs to develop in-house international business experts. KR is enhancing the competency of those employees engaged in international business by providing phased training programs covering overview of international business, in-depth courses on specialized fields, language skills, and technological knowledge.

Tailored training program

encouraged

KR made notable accomplishments including the Lucknow metro rail project, worth KRW 42.1 billion, utilizing a systematic sales base. KR will continue to improve its probability of successful sales activities through strategies tailored to individual strategic businesses. In addition, KR will continue to ensure the profitability of its international business by improving technological and risk management competency.

Establishment of sales basis through publicly funded business activities

KR is utilizing ODA (official development assistance) funds to carry out preliminary business activities for establishing infrastructure in developing countries. For regions with business opportunities within a short timeframe, KR utilizes overseas market development funds from the Ministry of Land, Infrastructure, and Transport to conduct feasibility study. KR submits business proposals based on the results of such feasibility studies to support prompt commencement of business. For regions without business opportunities in the foreseeable future but good potential for growth, KR utilizes KOICA funds to conduct tailored training programs such as invitation training and local railroad academy in cooperation with KOTRA. KR establishes mutual trust countries with business opportunities to secure potential customers and a sales platform.

Tailored training program

Category	Type of business	Countries	Funding
nvitation training	Invitation railroad personnel from developing countries to Korea	Mongolia, Nepal	KOICA ODA funds
ailroad academy	Deployment of Korean instructors to developing countries	India, Vietnam	KOTRA CSR funds

Identification of business opportunities through feasibility study

Country	Business opportunities		
India	Improvements to existing railroads including Delhi, Mumbai		
Indonesia	Airport railroad, LRT and phase 2 high speed rail construction for Bandung City		
Vietnam	Hochimin metro and semi-high speed rail project		
Laos-Vietnam	PM project for railway link between Laos and Vietnam		

Enhance sales capacity through training international business experts



OUR PRIORITY

Property and asset development

Background and impact

(unit: KRW 100 million)

1,268

2015

Key initiatives

Increase in land value and profits

2013

Increase in land value Increase in profits

2014

railroad facilities and land in order to secure future growth engine.

Strategy | Development of railroad assets

KR views stated owned property not only as assets to be managed, but rather as new growth engines capable of generating revenues when developed and utilized accordingly. Thus, KR is engaged in development of idle land, utilization of railroad assets, and developing station spheres to increase the value of state owned property and generate revenues.

KR's role is expanding not only as a construction project manager, but also as a railroad facility and property

manager. KR prepared various methods of revenue generation utilizing state owned properties including

Activities 1 | Improve utility of state owned properties

Diversification of railroad facility investment and utilization to increase returns on state owned properties KR is making additional facility investments in existing railroad facilities to generate value added. After the investment, KR rents these facilities to generate additional revenue. In addition, KR is moving away from the perception that railroad facilities are only to be used and rented as railroad related facilities such as parking lots. KR is diversifying the usage of such facilities to include cultural and recreational facilities in order to generate new revenue streams.

Category	Key content	Operating profit			
Generation of high value added through facility	Facility investment in empty land near Osong station and rental as parking space	KRW 300 million			
investments	Stores and advertisements in connection passage at Suseo KTX station	KRW 635 million			
	Utilization of abandoned tunnels as gallery and wine cellar	KRW 59 million			
	Utilization of abandoned line as mineral transportation line	KRW 36 million			
Diversification of railroad facility usage	Rail bike business in cooperation with Jeonju Hanok village utilizing abandoned site	KRW 300 million			
	Recreational facility utilizing South Daejeon connection line scheduled for demolition after opening of Daejeon urban high speed line	KRW 150 million			
	Camping facilities utilizing Jangho station land	KRW 50 million			
	Total KRW 1,530 million				

Enhance financial health through efficient state owned property management

KR is improving the utility of state owned property by attracting new customers and users to previously idle land. In addition, KR rationalized the land price of railroad sites, which were valued at much less than other sites, through continued discussions with local governments. Such valuation of railroad sites enabled KR to recognize additional profits. KR encouraged the usage and re-usage of inventory material to cut material purchasing costs. Sleepers that were difficult to sell in the market were donated to local governments for public usage or recycled to reduce disposition costs. In addition, KR was able to reduce construction debt by promptly resolving differences with stakeholders through continued discussion with internal and external experts and sell vehicles on the Honam high speed rail in early stage.

Category	Key content	Operating profit
Identifying idle land in	Usage rights to 3 sites on Gyeongeui line	KRW 582 million
urban areas with rental	New customers for parking space near Sanbon station	KRW 116 million
value	Usage rights to 1 site beneath overpass in Gyeongwon line	KRW 55 million
Discontinuation of free land usage	Usage rights for Yeosu Expo exhibition hall and parking facilities near Naju station	KRW 62 million
Collection of mobile communication facility usage fees	Usage fees when installing Wi-fi and LTE devices on existing 2G and PCS facilities	KRW 1,337 million
	Total	KRW 2,152 million



Scheduled site for the Southeast coast Blue Lline Theme Park ranging from Mipo to formerly Songjeong Station





Instead of focusing on land usage when developing idle land, KR has expanded the scope of development to include installation of solar modules on roofs of vehicle depots and platforms. Currently, KR installed 1,797MW of solar PV facilities on buildings such as Gwangju vehicle depot and Pohang station as well as idle land. Such PV facilities are generating revenues from usage of state owned properties. In the future, KR will make an additional 6.02 million m² of land and railroad buildings available to the private sector. In addition, KR will change its design standard to consider solar PV installation in the construction phase in order to increase private investment in railroad solar facilities.



KR is taking initiatives to provide "happy housing" on railroad and idle land in order to contribute to the achievement of the government goal of providing stable housing supply to people. By engaging in happy housing projects throughout the country, KR was able to provide 1,012 units of housing (for 4,048 people) at reasonable prices this year. In addition, KR included 2,810 units (11,240 people) of happy housing in its Suseo station sphere development project, thereby meeting the social demand for increasing public utility of large scale development projects carried out by public enterprises.

KR diversified the usage of railroad facilities to increase the value of state owned properties and used idle land not only to generate revenues and but create social utility. KR will prepare a reasonable railway usage fee calculation system and establish standards for facility usage contracts in order to improve revenue generation utilizing state owned assets. In addition, KR will continue to engage in asset development projects that achieve a balance between profitability and public utility by reflecting local community's opinions when developing idle land and station spheres.

Installing photovoltaic system on the depot roof of Gwangju

hase

Ministry of Land, Infrastructure, and Transport Happy Housing brochure



40

Activities 2 | Revenue and social utility generation through usage of idle land

Promotion of regional economic growth by creating theme parks

KR is promoting regional economic growth by creating theme parks on idle land that integrate railroad and cultural facilities. KR developed the Gangchon rail park utilizing the rail bike facility and completed the construction of a railroad theme park called "high one choo choo park" with accommodations utilizing its previous experience in operating rail parks. Southern east coast blue line(Mipo~(formerly)Songjeung), which will be developed utilizing abandoned railroad in the southern portions of the east coast line, will connect five tourist sites including Dalmaji pass. This theme park, upon completion, is expected to increase tourist traffic, generate revenues, and increase employment.

Theme park development direction

Rail bik	e		Railroad theme park		Railroad · Cultural theme park
on rail par e, convenie views of Bu	nce facilities		High one Choo Choo park - rail bike, accommodations - scenic views of rocky mountains in Gangwondo		Southern east coast blue line - rail bike + cultural facilities - program for each tourist site
ected nefits	- 1.05 million tourists, KRW 612.1 million of economic activities, 6,476 new jobs - KR to realize revenues of KRW 56.9 billion through theme parks				

Creating revenue through extension of photovoltaic business range

Activities 3 | Improve profitability and public utility of station sphere development projects

Diversification and improvements in station sphere development

KR is including privately owned land in this scope in order to overcome the issue of insufficient development scale and to maximize profits. By designing and carrying forward businesses in connection with city planning, KR not only creates profit but also plays a leading role for the development of the regional economy. In addition, KR will identify small hidden sites like the upper level of the Seoul Station connection passage, the parking lot site separated from Gwangmyeong Station et al and implement the development project, thereby contributing to creation of its own profit greatly (KRW 63 billion).

Increased public utility through Happy Housing project

Improve financial health

Background and impact

Key initiatives

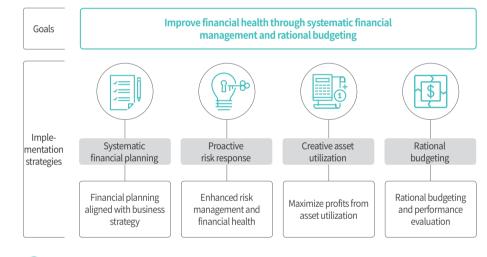
OUR PRIORITY

KR is taking initiatives such as managing debt reduction progress in order to fulfill government policy goals of reducing public company debt and improve financial health. KR is striving to minimize risks and secure stable funding by obtaining highest credit ratings both domestically and overseas and understand market trends and investment demands.

I Strategy | KR's strategies to improve financial structure

KR established systematic financial planning, proactive risk response, creative asset utilization, and rational budgeting as its strategies to fulfill government initiatives to improve the financial health of public companies. Currently, KR is implementing the above strategies. In 2016, KR is taking high level of companywide measures to mitigate its debt levels by reducing the limit for debt increase from KRW 817.9 billion to KRW 362.6 billion and reorganizing its high speed rail business.

KR's liabilities result from issuance of bonds and insufficient collection of rail usage fees from KORAIL. In addition, KR's liabilities are increasing as more than 50% of the funds for its business, including the Honam and metropolitan area high speed rail, are procured from issuance of bonds in accordance with high speed rail master plan. Through excruciating innovation and self-effort for debt reduction, KR will strive to implement comprehensive measures to provide economically viable railroad facilities and establish a sound basis for efficient railroad industry.



Activities 1 | Strategic utilization of assets

Performance index

Liability to asset ratio (%)
 Financial liabilities (KRW trillion)



KR established a risk management system unique to KR in order to overcome financial risks resulting from KR's simple financial structure and its susceptibility to changes in government policy initiatives. In addition, KR, as a special purpose company without capital, holds intangible assets such as high speed rail facility management rights* and tangible assets such as Honam KTX vehicles as means of repaying debt. KR continuously worked with the government to revise terms of railroad usage fees which originally felt short of KR's interest expenses. In 2015, KR partially increased railroad usage fees ($31 \rightarrow 34\%$ of operating profits) and generated interest income by investing in high-yield financial instruments. In addition, KR is making efforts to minimize costs by reducing investment expenditures through design and construction VE and adjusting repair and maintenance expenses paid to KORAIL to reasonable levels. Furthermore, KR will continue to take initiatives to improve its profitability through the utilization of state owned assets and proactive international business. In 2015, KR formed an asset disposition discussion group with related agencies and was able to sell assets including Honam KTX vehicles ahead of schedule and procure KRW 370.8 billion of funds for debt repayment.

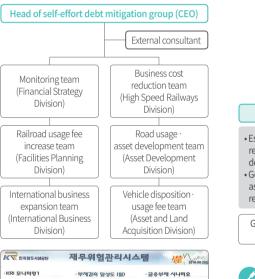
* High speed rail facility management rights: collection of railroad usage fee in amounts equivalent to bonds issued (debt) for high speed rail construction

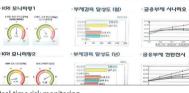


KR reorganized the organization to enhance the execution system for implementing and checking the debt reduction plan. KR expanded its debt mitigation group from four to six teams with each team working to cut costs and generate revenues in different areas. KR also clearly assigned roles and responsibilities according to the PDCA process to improve performance. In addition, all of the KR's employees have a productive awareness of crisis and are striving for the self-effort endeavor all the more by exerting every effort including, but not limited to, installation of KR debt watch*, self-effort idea, and slogan contest, in order to make KR become the exemplary public company by inbreathe the awareness of debt risk into all the employees and forming a common understanding. Furthermore, monthly CEO meetings are held to monitor and share debt reduction progress and to develop responses to lagging areas. Each index is assigned to specific persons and periodically monitored in order to instill a greater sense of responsibility.

* KR debt watch: KR installed the "KR debt watch" in the 1st floor entrance in its Daejeon head office under the slogan of "Today's debts, tomorrow's debits."

All-out self-effort group for debit mitigation





Real-time risk monitoring

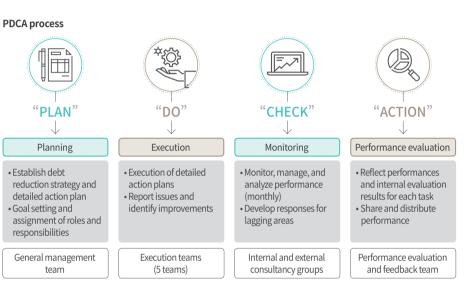


Evaluation and future directions

KR will proactively respond to domestic and overseas credit rating in order to obtain and maintain the highest credit rating possible. KR will also develop plans to procure funds to finance its construction activities. In addition, KR will utilize external expert consulting to the fullest possible extent in its efforts to improve its financial health.



Activities 2 | Enhance debt reduction execution system



Activities 3 | KR's efforts to prevent conflicts

KR is actively engaging in stakeholders in order to prevent issues and problems arising from its debt reduction efforts. In addition, KR publishes conflict resolution booklets to share know-how and holds biennial conflict management committee to identify sources of conflicts and periodically monitor conflicts in order to establish expand its support base to resolve conflicts. Furthermore, KR improved its risk response process by setting up IT-based financial risk management system capable of real-time financial risk monitoring and analysis.

On-line channel	Off-line channel	Satisfaction survey	
• VOC system to receive feedback • Hot-line with KORAIL	Conflict resolution team and regulation reform review conference On-site business partner mentoring	 Continued monitoring by satisfaction survey (employees, policy customers, business partners) Linking survey results with evaluation and awards 	

Background and impact

Key initiatives



Ethical management

Ethical management is at the core of KR's corporate value

Corporate ethics issues not only have adverse impacts on a company's survival, but also on the industry and the country in general. As a company responsible for the People's transportation convenience and safety, corporate ethics takes top priority at KR and will continue to do so.

(6) | Strategy | Establishment of ethical management system to create a culture of anti-corruption

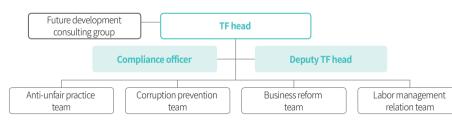
KR is eliminating potential corruption by establishing ethical management system and continuously improving its anti-corruption system. KR is providing anti-corruption guidelines by updating and revising its employee handbook and internalizing a culture of anti-corruption through various activities including training, education, and UCC contests. In addition KR is systematically managing its ethical management practices through periodic monitoring.

Activities 1 | Foundation for transparent management and a culture of anti-corruption

Reorganization and operation of anti-corruption organization

KR reorganized its anti-corruption organization and screening system by newly establishing the "Corruption Prevention and Future Development TF." This TF is comprised of anti-corruption, anti-unfair practice, business reform, and labor management relation team and enhances the platform for ethical management. KR also improved the expertise and credibility of its ethical management through verification by the future development consulting group comprised of external experts in different fields. Furthermore, KR operated the anti-corruption ombudsman system to receive feedback on unfair regulations, procedures, and business practices. KR reflected such feedback to ensure transparency in its business operations.

Corruption prevention and future development TF



Introduction of compliance officer system



Compliance officer system

The compliance officer system places internal control and monitoring system to ensure compliance with policies and internal regulations by KR and its employees when conducting business. An independent compliance officer monitors compliance with regulations prior to and throughout business activities. While the introduction of the compliance officer system was not a legal requirement for KR, KR established regulations and introduced the compliance officer to set a foundation for anti-corruption culture and ethical management as a public company. In December 2015, KR formed a compliance officer team comprised of nine internal compliance officers and two external compliance officers who were professor of law and lawyer. The compliance officer system will be implemented in KR's head office in 2016. In 2017, the compliance officer system will be updated to reflect the lessons learned in 2016 and will be expanded to KR's regional offices. KR will set the foundation for anti-corruption and transparent management by fully utilizing the compliance officer system.

Implementing comprehensive plans to recover confidence in railway

KR prepared "comprehensive plans to recover confidence in railway" which includes 33 action items in four different areas including reforming unjust practices in contract systems and preventing personnel corruption. Through implementation of this plan, KR was able to establish itself as an exemplary anticorruption agency in 2015. In addition, KR made improvements regarding systemic corruption such as unfair practices in goods delivery and personnel corruption such as unfair personnel practices and internalization of anti-corruption. KR was able to eliminate risk factors to ethical management by implementing guarterly monitoring.

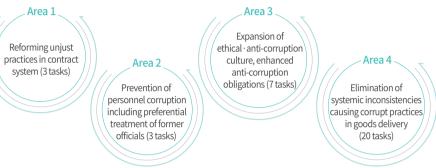
KR sought to identify and correct areas susceptible to corruption from a third party point of view. To achieve this aim, KR cooperated with the anti-corruption and civil rights commission (ACRC) and obtained objectivity in its anti-corruption system reform. KR reflected the results of ACRC's anti-corruption consulting (August 2015) and identified 16 action items in 4 different areas. In order to eliminate the systematic familiarity threat in the railroad industry, KR expanded the scope of persons subject to limited reemployment opportunities after retirement from executives to level 2 employees. In addition, KR hired external personnel for a number of key positions in order to bring about personnel reform and prevent familiarity threat. KR also enhanced the transparency of compliance management by introducing the compliance officer system to internally control and monitor regulations and procedures in advance and throughout the conduct of business activities. Furthermore, KR outsourced procurement activities susceptible to corruption to the Public Procurement Service to enhance fairness and reformed the monopolistic supplier system in specific and development items to encourage wider participation from railroad material suppliers. In addition by advance disclosure of tentative standards for newly developed items, KR was able to standardize and ensure quality of railroad materials.

16 tasks to improve anti-corruption system



Activities 2 | Normalization of unfair systems and customs

Four areas of comprehensive plans to recover confidence in railway



Improvement of anti-corruption system through cooperation with Anti-Corruption and **Civil Rights Commission**

f level 2 or higher employees inst personally contacting employees ent it of personal information of retired siness partners	 Introduction of restrictions against companies violating regulations regarding re-employment Detailed standards for composition and operation of technical consulting and design consulting committees Reporting standards for technical and design consulting committee members contacting retired employees
d independence of divisions in ourchasing contracts n by relaxing excessive restrictions and	 9. Expand scope of railway material standardization 10. Internal verification tool to prevent tampering with test results 11. Penalties for suppliers causing quality and safety issues
articipation for monopolized railway	13. Prior disclosure of tentative standards for newly developed materials
for corruption	16. Introduction of compliance officer system

Comprehensive evaluation and bidding system to ensure fair contract practices

Comprehensive evaluation and biding system is a system that awards contracts not to the lowest bidders but by comprehensively evaluating construction capability, fair pricing, trustworthiness of contract, and social responsibility of contractor. In July 2015, KR utilized the comprehensive evaluation and bidding system for 3 construction sites including Dodam~section 7 of the Yeongcheon construction site. KR has expanded the application of this system to all projects with contracts amount excess of KRW 30 billion starting from June 2016. Through the implementation of the comprehensive evaluation and bidding system, KR was able to prevent chicken games, quality degradation, and collusion, which were common issues in lowest price bidding. In addition, the implementation of this system enabled KR to improve its construction quality.

Activities 3 | Reform employee code of conduct to prevent corruption

KR initiated sweeping reforms to its employee code of conduct to prevent corruption. KR reflected suggestions to its code of conduct made by its customer and banned receiving mobile coupons and discount coupons to prevent receipt of gifts via smart phones. Furthermore, KR banned the notification of family events through 3rd parties to establish a sound family event culture. In addition, KR reflected ACRC's consulting results and disclosed the re-employment status and contacts of retired employees in related fields. KR updated special conditions for anti-corruption contracts and established re-employment status management system and mandated the submission of employment status of KR's retired employees (above general manager). As of June 2016, 28 persons were registered on KR's system. KR also mandated reporting of unjust solicitation and notification of investigation authorities. Furthermore, KR's division heads (or above) are forbidden from receiving contract and inspection duties for organizations they worked for three years prior to their employment at KR. KR also imposed stricter restrictions on personal contacts in order to enhance fairness in contracting practices. KR enforced stricter anti-corruption standards and obligations for employees by reforming its employee code of conduct in order to create a culture of anti-corruption. KR is continuing to take initiatives including notification using bulletin boards and anti-corruption officers in each division to prevent root causes of corruption.

Activities 4 | Company-wide internalization of anti-corruption culture

KR established comprehensive anti-corruption plans and conducted tailored training for employees in order to internalize a company-wide culture of anti-corruption. To set the tone at the top, KR conducted anticorruption training and official crime prevention training for its executives. Off-line training for all employees was carried out at regional offices by company instructors. KR also created two on-line anti-corruption courses to be completed by all employees in the course of one year. KR also had its ethics management personnel participate in ACRC's anti-corruption policy training and held second-half workshop for its inhouse anti-corruption managers (45 people) to enhance the expertise of related persons. In addition, KR designated Tuesdays as "Anti-corruption day" and broadcasted the "anti-corruption song" and shared anti-corruption contents (UCC and examples) on the company bulletin in order to continue to internalize the culture of anti-corruption. At the year-end, KR held the KR performance awards in which KR shared exemplary cases of anti-corruption and ethical management, UCCs, and awarded incentives (additional points in MBO) to outstanding anti-corruption managers and their team leaders.





Anti-corruption UCC

On · Off-line anti-corruption training program

	Key contents	Implementation performance
Executives	 Executive training on official crime prevention (corporate secrets, embezzlement, etc.) (March 11) Anti-corruption training for executives felt with 5 senses (October 13) 	 executives head office and Choongcheong regional office (118) CEO and executive officers (53)
Experts	 Anti-corruption manager workshop (biennial) (April 3, October 26) ACRC anti-corruption policy training (April 24) 	 anti-corruption managers in their respective teams ethical management personnel (2)
Common courses	 Regional office anti-corruption training supervised by the standing auditor (January 22~February 6) On-site anti-corruption training for all employees (June 15~June 23) On-line anti-corruption courses (2 courses per year) 	 employees in regional offices employees in applicable departments All employees in 1st and 2nd half of the year (2,633)
Monitoring	Collected VOC for anti-corruption training through anti-corruption r	nanager workshop (45) (October 26)

KR formulated various measures to prevent corruption issues. KR expanded the homepage disclosure requirements for business expenses from high level executives to individual teams. KR also revised regulations regarding unfair corporate card usage to enable corrective measures afterwards, thereby ensuring transparency in the usage of corporate cards. KR also established reporting systems for work related external lectures and conferences to ensure systematic management and updated its code of conduct to enforce stricter penalties against violations of regulations. KR subdivided railroad construction sites into sectors and conducted audits on a regular basis. KR also shared different types of audit results in different areas including railroad project and property management with regional offices and shared introduced consulting and auditing system focused on prevention. In addition, the majority of KR's disciplinary committee is now comprised of external experts in order to ensure appropriateness of disciplinary measures and prevent leniency.

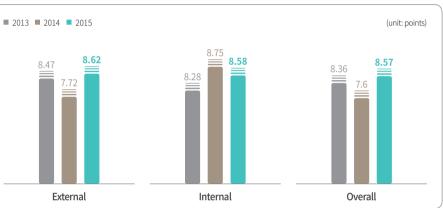




Evaluation and future directions

KR was able to establish itself as an outstanding anti-corruption agency through its CEO's strong drive for ethical practices and the accompanying company-wide efforts. KR received level 2 rating in overall anti-corruption for the first time, up three levels from the previous year. KR received level 1 rating in the anti-corruption implementation assessment, up two levels from the previous year, and ranked highest among the Ministry of Land, Infrastructure, and Transport's SOCs. However, direct and indirect instances of corruption occurred in some regional offices, resulting in a lower internal anti-corruption score than the previous year. KR is analyzing its anti-corruption process and taking initiatives to improve its system. In the future, KR will provide tailored anti-corruption training for all its employees to address weak points and establish a cooperative system with its business partners to prevent corruption. Furthermore, KR will encourage voluntary anti-corruption culture and internalize ethical management to become a trusted public company that leads the anti-corruption culture.

Activities 5 | Prevention of corruption issues through stronger internal controls



ACRC anti-corruption assessment

Anti-corruption implementation assessment





Background and impact

Key initiatives

ISSUE 05 🐆 🔒 📲 📫 🗭 🖽 👳

Win-win growth

growing alongside our stakeholders

Recently, discussions about fair trade and win-win growth have been making headlines in various fields in our society. KR, as a public company responsible for executing and managing large scale railway construction projects, is taking a leadership position in establishing cooperative partnerships that can benefit all parties involved in construction projects, be it large corporations or small and medium enterprises.

I Strategy | Expanding the environment for transparent and fair competition and foundation for cooperative partnership

KR established three win-win growth strategies comprised of "construction of growth ladder," "establishment of infrastructure and expansion of win-win culture," and "implementation of sound fair trade practices," as well as mid/long-term roadmap for implementation of these strategies. Keeping in line with the CEO's drive for win-win growth, which was made clear from the start of his tenure, KR created an environment conducive to transparent and fair competition and expanded the foundation for win-win growth. Specifically, KR cooperated with and provided support to its business partners including but not limited to assignment of win-win growth managers, elimination of unfair customs, reforming regulations, expanding opportunities for small and medium enterprise participation, and jointly entering international markets. In addition, KR is transparently implementing such measures by reflecting suggestions for corrective measures.

Win-win growth strategic system

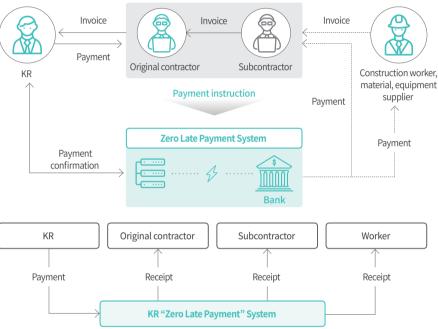
Mission	Horizontal and cooperative partnership in the railway industry ecosphere					
Vision	Supporting creative economic development through KR's win-win growth					
Core value	Autonomous win-w	Autonomous win-win growth and cooperative construction ecosphere				
3 key strategies	Growth ladder	Infrastructure and culture	Implementation of sound fair trade practices			
6 themes	Tailored SME support Joint domestic and international market entry	Enhance autonomous win-win growth activities Promote expansion of win-win growth culture	Eliminate unfair practices and reform regulations Stricter management and control of unfair subcontracting practices			
	2011~2013 Introductory phase	2014~2017 Settlement phase	2018~2020 Stabilization and expansion			
Mid/ long-term roadmap	 Expand railway investment Recovery of construction business, job creation 	Tailored SME support Joint domestic and international market entry	 Continued performance generation Expansion of autonomous win-win growth culture 			
	Creation of win-win growth infrastructure	Re-initiation of win-win growth program (overcoming slowdown)	Upgraded win-win growth (sustainable system)			

KR Future Development TF CEO External Head of TF consultants Deputy head of TF Unfair Labor External Organizational Custom lanagement Policy Performance Resolution Cooperation Team Team Team Team Investigatio Public sector £ Private and correctiv KR sector measures Planning • CAK KOSCA Contracting Construction KMCCA Facility KENCA

Prevention of late payment through KR "Zero Late Payment" System

Late payment, a common occurrence in construction business, is an issue that can easily lead to a series of financial problems among subcontractors and material and equipment suppliers. In order to prevent such late payments, KR established a new KR "Zero Late Payment" System. Previously, KR paid the entire contract amount to the original contractor, making it difficult to control payments between contractors. Through the KR "Zero Late Payment" System, which is linked with bank however, KR is able to distinguish and make direct payments to subcontractors, material and equipment suppliers, and construction workers, thereby eliminating the possibility of late payment. In 2015, KR tested the system in three railway projects and achieved zero late payments. KR's zero late payment was subsequently recognized for its effectiveness and selected as the Ministry of Land, Infrastructure, and Transport's standard payment management model.

Zero Late Payment





KR implemented various reforms to its systems in order to provide more opportunities for SMEs to participate in railway construction projects. KR assigned more credit when local suppliers were participating in intercity railway construction and local construction projects and penalized business proposals that did not include SMEs. As a result, SMEs were able to participate in all of KR's projects in 2015. In addition, KR ensured that large corporations and SMEs shared equal position in contracts in order to create a horizontal cooperative relationship and prevent unfair trade practices resulting from hierarchical structures.

Establishment of private-public partnership by eliminating unfair customs

KR is operating the "KR Future Development TF" which identifies improvements to be made and implements improvement measures to fulfill the social demand for reforming public companies. In 2014, KR established the "Unfair Custom Resolution Team" within the future development TF in response to identification of numerous unfair trade practices in railway construction sites during a subcontractor inspection. KR cooperated with the private sector, including CAK (Construction Association of Korea), in order to dispense of unfair customs that were still in place in construction sites. As a result, KR was able to eliminate 18 unfair customs, one of which was shifting responsibilities to subcontractors. KR was also able to make improvements to 13 unnecessary regulations which resulted in the minimization of design deliverables.

Activities 1 | Creation of cooperative construction environment by correcting unfair practices

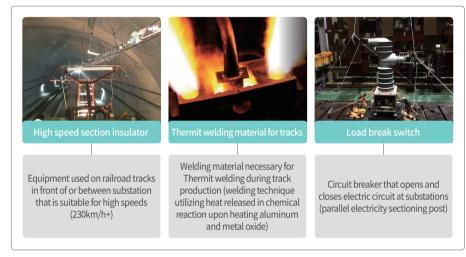
Providing business opportunities for SMEs by reforming contract systems

Activities 2 | Creation of growth ladders to support SME market expansion

Increased SME product acquisition through purchase-backed development projects

KR and SMEs are jointly implementing purchase-backed development projects which localizes production of railroad materials and gives priority in purchasing. SMEs participating in the joint development projects can advance their technological competency while securing demand for their materials at the same time. During the construction of Honam high speed rail which opened in April 2015, KR gave priority to SME's products that were developed through the purchase-backed development projects. KR plans to give priority to three additional items that were successfully localized in 2015 in future construction projects.

Successful localization through purchase-backed development projects in 2015



Promotion channels for SME products

KR provides support in promoting high quality SME products to different business departments in KR and various construction industry customers. KR opened the on-line consultation platform which enables SMEs to promote and sell their products year-round. In addition, KR hosts conferences to promote SME products twice a year.

In the two conferences held in 2015, 34 SMEs participated to exhibit their products and introduce their technologies. Furthermore, KR assigned target SME purchase ratio and is encouraging giving priority to SME products when making purchasing decisions.

Category	Contents	Product sales
Building equipment (6 companies)	 reviewed purchasing priority for materials for AL fitting reviewed purchasing priority for tiles and water proof materials 	3
Railway electric (4 companies)	• reviewed purchasing priority for materials for distribution panel and panel board	2
Electronics and telecommunication (3 companies)	 reviewed purchasing priority for train destination indicator materials 	1





Creation of SME sales platform through joint international market entry

KR is supporting international sales by SMEs by forming consortiums with SMEs when entering international railroad projects. In 2015, KR successfully concluded four new international contracts in cooperation with SMEs. SMEs participating in these projects recognized KRW 10.6 billion in international revenues. KR will continuously contribute to the expansion of SMEs' international sales platform by enabling SMEs to gain international experience and raise customers' awareness.



Enhancing cooperative relationship through feedback loop

quality or cut costs.

Evaluation and future directions

In 2015, KR received "satisfactory" rating for its win-win growth assessment in recognition of its proactive win-win growth initiatives. KR will continue to correct unfair practices and customs and establish a horizontal relationship between large, medium, and small enterprises as well as employees in order to create a sound construction industry.

Media coverage of KR's win-win growth activities

"Path of win-win growth with business partners"

KR invited approximately 100 business partners to the "conference for quality and safety improvement and win-win cooperation" in search of ways to achieve sustainable growth. Constructive discussions took place to normalize unfair practices between purchases, original and subcontractors and cooperation to achieve win-win growth. KR introduced the KR "Zero Late Payment" System and pledged to create a construction industry environment without any instances of late payment.

Activities 3 | Expansion of win-win growth culture through communication with internal and external customers

On-site trouble shooting through communication with business partners

KR is engaged in activities such as "on-site trouble shooting" to communicate with business partners and proactively resolve conflicts and problems. KR hosts annual "One-mind conference" in which KR's construction and technology departments and business partners in design and construction participate. In this conference, KR receives feedback from its business partners and seeks to establish horizontal cooperative relationship between all parties. In addition, KR hosts subcontractor conferences to receive input on on-site issues such as late payment and inequities resulting from hierarchical contractual relationships in order to discuss and resolve such issues.



Autonomous implementation of win-win growth ideas

KR is taking initiatives to identify and implement various win-win growth tasks. In 2015, KR provided various training programs including project management to 712 SME employees. In addition, KR contributed to the cost saving activities of its business partners by allowing SMEs to use KR's high-end testing devices including spectrometers. Furthermore, KR hosts periodic technology seminars to enable SMEs to improve product

KR also utilizes public-private technology development fund formed in conjunction with Small and Medium Business Administration and Foundation for Large, medium, and small business cooperation in order to support SMEs' railway technology development.

General news Daejeon	KR opens the way of safety and win-win with the construction industry. Supporting win-win development by safety management, prevention of delayed payment to subcontractors, and abolition of unfair practices
a conference for in 100 business partn council chamber of participants review cooperation for sha	baejeon (korea Rail Network Authority ("KR") (EC: Yeong-H Kang) had mprovement of safety quality and win-win cooperation with about ers including railway constructors, supervisors, designers et al in the the head office at 300 ers. on 26 this month. In that conference, all the eff headely result of railway constructor of 2015 and resolved win-win ring of government's safety policy, eradication of unfair practice among subcontractors, and development Off herailway influence and development of the railway routstry in 2016.
all the participants s	h 150 persons from business partners and KR's employees participated, shared the performance of the excellent safety management that despite d full-time workers due to increased business expenses scale of KRW 8

Daejeon Today (November 26, 2015)

OUR PRIORITY



Background and impact

Key initiatives

ISSUE 06

Human resource management

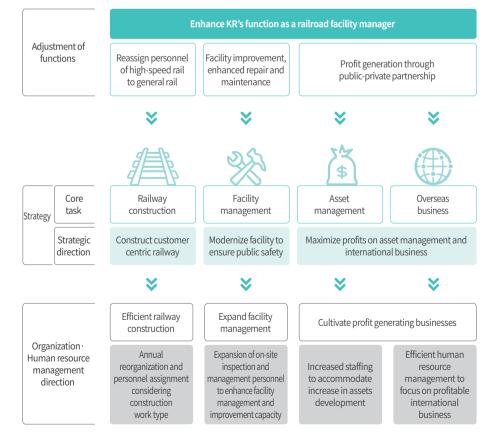
People are KR's greatest asset

The need to review KR's human resource management system surfaced as KR's role and focus was changing from railroad construction to facility management. At the same time, increasing social demand for better quality of life initiated discussions about work-life balance. In response to such changes in business environment and social demands, KR is resetting its organizational operations and striving to cultivate the right people. In addition, KR is providing various systemic support including flexible working hours to create a better work place.

Strategy | KR human resource management strategy

KR reset its organizational and human resource management direction in response to changes in business environment that demanded a larger role in railroad facility management and improved safety. KR relocated its human resources, previously focused primarily on construction business, to facility management, asset development and international business to ensure the company's sustainability. In addition, KR newly established a facility improvement organization in response to increased demand for improvement projects as railway construction projects near completion and existing railway facilities become obsolete. KR is aligning its human resource training, policies, and compensation schemes to such organization and human resource management in order to improve the organization's productivity.

Direction of human resource management

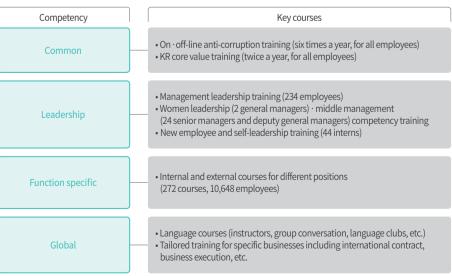


Redesigning organization in line with changes in strategic direction

KR expanded its facility, asset management, and international business organization in order to enhance its competency in facility management and new businesses. At the same time, KR aligned construction project management organizations to the changes in work types in major projects to provide timely support. KR also established a new technology team to enhance its core competency in the railroad project. Furthermore, KR is forming temporary organizations such as the property management system T/F responsible for preparing station facility usage contract and facility usage T/F responsible for selecting new operators of station facilities through competitive bidding, in order to respond to ad hoc issues.

KR established a performance management system to achieve corporate goals and strategies and is creating a culture of meritocracy by reflecting evaluation results in remuneration and other human resource considerations. KR conducted employee interviews to reflect appropriate tasks in the evaluation index and adjusted evaluation groups considering similarities in organizational functions to enhance the rationality and executive ability of evaluations. KR held briefings and on-line surveys to receive feedback and VOC regarding the evaluation system and established evaluation committees comprised of internal and external experts. Through such measures, KR was able to enhance the rationality of the evaluation system and employee satisfaction at the same time.





Activities 1 | Organizational structuring based on core functions and performance

Rational performance management system approved by employees

Activities 2 | Tailored training programs to enhance organizational competence

KR analyzed its management strategy, training requirements and core competencies in order to establish human resource development strategies that cultivate creative leaderships among managers and working level knowledge among employees. KR is offering training programs focusing on four major areas of competency (common, leadership, function specific, and global) that are tailored to position and function in order to enhance organizational competency.

In addition, KR expanded professional training programs linked with professional training agencies such as Ministry of Land, Infrastructure, and Transport human resource development center and human resource development center for public procurement service (total of 29 organizations, 194 courses, 536 employees) to provide training programs, thereby enhancing working level knowledge of different departments. Furthermore, KR is assigning employees who complete overseas technical training (master's degree) to related divisions or departments to align personal development with organizational growth.

Activities 3 | Socially equitable human resource management to strengthen social responsibility

Open hiring practices and expansion of socially equitable employment opportunities

KR, keeping in line with the government initiative of holistic recruitment practices, introduced a competency based recruiting system based on the national competency standards (NCS). 176 persons, equivalent to 13% of the recruiting class in 2015, were hired through this system. This is the largest NCS based employment in KR's history. From an external standpoint, such hiring practices contributed to lower youth employment while from an internal standpoint, such hiring practices balanced generational gaps in human resources. In addition, KR set employment quota for socially disadvantaged groups including women, high school graduates, and local community residents. Furthermore, KR diversified hiring methods to include hiring graduates from specialized high schools through "Scout" and hiring women who experienced career interruptions at call centers in order to expand socially equitable employment opportunities.



Abolishment of glass ceilings for women and high-school graduates

KR is going beyond hiring more women. In order to promote gender equality, KR is actively training and promoting women to managerial positions. KR is increasing the ratio of women in management by providing various advantages including expanding the scope of management training for women from deputy general manager to senior manager, reducing time to promotion by 5% compared to men, and making more women eligible for promotion and assigning women to key positions. In addition, KR is assigning high school graduates to key positions in order to meet society's demand for a culture that does not discriminate on the basis of education. At KR, high school graduates are promoted to the same position as college graduates after four years of work experience and receive the same treatment as college graduates in terms of future promotion opportunities and remuneration.

Management personnel



Activities 4 | Creating a corporate culture conducive to employee happiness

Various flexible hour arrangements to improve employees' quality of life

KR implemented various flexible working hour arrangements including flexible hours and part-time options for pregnant or child rearing employees. In 2015, 154 employees took advantage of the flexible hours and 8 employees utilized the part-time option, totally making 162 persons, to achieve balance between work and life. KR developed seven functions for which flexible working hour arrangements are well suited for and provides identical employee benefits, promotion opportunities, evaluations and training opportunities to employees assigned to these functions. In addition, KR is seeking to expand the flexible hour arrangements by providing priority in training, assignment to desired posts, and giving additional credit in team evaluation.



Family invitation ceremony for corporate culture experience



KR employees at the Three Rivers Marathon



We declare, as stated below, that we will follow the Global Human Rights Declaration and respect our own as well as our stakeholders, we will the participation of our employees' as well as our stakeholders, we will work to protect and advance human rights and champion human rights

- First, We support and respect the international standards and regulations to support the values of human rights, labor, environment, and anti-con
- Second. We do not discriminate between stakeholders on the basis of race. eligion, disability, gender, birthplace, and political views
- Third We guarantee the right of association and collective bargaining for the tection of our employee human rights.
- Fourth. We do not permit any forms of forced labor and child labor
- Fifth. We create safe and sanitary work environment and guarantee industrial safety Sixth. We support and cooperate with partner companies to enable all
- partners to implement human rights management. Seventh. We respect and protect human rights of the local community in areas where
- ve conduct our business operations. Eighth, We strive to protect the environment for healthy happy lives for our nation and future generations.
 - We commit ourselves to not endanger the safety of public and to protect th confidentiality of the personal information collected in the course of our

To fulfill these promises, we declare our commitment to guaranteeing universal freedom an rights and human integrity for all our stakeholders, including our employees, and that we wil work together to ensu

> Korea Rail Network Authori By all employee

Human rights declaration

Ninth.

Evaluation and future directions



Expanding work-family balance through family friendly management

KR became a certified family friendly organization in 2015 due to its various efforts to create a culture of work and family balance. In addition to part-time options for child rearing and pregnant women, KR extended the maternal leave for men from 1 year to 3 years. Currently 10 men are on maternity leave. Furthermore, KR opened additional KR nursery homes and employed 30 additional caretakers to reduce employees' burden of child rearing. Wednesdays are family days at KR, where the "Family Song" is broadcasted and employees are encouraged to refrain from overtime. In addition, KR provides various programs including family invitation days and paid family vacation for outstanding employees.

Support for personal development and recreational activities to promote work-life balance

KR is striving to achieve employee work-life balance by providing various educational programs including home coffee courses, yoga classes during lunch, and telephone English courses. KR also created the retirement preparation course to enable employees to systematically prepare for life after retirement. In order to promote employee health, KR has group exercise time at 3PM. In addition, KR created the "KR healthy stairs" by decorating the stairwell in its buildings with runway photos with mirrors and other pictures to promote walking. In addition, KR is implementing the reading bucket list challenge in which employees exchange books as gifts to encourage reading and personal development. KR also provides electronic library and scholarly article services to promote reading among its employees. KR also made it easier for employees to form clubs to encourage recreational activities among employees. In addition, KR encourages its employees to take leaves and operates 26 resorts to enhance employee welfare.

🖊 | Activities 5 | Human rights management

Continued promotion of human rights

KR is striving to fulfill its social responsibilities in the four areas of human rights, labor, environment, and anti-corruption in accordance with the 10 principles set forth in the UN Global Compact which includes implementation guideline for human rights and calls for corporate social responsibilities. Combining the CEO's management philosophy that prioritizes mutually beneficial management and the human rights management guidelines set forth by the National Human Rights Commission of Korea, KR is implementing human's rights management that respects the inalienable rights of not only KR's employees, but the employees of KR's business partners, customers, and the local residents.

Declaration of human rights and establishment of human rights management implementation guideline

KR's human rights declaration, issued in July 2015, contains human rights of various stakeholders that KR ought to protect as a public company engaged in the railroad project, including but not limited to antidiscrimination, expansion of human rights management for business partners, and protection of local residents' human rights. In order to ensure effective implementation of the human rights declaration, KR established human rights office and human rights committee and set up human rights management implementation guidelines which specified the implementation of human rights effect evaluation to prevent violation of human rights. KR is taking initiatives to continuously promote human right management through annual human rights training and monitoring of business partners' human rights compliance.

KR will continue to operate its organization focusing on core competencies in order to proactively respond to the changing railway industry environment. KR plans to assign the right people to right post by linking human resource systems with tailored training for different functions and positions. KR will continue to give consideration to unemployed youth, disabled persons, and women in its hiring and human resource management process. KR will also create social value by providing various supports to enable employees to achieve work-life balance. Finally, KR will communicate with its constituents to create a rational and sustainable system that its employees find to be satisfactory.

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Sense of

duty

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recoverv

Executive

capability



Background and impact

Key initiatives



Customer satisfaction

KR will become a company that is trusted by its customers

Customers are playing an increasingly important role in a company's performance. Therefore, it is imperative to have a long-term initiative for increasing customer value. KR has two way communication channels with its internal and external customers and is building upon the four principles of government 3.0 (openness, sharing, communication, and cooperation) in order to establish relationships with its customers and build trust.

I Strategy | Improving customer satisfaction

KR re-established its customer satisfaction management system and "KR customer satisfaction strategy" by analyzing drivers in customer satisfaction change, diagnosing internal competency, and analyzing customers in order to reflect its stakeholders' needs in management policies. In addition, KR upgraded its VOC system^{*}, improved internal competency, and provided training courses to enhance organizational productivity and customer satisfaction in order to implement top-tier customer satisfaction services among public companies. As a result, KR was able to improve public transportation convenience while maintaining good relationship with its stakeholders. In recognition of such efforts, KR received the A rating in the Public-Service CustomerSatisfaction Index 2.0** for two consecutive years.

* VOC system: VOC (Voice of Customer) is a customer management system that integrates customer opinion and feedback from various customers to maximize efficiency of products, services, and marketing activities.

* * Public-Service Customer Satisfaction Index 2.0 (PCSI 2.0): PCSI is a model to measure customer satisfaction comprised of satisfaction index. quality index. and performance index.

KR CS strategic system

Corporate mission	Connecting	the world throug	h rail and creatii	ng happiness	
Corporate vision	Realizing Faster, Safer, and more Convenient Rail Network				
CS vision	Customer satisf	action and trust	hrough sincere	communication	
CS goals	Qualitative: Earning public trust Quantitative: No. 1 in customer satisfaction among semi-autonomous government agencies				
CS strategic direction	Establish mutual trust through communication with customers	Improve CS im for win-wi		Establish customer value management system to create future value	
CS strategy action items	Improve response to social media and other smart medium Enhance on-site VOC collection and activities Upgrade customer centric services	Enhance win managemen business part Improve CS c executive cap Realize tailor	t with mers rganizations' pabilities	 Revise CS evaluation and remuneration system Prepare ways to improve public image Prepare basis for CVM 	

Overall customer satisfaction survey result



Tailored training directions and methodologies

Training directi Training to provide solutions for Mentoring problems Task sharing and COP problem solving through communication On-site, group, Hands-on training applicable to real and external life situations training Sharing success Expert stories and increasin lectures motivation Emotional healing Emotional and recovering training assion about work Educating CS CS Master

experts

programs

89

0

37,355

2014

Passion Emotional

Recently, cyber-attacks against public companies and resulting information leakage are becoming increasingly common. As such, there is a need for implementing information protection management system. In response, KR designated and is implementing three strategic directions of working environment conducive to information protection, cyber threat management activities, and prevention of information leakage. Furthermore, KR established an information security organization in order to ensure prompt response to external and internal environmental changes. KR staffed this organization with three information security personnel and one privacy protection personnel. KR is also refraining from collection personal identification numbers, unless mandated by law. As a result of these efforts, KR was named an "outstanding organization" in the privacy protection diagnosis and private information impact assessment by the Ministry of Interior in July 2015. In addition, KR recorded zero security incidents for four consecutive years.

KR established three conflict prevention and management strategies comprised of system reform, revising

implementation procedures, and improving conflict prevention competencies. As a result, KR was able to transition from its previous custom of "business first, conflict resolution next" to a new paradigm of conflict prevention. KR established conflict prevention and management system led by the internal "conflict coordination committee", responsible for identifying and managing sources of conflicts, and the "conflict management review committee", comprised of 7 members including 4 civilian members, which is responsible for reviewing conflicts. In 2015, KR was able to resolve five of the six conflict situations. KR awarded outstanding cases of conflict resolutions and published case books to spread the culture of conflict resolution



Host conflict Selection and Preparation of monitoring of conflict coordination onflict prevention management committee activities cards meetings

2015

90

0

40.898

Evaluation and future directions

Employee satisfaction for tailored training

Total trainees (persons)
 Satisfaction score (points)

KR established a conflict management system in order to improve customer satisfaction and upgraded its VOC management system to create a company-wide customer satisfaction management system and to lead customer-centric management practices. KR will continue to prepare various strategic measures including VOC system improvements, systematic analysis and sharing of customer opinion, and improving internal competency to ensure continued customer satisfaction.





Activities 1 | Government 3.0 platform-based civil complaint service

KR improved its various and often complex civil complaint administration system into a proactive, onestop, and tailored system as an effort to implement the government 3.0 initiative. KR updated its system so that these tasks could be processed with a click of a button. In addition, KR conducted publicity activities for its new system at some 400 construction sites throughout Korea and through major media. Complaints registered on "e-People" are forwarded to the Customer Service Center for additional analysis and response and for monitoring of final results.

Activities 2 | Tailored training programs

KR is taking initiatives to systematically respond to feedbacks and complaints registered on VOC by various stakeholders and improve customer satisfaction. KR provided tailored training programs such as mentoring, group and external training, expert speaker lectures, and CS Master training to enhance customer service competency of its employees and ensure that KR's employees at different points of contact with customers can provide appropriate response to customers' needs and wants. In addition, KR offered hands-on training programs to enable its employees to relate to the customers rather than focus on formalities to prevent VOCs from occurring in the first place.

Activities 3 | Protection of customer information through information security system

Activities 4 | Formation of customer trust through conflict prevention and management system





Background and impact

Key initiatives

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Social contribution

KR will fulfill its social responsibility by sharing

KR is enhancing its connections with local communities by participating in non-profit social involvement activities including environmental campaigns, volunteer activities, and donation activities for rural areas and marginalized people. KR will fulfill its social responsibilities as a public company in order to grow with the people.

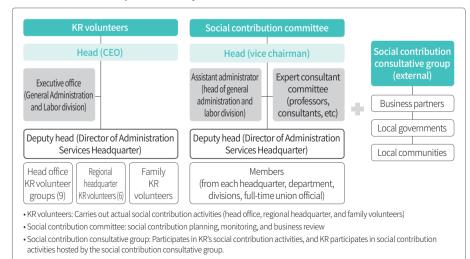
I Strategy | KR social contribution strategy

KR is spreading and developing the value of sharing through public service activities utilizing railroad infrastructure that contributes to local economic development, and serve local residents and disadvantages persons. In 2015, KR established and branded its three social contribution strategies (C.S.R.), comprised of "Creative Value," "Social Responsibility," and "Regional Indigenous." In addition, KR prepared six action items including creating public accommodations utilizing railway facilities, expanding the culture of environmental friendliness and safety, and KR youth hope project as means of implementing its social contribution activities. Through its social contribution activities, KR is sharing with the local communities providing support to disadvantaged persons.

KR social contribution strategy

Social contribution strategy goals	Implementation of corporate social responsibility(CSR) activities utilizing core railway engineering competence					
	Creative value	Social responsibility	Regional indigenous			
3 key strategies	Social contribution activities creating shared values (CSV)	Social contribution activities enhancing public safety and convenience	Social contribution activities tailored to target regions			
6 action items	Creation of accommodations utilizing railway facilities Global contribution of railway technologies	Public service activities including disaster relief Expansion of environment friendly and safety culture	Tailored contribution programs KR youth hope projects			

KR social contribution implementation system



Okcheon KTX railway theme park (tentative naming)



Bazaar for love

enhance safety.

KR continued to carry out various locale specific volunteer activities including one company - one village activities, scholarship programs, child sponsorship, as well as kimchi and briquette donations. In 2015, KR made full use of its personnel and competencies by providing housing and electric repairs. In addition, KR initiated new activities including uniform donation and support for multi-cultural families. Furthermore, KR provided both physical and mental support for multi-cultural families, financially needy, disabled and elderly persons as well as well as single mothers through sharing events including friendly conversation and a party of Korean Thanksgiving-day.



Briquette donation

Evaluation and future directions

Electric repain

KR is planning railway technology transfer programs including overseas internships and exchange programs as a part of its creative value activities. In addition, KR will continue to expand public accommodations by creating parks, developing station spheres, and constructing railway theme parks. Furthermore, KR will establish an expert consulting committee to identify the needs of local communities and raise employee awareness and implement various public service activities to earn people's trust.



Activities 1 | Creative value

Instead of demolishing the existing railway after the opening of the Daejeon urban KTX line in the Gyeongbu high speed rail, KR initiated the "Okcheon KTX railway theme park (tentative name)" business. KR decided to create a tourist attraction from a railway track that was scheduled for demolition.

KR began work after reaching an agreement with the local community and created a business that is expected to attract 170,000 tourists per year, generate KRW 1.6 billion in value added, and create 20 new jobs.In addition, KR conducted invitation training for foreign railway personnel in order to transfer its technologies to developing countries.

To ensure extensive knowledge sharing, KR established its first short-term railway school in Egypt in 2014. KR proceeded to establish short-term training programs in Egypt (March 2015), India (May 2015), and Vietnam and Laos (September 2015) to conduct expert training programs.

Activities 2 | Social responsibility

KR is creating social contribution funds through various donations including voluntary employee donation, sharing fund, and matching grants*. KR also participated in domestic and overseas donation and disaster relief activities including contribution to Nepalese citizens after earthquakes. In addition, KR also delivered donations to encourage military and police personnel serving in isolated areas.

KR carried out railway safety campaigns by distributing souvenirs and pamphlets to construction sites and local residents that encouraged safe railroad crossing and refraining from unauthorized work in order to

* Matching grant: System in which the company matches the donation made by employees.

Activities 3 | Regional indigenous



Donation ceremony on Lunar New Year

SUSTAINABILITY PERFORMANCE

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> • Summary of the Social Performance

• Summary of the Environmental Performance

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🕒 Sustainability Performance 🛏

Economic performance

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Assets

Liabilities

Summary statement of financial position

Category

Non-current assets

Category

Current liabilities

Total liabilities

Non-current liabilities

Current assets

Total assets









Capital			(unit: KRW 100 million)
Category	2013	2014	2015
Deficit	(18,438)	(18,728)	(19,458)
Other components of equity	(12)	(251)	(193)
Total capital	(18,450)	(18,980)	(19,651)

(unit: KRW 100 million)

2015

9,794

170,936

180,730

2015

33,031

167,351

200,382

(unit: KRW 100 million)

2014

5,786

165,028

170,814

2014

26,283

163,509

189,792

2013

7,365

156,169

163,534

2013

25,602

156,381

181,983

Condensed income statement

			(unit: KRW 100 million)
Category	2013	2014	2015
Turnover	8,105	10,704	12,461
Cost of goods sold	4,877	7,023	7,841
Gross profit on sale	3,228	3,681	4,620
Operating profit	3,228	3,681	4,620
Non-operating income	515	441	467
Non-operating expenses	4,701	4,412	5,817
Current net loss	(958)	(290)	(730)



Distribution of the economic value

Creation of economic

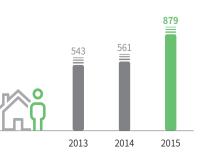
Distributio the econo value

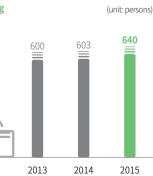




Category	Unit	2013	2014	2015
Turnover, Governmental contribution, Bond issuance et al	KRW 100 million	101,538	103,639	116,103
Business partners (order of the investment project)	KRW 100 million	70,972	79,424	55,700
Financial expenses (principal and interest, etc.)	KRW 100 million	33,804	23,848	24,867
Employees (personnel expenses)	KRW 100 million	998	1,139	1,202
Taxes and dues	KRW1 million	513	76	4,050
Operation expense of the institution (operating cost et al)	KRW1 million	24,860	25,956	33,656
	Turnover, Governmental contribution, Bond issuance et al Business partners (order of the investment project) Financial expenses (principal and interest, etc.) Employees (personnel expenses) Taxes and dues Operation expense of the institution	Turnover, KRW 100 Governmental contribution, million Business partners KRW 100 (order of the investment million Financial expenses KRW 100 (principal and interest, etc.) KRW 100 Taxes and dues KRW1 Operation expense of the KRW1 institution KRW1	Turnover, Governmental contribution, Bond issuance et alKRW 100 million101,538Business partners (order of the investment project)KRW 100 million70,972Financial expenses (principal and interest, etc.)KRW 100 million33,804Employees (personnel expenses)KRW 100 million998Taxes and duesKRW1 million513Operation expense of the institutionKRW1 million24,860	Turnover, Governmental contribution, Bond issuance et alKRW 100 million101,538103,639Business partners (order of the investment project)KRW 100 million70,97279,424Financial expenses (principal and interest, etc.)KRW 100 million33,80423,848Employees (personnel expenses)KRW 100 million9981,139Taxes and duesKRW1 million51376Operation expense of the institutionKRW1 million24,86025,956

Indirect economic impacts (job creation)





🕒 Sustainability Performance 🛏

Employment overview

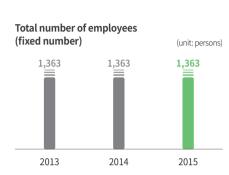
Recruitment of non-regular work

Young interns Specialized contract job

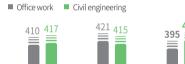
(unit: persons)

422

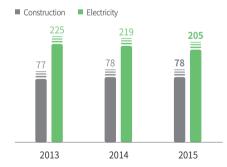
Social performance



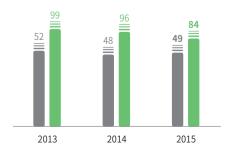
Personnel overview by series of class







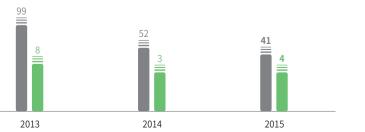
Telecommunication



C	Category	Unit	2013	2014	2015
	Regular worker	persons	1,333	1,330	1,352
Employment specific	Contract worker	persons	21	19	19
	Non-regular worker	persons	27	23	23
	20~29 years old	persons	29	56	68
	30~39 years old	persons	218	224	200
Employee distribution	40~49 years old	persons	696	687	595
oy age	50~59 years old	persons	380	354	454
	Over 60 years old	persons	8	2	12
	Women executives	persons (%)	144(10.8)	159(12.0)	176(13.0)
Minority overview	Women deputy head of department or higher	persons (%)	17(1.3)	22(1.7)	26(1.9)
	Disabled person	persons (%)	46(3.4)	44(3.3)	46(3.4)
	Total	persons	21	48	54
	Disabled person	persons	-	-	0
	Women	persons	10	18	17
New recruits	High school graduates	persons	4	8	10
	Characterization high school	persons	-	-	5
	Natural sciences and engineering	persons	11	19	19
	Local talent	persons	9	21	11
	Regular retirement	persons	11	6	6
Change jobs	Voluntary resignation	persons	29	27	19
Average continu	ious service year	year	18.9	18.5	19.2



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Summary of the Economic Performance Summary of t	b he Social Perf
Labor union overview (as of 2/4 quarter 2016)	Industria
Name of the labor union A R A Labor Union of Korea IUNION Rail Network Authority	Accid Avera Rail-r
Date of establishment	Support
25 May 2005	
Number of employees subject to join	Purchase ra
8 1,418 persons	Number of e in the joint F

Union numbers		
Regular worker	Non-regular worker	Contract worker
1,086 persons	6 persons	13 persons

Edu Edu Ass

Full-time workers of the labor union

8	
\Box	

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Upper organization

5 persons

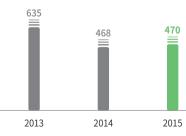
Emplo Reinsta Safety

Korean Confederation of Trade Union, Korean Public Service and Transport Workers' Union

Customer satisfaction index

			(Unit: point
Category	2013	2014	2015
Satisfaction index of handling civil affairs	74.9	-	-
Satisfaction level on E-People	-	46.6	52.8
Satisfaction index of the business partners	94.9	93.1	89.7
Public-service customer satisfaction index (PCSI)	94.1	94.2	94.2

Trade with and goods purchase from the business partners (unit: KRW 100 million)



Accident rat

Others

ial safety

Category	Unit	2013	2014	2015
ident rate	%	0.102	0.087	0.083
rage of the construction industry	%	0.46	0.45	0.51
l-related accident	number of items	16	20	16

rt to Small and Medium Enterprises ("SMEs")

Category	Unit	2013	2014	2015
rate of SMEs' product	%	26.77	29.12	31.25
of support to joint R&D	number of items	10	6	2
of enterprises participating t R&D	number of enterprises	13	7	2

Education time and investment

Unit	2013	2014	2015
hour	132	120	119
KRW 1000	919	880	1,090
%	36.67	35.60	36.32
	hour KRW 1000	hour 132 KRW 1000 919	hour 132 120 KRW 1000 919 880

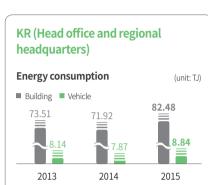
Welfare and occupational safety

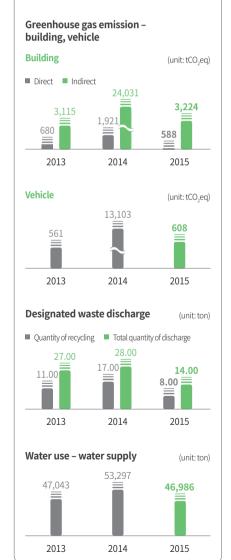
Category	Unit	2013	2014	2015
loyee satisfaction level	point	78.5	81.6	81.9
statement rate after maternity leave	%	95.69	100	100
y and security accident	number of items	1	0	0

Category	Unit	2013	2014	2015
Comprehensive integrity of the Anti-Corruption and Civil Rights Commission	point	8.4	7.6	8.6
Community service hours per employee	hour	5.8	6.3	5.6
Violation of laws and regulations	number of items	0	0	0
Accident rate at the construction site	%	0.102	0.087	0.083

🕒 Sustainability Performance 🛏

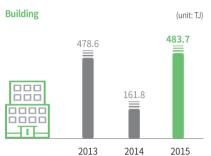


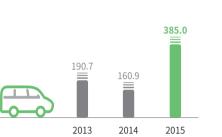




Railroad construction site (business partners)







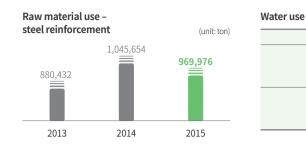
Vehicle

X

(unit: TJ)

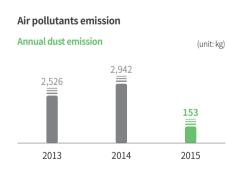


(Category	Unit	2013	2014	2015
Rail —	New material	ton	33,431	22,373	10,880
kan —	Recycle	ton	1,329	354	3,952
DC damas	New material	number	176,635	221,371	126,945
PC sleeper —	Recycle	number	23,046	21,936	14,916
Wooden	New material	number	4,404	5,023	947
sleeper	Recycle	number	4,283	4,349	252
Aggragata	General	ton	3,452,853	2,804,024	2,048,830
Aggregate —	Rotate	ton	331,811	62,849	99,868
Cast —	Wood	m²	3,031,012	2,067,901	2,122,829
Cast —	Substitute	m²	1,951,122	2,026,688	1,481,515

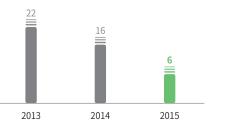


Greenhouse gas emission Building (unit: tCO₂eq) Direct Indirect 24,031.30 23,354.82 17,379.34 2,345.2 1.921 1,900.90 2013 2014 2015





Air pollutants emission facility (unit: number of facility)



Railroad construction site (business partners)

e			(unit: ton)
Category	2013	2014	2015
Recycled water	28,135	37,524	29,745
Total	2,507,456	5,155,088	17,549,221

Waste discharge

Vaste discharge				(unit: tC0 ₂ eq)
	Category	2013	2014	2015
Construction waste	Generated	1,402,839.00	986,354.00	891,858.80
	Recycled	1,390,682.00	967,835.00	770,602.30
Industrial waste	Generated	464,812.70	261,775.60	241,437.00
	Recycled	276,992.80	232,914.70	208,612.00
Designated waste	Generated	5,646.50	12,697.50	7,232.70
	Recycled	876.00	2,840.30	804.90

Water pollutants discharge

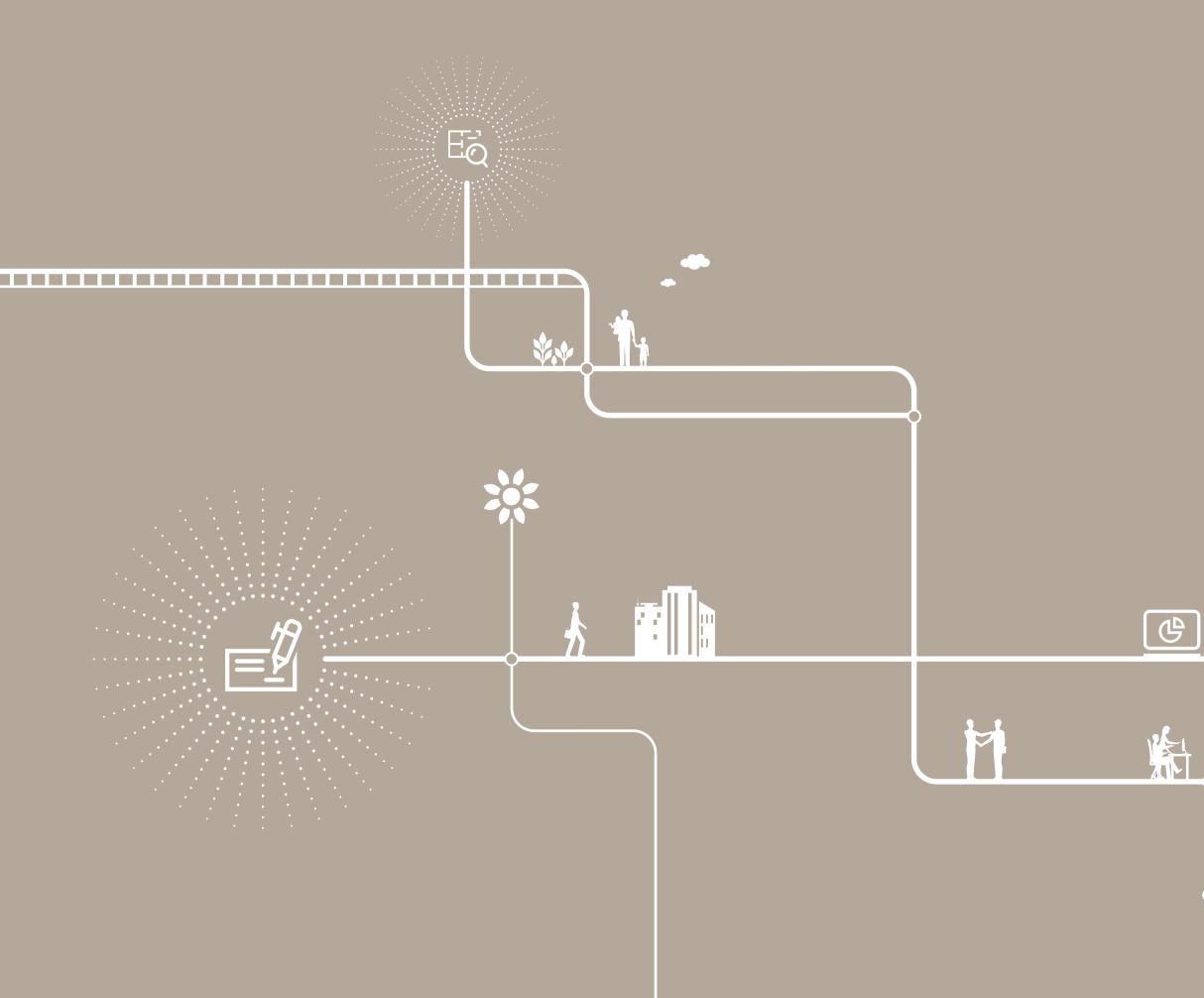
A

W

Category	Unit	2013	2014	2015
nnual waste water discharge	ton	7,176,449	10,944,822	3,131,760
Vaste water discharge facility	number of facilities	92	156	118

Major environmental indicators

Category	Unit	2013	2014	2015
Environmental management index	point	212.6	226.6	283.7
Greenhouse gas reduction rate	%	24.8	27.5	25.8
Violations of environmental laws and regulations	number of items	4	0	0
Construction waste recycling rate	%	99.1	98.1	98.6



APPENDIX

ISO 26000 Implementation Assessment
Third Party's Verification Opinion
GRI G4 Index
Implementation of UN Global Compact Principle
Recognitions and Affiliations





└─ ISO 26000 Implementation Assessment o

To Management group and stakeholder of Korea Railway Network Authority

Assessment standard

Korea Standards Association ("KSA") has developed the assessment checklist of the implementation level for the social responsibility based on ISO 26000, which is the international standard of the social responsibility. ISO 26000 checklist includes the process for the implementation of the social responsibilities and the result assessment for 7 core subjects (organizational governance, human rights, labor practices, fair operating practices, consumer issues, and community involvement and development). KSA has assessed the corporate social responsibility level of KR in accordance with ISO 26000 checklist.

Assessment scope

KSA has implemented assessment for KR's overall internal/external activities. mid/ long-term strategy, corporate social responsibility activities, and implementation process of the sustainable management strategy. The assessment result was evaluated in accordance with review of the internal documents on the relevant policy and activities, performance data and calculation system.

Assessment method

KSA performed the following activities for collecting and assessing the relevant bases on the basis of the objective assessment standard centered on each department related to issuance of the sustainability report.

- Review of KR's internal data related to the sustainable management activities and results
- Implementing interview with persons in charge of each issue of KR's sustainable management

Assessment results

As a result of assessment. KR acquired 930 out of 1.000 and was identified to correspond to the IV grade of ISO 26000 social responsibility implementation. This grade means that the members' recognition level for the social responsibility implementation is high and the organization's operating system, policy and practice are aligned.

Core subject	Total point	Assessment point
Process	360	326
Performance	640	604
Total	1,000	930

I. Assessment of the social responsibility process: 326/360

KR has strived to implement the corporate social responsibility faithfully in 4 sectors of human rights, labor, the environment and anti-corruption under the 10 principles of UN Global Compact. Overall social responsibility recognition level and stakeholders' communication is excellent, but establishment of strategy and implementation system needs to be improved.

It is recommended that KR practically integrate the management strategy system and process with sustainability and corporate social responsibility, and establish the sustainable performance management system including all the seven core subjects of ISO 26000.



II. Assessment of 7 core subjects: 604/640

By and large, KR is outstanding in implementation level for expectation of seven core subjects of ISO 26000. Especially, the implementation level of organizational governance, fair operating practice and labor practices was excellent.

Assessment result of each core subject

(achievement level: %)



III. Improvement recommendations by subject Improvement recommendations according to the detailed assessment result by subject are as follows.

1 Organizational governance

KR operates its organization with optimal experts for improving the transparency of the governance and continued management efficiency through expeditious policy decision, and checks problems and issues related to 'corporate social responsibility' and implements decision-makings based on the sustainable management, one of the core values. It is recommended that KR operate the sustainability management committee which can support BOD's decisionmakings.

2 Human rights

By newly setting up the Human Rights Committee, KR stipulated the policy of respect for human rights, equal employment, and anti-discrimination in its personnel policy and code of ethics, and grasps grievance related to human rights through the grievance settlement system. It is recommended that KR establish the actual inspection standard for investigating the actual condition related to the human rights abuse including, but not limited to, violence, sexual harassment, industrial safety, compliance with the Labor Standard Law, delayed payment of wage, and maternity protection. KR is also recommended to actively support education and monitoring for the business partners to implement the policy of respect for human rights.

(3) Labor practices

KR implements the tailored education for improving employees' working conditions and organizational capability. It is recommended that KR create the social value through diverse support for the balance of employees' work and life, and operate the sustainable system for satisfying the internal members through active communication with its members.

(4) The environment

By actively striving to save energy, KR has outstandingly reduced GHG (greenhouse gas) year by year and introduced renewable energy technology, including PV generation and geothermal power generation, through eco-friendly design of station building. However, it lacks the staffs dedicated to the environment compared to its scale of organization. It is recommended that KR enhance the dedicated division and staffs according to the scale of organization and business, and strive to protect biodiversity and natural habitats in response to constructions of station buildings and railroad.

(5) Fair trading practices

KR is very high in the systematic operation level of fair trading practices including, but not limited to, introduction of mandatory completion of the anti-corruption education by public office life cycle, and in the transparency level related contracts with its business partners. However, it is necessary for KR to identify and manage in priority the business field and sector vulnerable to anti-corruption depending



on the characteristic of large ordering agency, and improve the internal reporting system.

6 Consumer issues

KR systemized the on/off-line communication channel for sharing opinions with all of the stakeholders. KR collected the opinions of the People by operating the VOC system for listening to customers' opinions. As a result, KR achieved the A grade in the customers satisfaction level supervised by the Government for two consecutive years. It is recommended that KR continuously establish the safety management facilities for customers using railroad and station buildings including, but not limited to, the socially disadvantaged, such as children, the disabled, and senior citizens. KR is also recommended to enhance the public awareness, such as the public campaign for the railroad safety.

(7) Community involvement and development

KR contributed to the functional development of the community by preparing for the nature ecology center, bike lane, rail bike, and auto-camping site utilizing the railroad site. KR also performs activities of annually supporting scholarship, study room and culture experience to the children of the railroad site through 'KR Boys Hope Project'. However, there are quite a lot of one-time voluntary services, and the windows for procuring the finances for the social contribution are limited. It is recommended that KR strive to expand finances for the social contribution and operate the purpose-oriented programs for solving the macroscopic social problems beyond the level of sporadic voluntary services.

Assessment conclusion

As a result of assessment of the ISO 26000 response level, KR acquired 930 out of 1,000 and was identified to correspond to the SR IV grade. KR is at a stage of expanding the corporate social responsibility activities to an organization-wide stage, and is excellent in the implementation level of organizational governance, fair trading practice, and labor practice. KR is recommended to integrate the subject and principle of the social responsibility with its distinct business strategy in order to fulfil its public interest goal more stably as the enterprise specialized in the railroad construction based on the standard of ISO 26000.

> 18 July 2016 Korea Standards Association Chairman Su-hyeon Baek

战千记

Korea Standards Association ("KSA") is a special corporate body founded in 1962 under Korea Industrial Standardization Act. KSA is a knowledge service institute providing and expanding the industrial standardization, quality management, sustainable management, KS&ISO certification et al to enterprises. Especially, KSA acts as Korean secretary of ISO 26000, GRI-designated training institute, AA1000 verification agency, operating institute of Korean Sustainability Index (KSI), UN CDM operating organization, and verification agency of GHS target management scheme, thereby contributing to the sustainable development of Korea.

Third Party's Assurance Statement or Control

To the Readers of Korea Rail Network Authority Sustainability Report 2016

Foreword

Korea Management Association Registration Inc. (hereinafter "KMAR") has been requested by Korea Rail Network Authority (hereinafter "KR") to verify the contents of its Sustainability Report 2016 (hereinafter "the Report"). KR is responsible for the collection and presentation of information included in the Report. KMAR's responsibility is to carry out assurance engagement on specific data and information in the assurance scope specified below.

Scope and standard

KR describes its efforts and achievements of the corporate social responsibility activities in the Report. KMAR performed a Type 2, moderate level of assurance using AA1000AS (2008) as an assurance standard. KMAR's assurance team (hereinafter "the assurance team") evaluated the adherence to Principles of the inclusivity, materiality and responsiveness, and the reliability of the selected GRI G4 indices as below, where professional judgment of the team was exercised as materiality criteria.

- G4 Reporting Principles
- General Standard Disclosures
- Specific Standard Disclosures
- Generic DMA of each of following material Indicators of Aspects
- Indirect Economic Impacts: EC7, EC8
- Emissions: EN15, EN19
- Effluents and Waste: EN23
- Compliance: EN29
- Employment: LA1, LA3
- Occupational Health and Safety: LA6, LA7

- Anti-corruption: SO3, SO4 - Anti-competitive Behavior: SO7 - Compliance: SO8 - Customer Health and Safety: PR1
- Product and Service Labeling: PR5
- Customer Privacy: PR8

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

Our approach

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

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

Our conclusion

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

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

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

Materiality

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

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

Responsiveness

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

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

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

Recommendation for improvement

We hope the Report is actively used as a communication tool with stakeholders and recommend the following for improvements.

• Expand and refine the report contents: KR reports sustainability issues in accordance with the 'Core Option' of GRI guidance. We recommend that the report contents related with the materiality aspects should be expanded in the future to fully report various issues that have influence on KR's sustainability. In addition, the report contents need to be more quantitative instead being rough explanation.

• Build sustainability information management system: As a basis for sustainability risk management, data collection and managementactivities increase usability and value of the data. We recommend that KR set up information management system including data collection and management process, and the organization in charge, and that link the system with the internal management evaluation system.

Our independence

With the exception of providing third party assurance services, KMAR is not involved in any other Korea Rail Network Authority's business operations that are aimed at making profit in order to avoid any conflicts of interest and to maintain independence.



AA1000 Licensed Assurance Provider

August, 5th, 2016 CEO Ki Ho Park

K. H. Park

GRI G4 Index -

General Standard Disclousure

GRI	Description	Page	Externally assured
Strategy and	Analysis		
G4-1	CEO's Message	5	٠
Organizatior	al Profile		
G4-3	Name of the organization	10-11	٠
G4-4	Primary brands, products, and services	10-11	٠
G4-5	Location of the organization's headquarters	10-11	٠
G4-6	Number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report	10-11	٠
G4-7	Nature of ownership and legal form	10-11	٠
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	10-11	٠
G4-9	Scale of reporting organization	10-11	٠
G4-10	Employment information, by type of employment, type of contract and by region	64	٠
G4-11	Percentage of total employees covered by collective bargaining agreements	65	٠
G4-12	Key characteristics of the supply chain relating to key activities, products and services of the reporting organization	10-11	٠
G4-13	Significant changes during the reporting period regarding the organization's size, structure, and ownership	10-11	٠
G4-14	Explanation of whether and how the precautionary approach or principle is addressed by the organization	15	•
G4-15	List of externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	77	٠
G4-16	Memberships of associations (such as industry associations) and national or international advocacy organizations to which the organization is affiliated	78	٠
dentified Ma	aterial Aspects and Boundaries		
G4-17	Operational structure of the reporting organization including key business departments, operating companies, affiliate companies, and joint venture companies	62	٠
G4-18	Process for defining report content	20-21	•
G4-19	All material Aspects identified in the process for defining report content	20-21	•
G4-20	Aspect Boundary within the organization	20-21	•
G4-21	Aspect Boundary outside the organization	20-21	•
G4-22	Explanation of the effect of any restatements of information provided in previous reports, and the reasons for such restatements	20-21	٠
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries	2	•
Stakeholder	Engagement		
G4-24	List of stakeholder groups engaged by the organization	16	•
G4-25	Basis for identification and selection of stakeholders with whom to engage	16	•
G4-26	Organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group	16	٠
G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns	16	٠
Report Profi	le		
G4-28	Reporting period for information provided	2	•
G4-29	Date of most recent previous report	2	•
G4-30	Reporting cycle	2	•

GRI	Description		Externally assured
G4-31	Contact point for questions regarding the report or its contents 2		•
G4-32	32 GRI content index 2		•
G4-33	Policy and current practices with regard to seeking external assurance for the report		•
Governance			
G4-34	Governance structure of the organization		•
Ethics and In	tegrity		
G4-56	Description of the organization's values, principles, standards and norms of behavior	55	•

Specific Sandard Disclousures

	GRI	Description	Page	Externally assured
Economic				
	Generic DMA		36-43	
Indirect Economic	G4-EC7	Development and impact of infrastructure investments and services supported	40-41	٠
Impacts	G4-EC8	Significant indirect economic impacts, including the extent of impacts	40-41	•
Environmental				
	Generic DMA		30-35	
Emissions	G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	66-67	٠
ETTISSIOTIS	G4-EN19	Reduction of greenhouse gas (GHG) emissions	66-67	•
	Generic DMA		30-35	
Effluents and Waste	G4-EN23	Total weight of waste by type and disposal method	67	٠
	Generic DMA		30-35	
Compliance	G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and reguations	67	•
Social				
	Labor Practice a	nd Decent Work		
	Generic DMA		52-55	
Employment	G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender, region	54	•
	G4-LA3	Return to work and retention rates after parental leave, by gender	65	٠
	Generic DMA		30-35	
Occupational Health and	G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	31	•
Safety	G4-LA7	Workers with high incidence or high risk or diseases related to their occupation	32	٠

🖵 GRI G4 Index 🔶

Implementation of UN Global Compact Principle

	GRI	Description	Page	Externally assured
	Society			
	Generic DMA		44-47	
Anti-corruption	G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	45	٠
	G4-SO4	Communication and training on anti-corruption policies and procedures	46	•
	Generic DMA		48-51	
Anti-competitive Behavior	G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	49	•
	Generic DMA		24-29	
Compliance	G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulation	65	٠
	Product Respon	sibility		
	Generic DMA		30-35	
Customer Health and Safety	G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	30, 34	•
	Generic DMA		56-57	
Product and Service labeling	G4-PR5	Results of surveys measuring customer satisfaction	56	٠
	Generic DMA		56-57	
Customer Privacy	G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	57	•



KR joined the UN Global Compact, an international agreement on corporate social responsibility, and abides by the ten principles in the four major sectors of human rights, labor, environment, and anti-corruption.

Classification	
Human rights	 Businesses should s human rights. Ensure that they are
Labor	 3. Businesses should u right to collective ba 4. The elimination of a 5. The effective abolitie 6. The elimination of c
Environment	 7. Businesses should s 8. Undertake initiatives 9. Encourage the development
Anti-corruption	10. Businesses should

Principles

support and respect the protection of internationally proclaimed

e not complicit in human rights abuses

- uphold the freedom of association and the effective recognition of the argaining.
- all forms of forced and compulsory labor
- ion of child labor; and
- discrimination in respect of employment and occupation

support a precautionary approach to environmental challenges; es to promote greater environmental responsibility; and elopment and diffusion of environmentally friendly technologies

d work against corruption in all its forms, including extortion and bribery.

Recognitions and Affiliations —

2015 Awards and Recognitions

Achievement	Sponsor	Significance	
National Quality Convention Presidential Award (3 awards)	Ministry of Trade, Industry and Energy	• Recognized for CoP quality working group activities and outstanding case of management performance creation (November 2015)	
National Quality Convention National Quality Master (1 person)	Ministry of Trade, Industry and Energy	Awarded to the employee who led proactively to practice of the quality management with convinced workmanship (November 2015)	
Korea Knowledge Awards Excellence Award	Ministry of the Interior	• Contributed to national and social development through improvement of knowledge management (October 2015)	
Certification of Family-Friendly Excellent Institution	Ministry of Gender Equality and Family	Strived to foster culture of work and family balance (December 2015)	
2015 Public Information Disclosure Assessment The Best Institute Award	Ministry of Land, Infrastructure and Transport	• Government 3.0 progress result and endeavor to satisfy the People's right to know (December 2015)	
5th consecutive Minister of Land, Infrastructure and Transport's Award in National VE Competition	Ministry of Land, Infrastructure and Transport	Quality improvement and cost saving of construction work through VE (November 2015)	
Contest of the Year's Engineering Structure Awarded gold, silver and bronze (2) prize respectively	Korean Society of Civil Engineers	• Stability, artistry and eco-friendliness for Mangyeonggang River Bridge, Jangji Over-bridge, Geumgang River Bridge, and Jeongeup Over-bridge of Honam high-speed railway (March 2015)	
5th consecutive Korea Sustainability Report Award	KSA KOREAN STANDARDS ASSOCIATION	• Economic, eco-friendly, and social result of management for sustainable development (September 2015)	
2015 Spotlight Awards Awarded 3 awards including grand prize in the Sustainability Report	League of American Communication Professionals	 Superiority in component, design, and convincibility for the sustainability report (November 2015) Grand prize in the sustainability report Gold prize in the Most Creative sector 12th of the Top 100 Worldwide 	
Obtained Grade 8 (the highest) in the QMS level assessment	KSA KOREAN STANDARDS ASSOCIATION	 Performance in quality management system, resources management, win-win growth and expansion of fair trade culture (December 2015) 	
Korea Innovation Award Awarded grand prize of Management Innovation	KSA KOREAN STANDARDS ASSOCIATION	 Improved convenience of the People's life and contributed to the industrial development of Korea through innovative management (June 2015) 	
Quality Working Group Competition Awarded gold prize(1) and silver prize (1)	KSA KOREAN STANDARDS ASSOCIATION	Shared and expanded the outstanding case of quality working group activities (October 2015)	
Korea Idea Management Conference Award Top Excellence Award (2)	KSSA	Created performance in improvement of quality and productivity, cost saving, process improvement (December 2015)	
Web accessibility of KR website and Railroad Industry Information Center 「National Quality Certification」	Ministry of Science, ICT and Future Planning	Access convenience of web page for the information underprivileged, such as the disabled, and the elderly and infirm Website (October 2015), Railroad Industry Information Center (December 2015)	

Affiliations

UIC	The Korea Railway	International Association for	Korea Suggestion System	Korea Association of
(International Union of Railways)	Association	Construction	Association	Management Projects
Korea Industrial Technology Promotion Association	Korea Association for Railway	Traffic Institute of Korea	Korean Society of Civil Engineers	Architectural Institute of Korea
Korea Institute of Electrical	Korea Association for	Korea Association for	Korea Association of Environmental	Korea Society of
Engineers	Disaster Prevention	Tunnel Underground	Planning & Landscape Architecture	Public Enterprise
UN Global Compact Korea	Korean Association for Audit	Business Ethics and Sustainability management for Top performance	Korea Fire Safety Association	Korea Employer's Federation
Korea Construction Engineering	Korea Railway Construction	Korea Industrial Technology	Korea Network on	The Korean Society for
Company Association in China	Association	Promotion Association	Anti-Corruption & Transparency	Quality Management

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KOREA RAIL NETWORK AUTHORITY

Tel. 1588-7270 / Fax. 042-607-3629

242, Jungang-ro, Dong-gu, Daejeon Metropolitan City

