

Sustainability Report 2010

# Rail, Hope for Tomorrow





## <sub>Rail,</sub> Hope for Tomorrow

#### Significance of the Report

As the second report published by Korea Rail Network Authority (hereinafter referred to as KR) following 2008, this sustainability report contained the economic, social, and environmental efforts and performances of KR for sustainable growth.

#### Report Scope and Period

This report contained quantitative and qualitative performances from January to December 2009, making time-series trend analysis possible by containing 3 year performances from 2007 for performances considered meaningful, and stipulating the reason in case of difficulty in collecting relevant data. The report scope covered main office, 5 regional offices, central engineering office and 208 construction sites. The unit of currency was based on Korean Won (USD1=KRW1,163, as of Sep. 20, 2010). KR plans to express its will for sustainable management at home and abroad by annually publishing sustainability report in the future.

#### Report Standard

This report was made in accordance with GRI G3 guidelines, and KR stipulated relevant items in attached GRI Index.

#### Report Assurance

In order to secure the reliability of the contents of this report, the independent assurance was conducted by independent and objective assurance institute, with the result contained in the Appendix of the report.

#### Report Characteristics

In this report, priority of report indexes was decided by conducting the evaluation of importance on stakeholders in 7 areas. Further, KR made efforts to more reinforce the degree of participation of stakeholders than last report such as multidirectional reflection of requirements from stakeholders through in-depth interviews.

#### Additional Information

For those who have any opinion or inquiry about this report, please feel free to contact Assistant Manager Yang, Hee-Hyun, Sustainability Strategy Division, Planning and Coordination Deptartment (Tel. +82-42-607-3156, historyace@naver.com)

## **Evaluation from External Institutes**

#### **Evaluation from External Institutes**

KR's company-wide efforts for sustainable management were proved with various performances such as receiving Korea Green Award.

External Performances	Hosting Institute	Significance of Award
Excellent Degree for Head of Public Organization (2009.6)	Ministry of Strategy and Finance	Implemented modernization of public institution
Korea Green Award (2009.6)	Hankook Ilbo	Led Low Carbon Green Growth
Excellent Oraganization for Early Financial Execution (2009.8)	The Board of Audit and Inspection	Contributed to overcoming global financial crisis
The Best Oraganization for Inspection of Government Administration (2009.10)	National Assembly	Improved the feedback function of parliamentary inspection of government offices
Korea Management Grand Award (2009.11)	KMAC (Korea Management Association Consulting)	Created management quality innovation outcome
Korean CEO Grand Award (2009.12)	The Economic Daily	Enhanced the company and CEO brand value
Information Disclosure Excellent Institution (2009.12)	Ministry of Land, Transport and Maritime Affairs	Authorized as transparent management company
Urban-Rural Communication Award by Prime Minister (2009.1)	Ministry of Food, Agriculture, Forestry and Fisheries	Carried out social responsibilities of public company

#### **Membership Organization**

In order to successfully carry out sustainable management, KR joined various organizations including UN Global Compact and is conducting vigorous activities.



Institute of Korea

#### G3 Guideline Application Level

KR Sustainability Report 2010 has been compiled to satisfy all requirements for  $A^+$  level of GRI  $G_3$  Guideline Application Level.





## **UNGC 10 Principles**



KR is abiding by 10 principles in 4 areas such as human right, labor, environment, and anti-corruption by joining UN Global Compact in February 2007. KR will make efforts to expand the spirit of UN Global Compact to overall society by carrying out various sharing activities with stakeholders as well as internally practicing 10 principles of UN Global Compact.

Human Dight	Principle 1	Company should support and respect human right protection internationally declared.	Welfare system, operation of Labor-Management Council	44, 45
Human Right	Principle 2	Company will actively make efforts not to be involved in violation of human rights.	Efforts for socially balanced cruitment, Operation of Labor-Management Council	40, 45
	Principle 3	Company shall support substantial recognition of freedom of association and collective bargaining right,	Formation of and joining labor union	45
Labor	Principle 4	Exclude all types of forced labor,	Observance of Labor Standard Act	45
	Principle 5	Efficiently abolish child labor,	Observance of Labor Standard Act	45
	Principle 6	Abolish discrimination in recruitment and job	Efforts for socially balanced recruitment	40
	Principle 7	Company shall support preventive approach to environmental matters,	Establishment of greenhouse gas inventory,efforts to reduce environmental impacts,input and emission data management	29~32
Environment	Principle 8	Conduct measures to improve environmental responsibilities,	Enhancing environment management system,organizing environmental ecosystem joint investigation team	29, 34
	Principle 9	Accelerate development and expansion of Eco-friendly technologies	Carrying out CDM Project,establishment of Eco-Station,DST introduction plan	33
Anti- Corruption	Principle 10	O Company shall oppose to all types of corruption including extortion and bribe.	Reinforcement of ethical management organization, efficient efforts to prevent corruption, efforts to improve level of integrity, KR integrity Ombudsman	46~49
		-	corruption, efforts to improve level of integrity,	46-

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# KR's 2009 Highlights

#### **Declaration of 2020 Future Vision**

Reflecting rapidly-changing domestic and foreign management environments, KR established 2020 KR Future Management Strategy to lead Green Railway Era, in which KR's developmental image until 2020 was extracted, maximizing organizational engine by establishing 4 aggressive vision goals. KR officially expressed its will to achieve future vision by holding KR Future Vision Declaration Ceremony in June 2009.

#### The Best Organization Award in Early Financial Execution

KR actively complied with governmental policy for overcoming global financial crisis by early enforcing KRW 4.2911 trillion, 70.4% of total project expense in the first half of 2009. In order to thoroughly carry out early financial execution, KR organized special inspection team for early financial execution with KR's Chairman as its leader and inspected the result of the early financial execution result by establishing risk situation department. This successful early financial execution resulted in total KRW 8.6 trillion of production-inducing effect and 78,000 persons of employment creation effect. In recognition of these performances, KR received an award from the Chairman of the Board of Audit and Inspection as the best organization in early financial execution in August 2009.

#### Timely Opening of Gyeongui and Chungang Line

KR accomplished its mission to contribute to improvement of national transportation convenience through timely opening of 2 lines by systematic project management. KR successfully opened Seongsan~Munsan section of Gyeongui Line in July, 2009 and Guksu~Yongmun section of Chungang Line in December, 2009 through the intensive investment focused on timely opening. Through this opening of Gyeongui and Chungang Lines, KR provided transportation conveniences to northwestern and southeastern regions of metropolitan area, contributing to dispersion of metropolitan population and revitalization of local economy.





#### Increase of Profit Creation through Expansion of New Business

KR's liability has been continuously on the increase due to self-raising of the fund for construction of High Speed Railway, but it is difficult for KR to resolve financial risks only with the rail alless fee collected from Korea Railroad (hereinafter referred to as KORAIL). Accordingly, KR reinforced the self-salvage efforts to improve its financial structure through maximization of railway asset value such as discovering hidden property and development of railway station-adjacent areas and through advancing into Light Rail Transit market in foreign countries such as Bangladesh and Cameroon as well as in Gimpo City, and Gyeonggi-do.

#### Establishment of the Korea Railway Association

Railway industry had a limit in concentrating capabilities due to the lack of control tower which can lead small sized associations. So, in order to systematically devise a way to advance into overseas market by establishing combined railway cooperation system, KR established the Korea Railway Association jointly with Industry/University/Research Institute in May 2009. The Chairman of KR who played the leading role from the plan to foundation of the association was selected as the first Chairman of the Korea Railway Association. With this establishment of the Korea Railway Association, KR will take the initiative in leading Korean railway industry to global level.



As a result of 2009 governmental survey of customer satisfaction, KR recorded 6-year consecutive increase of customer satisfaction and was selected as 2-year consecutive excellent organization. KR redefined the customer through reestablishment of CS strategy of the 3<sup>rd</sup>Term Management, and highly improved 'Sorisaem' which is a integrated customer management system for efficient collection, analysis, and feedback of VOC, successfully establishing 'customer satisfaction-first' culture in the company.

#### Receiving 'Korea Green Award'

Evaluated as excellent organization in Green New Deal Project abiding by governmental 'Low Carbon, Green Growth' policy, KR received Korea Green Award in work site sector in June 2009, and this result was directly connected to splendid achievement of 5 year consecutive Management Quality General Grand Award in November. Further, by systematically coping with Parliamentary Inspection of the Government Offices, KR was selected as the best inspected organization by Land and Maritime Committee in National Assembly in October 2009, and KR's excellence could be officially recognized by receiving Korean CEO Grand Award in December 2009.



#### **Specialized Social Contribution Activities**

Since its foundation, KR has been continuously carrying out specialized social contribution activities together with local communities. KR made '1 Company-1 Village' agreement with Gapa Village in Cheongyang-gun, Chungcheongnam-do, offering helping hands in busy farming season every year and buying agricultural products. Also, KR replaced boilers and delivered holiday presents to senior citizens who live alone and to neglected class of people, and carried out various activities such as overall renovation of playing grounds along railroads in Daejeon area. These activities became the foundation for receiving awards of excellent organization in social contribution activities from 6 organizations including Ministry of Food, Agriculture, Forestry and Fisheries in January 2009.





## My Dear Stakeholders,

On the occasion of this second publication of Sustainability Report, KR is preparing for the takeoff to be a public enterprise respected and beloved by national people by more reinforcing sustainable management. Since it joined UN Global Compact in February 2007, KR has been carrying out companywide sustainable management in each area such as economy, environment, and society as follows;

2010. 10 Cho, Hyun-Yong Chairman and CEO Korea Rail Network Authority



## Reinforcing sustainability management through establishment of 2020 KR Future Management Strategy

Also in the past year of 2009, KR made many efforts to promote sustainable management. First of all, KR established and declared 2020 KR Future Management Strategy by reflecting rapidly-changing domestic and foreign management environments such as governmental policy of 'Low Carbon Green Growth'. With 'The Global Partner for Future Value of Rail Network and Green Growth' as its future vision which should be accomplished until 2020, KR arranged 4 strategic goals and 10 company-wide strategies and strategic tasks. When future vision is accomplished in 2020, it is expected that 90-minutes eco-friendly railway service will be provided to major cities in the whole country with epochal effect of saving energy through improvement of railway transportation share ratio.

#### Providing public service through expansion of eco-friendly rail network

KR completely conducted its original mission to contribute to improvement of national transportation conveniences with timely opening of Seonsan-Munsan section of Gyeongui Line and Guksu-Yongmun section of Chungang Line through systematic project management. KR will make it best efforts to be able to open the second stage construction of Gyeongbu High Speed Railway at the right time promised to people, and will also make efforts for timely completion of the first stage construction of Honam High Speed Railway which started to be constructed earlier than originally planned through thorough project management, and will contribute to balance regional development by actively carrying out speed-up projects of major railways.

Not satisfying with performances in 2009, KR will continuously pursue sustainability management in the future.

#### Securing financial safety through creation of new business profit

KR's efforts to advance into the overseas market have resulted in being selected as a partner of the Cameroon Railway Master Plan Consulting Project and obtaining the contract of the Gimpo Light Rail Transit Business Management in 2009. While reinforcing overseas network through the medium of the Korea Railway Association, KR will secure the bridgehead of overseas business diversification through order-winning from such countries as Brazil and USA. Also, KR will make the turning point of ensuring financial soundness by actively advancing into new businesses in need of high-tech such as Light-Rail Transit and Magnetic Levitation Trains.

#### Realizing Eco-Green Railway

For construction of eco-friendly railway, KR began to develop greenhouse gases inventory in 2009 and decided to proceed Honam High Speed Railway as CDM(Carbon Development Mechanism) project. Particularly, KR received the first award at the 10th Natural Environment Award held by Ministry of Environment for "Ecosystem Restoration Project around Daechun Stream Closed Railway Bridge" in October 2010. KR has made its efforts to restore closed railway bridge by construction of ecosystem observation passage and eco-friendly local residents' convenience facilities. On top of that, KR donated them to the local community for the first time in Korea. All these efforts for construction of eco-friendly railway were officially acknowledged. As successful construction of Honam High Speed Railway based on a close consultation with environmental organizations showed, recognition of railway as a leader of eco-friendly transportation becomes solider. In 2010, KR will secure its own core competitiveness for sustainable management by utilizing new and renewable energy in railway facilities and by expanding the use of high-efficiency equipments to reduce greenhouse gases emissions.

#### Fulfilling social responsibilities through realization of responsibility management

In order to realize corporate social responsibility, KR joined UN Global Compact in February 2007, abiding by 10 biggest principles. Particularly, Integrity Ombudsman system operated every other week was selected as standard model of public organizations by Anti-Corruption & Civil Right Commission and enjoyed the honor of being spread to other public organizations. KR will accelerate its customer satisfaction management by utilizing 'Sorisaem' which is a integrated customer management system for which KR obtained its patent for the first time in public enterprises. In addition, KR will grow as public organization which co-exists with local community by continuously carrying out strategic social contribution activities on neglected class of people. Further, as the first public organization, KR was inducted into the 'hall of fame' for the best management quality at Korea Management Award held by Korea Management Association Consulting (KMAC) in October 2010. As the selected company for the 'hall of fame', KR will not satisfy with current accomplishments. KR will develop its unique specialized management quality activities program and make it as our own brand. By doing this, KR will publicly play its leading role as the excellent management company and fulfill its social responsibility as public organization as well.

#### Leaping to global railway partner through sustainability management

The era of railway Renaissance is being opened throughout the whole world as well as in Korea. Actively making the best use of this opportunity, KR promises to develop into global railway organization by achieving 'total 5,000km of railway extension', 'annual KRW 300 billion of new business profit', 'the third place in international railway quality standard', and 'the first place in governmental survey of customer satisfaction' until 2020. Stakeholders are kindly requested to support KR's ambitious challenges with warm interests and affectionate eyes in the future. Thank you.





## **About KR**

#### **KR** Status

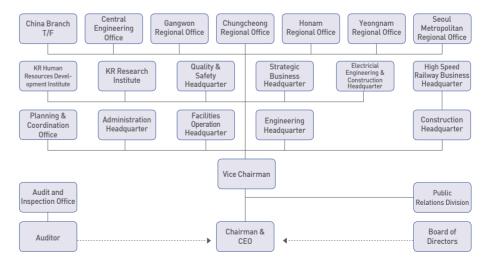
#### **KR's Foundation**

In order to improve the role of railway and to enhance the management efficiency, the government carried out structural reform of railway industry in 2003. Accordingly, Ministry of Land, Transport and Maritime Affairs (MLTM) is in charge of establishment of railway policy and investment plan, KR in charge of railway construction and facilities management, and KORAIL exclusively in charge of railway business and transportation. Each organization is making efforts to enhance the quality of national railway service and to reinforce the global competitiveness of Korean railway through close cooperation with each other.

Right after the establishment, KR successfully opened the first stage construction project of Gyeongbu High Speed Railway and in the next year took the first step of advancing into overseas market by receiving order of engineering service work from China. Further, KR made splendid achievement of receiving additional order of engineering service work for other sectors thanks to the best evaluation in China. Also, KR has been enjoying high evaluation at home and abroad such as achieving 3 year consecutive winner in governmental management evaluation and being selected as the best organization in innovation evaluation. Chairman Cho, Hyun-Yong who took office in 2008 is leading the sustainable management of KR with 'Pursue the Sustainable Growth Faithful to the Basics' as his management philosophy. Also in 2009, KR laid the foundation to leap into global railway organization by accomplishing various performances such as declaration of future vision, opening of Gyeongui and Chungang Lines, starting to construct Honam High Speed Railway, and winning orders for Cameroon and Gimpo railway projects.

#### **KR Organization**

KR is composed of 8 headquarters, 1 office, 1 research institute, and 5 regional offices under the chairman. 8 headquarters are composed of Administration Headquarter, Facilities Operation Headquarter, Construction Headquarter, Engineering Headquarter, Quality & Safety Headquarter, Strategic Business Headquarter, Electrical Engineering & Construction Headquarter, and Construction Headquarter-affiliated High Speed Railway Business Headquarter while 1 office is for Planning & Coordination Office. 5 regional offices in Seoul, Busan, Suncheon, Daejeon, and Wonju were installed to efficiently manage rail networks throughout the whole country. In addition, a branch office was



#### KR Outline (as of Dec. 31, 2009)

Name	Korea Rail Network Authority
Main Office Location	264, Shinan-dong, Dong-gu, Daejeon
Date of Establishment	Jan. 07, 2004
Туре	Quasi-Governmental Organization
Budget	KRW 7.5175 trillion
Contribution	KRW 3.7936 trillion,
Number of Employees	1,441



#### KR Major History



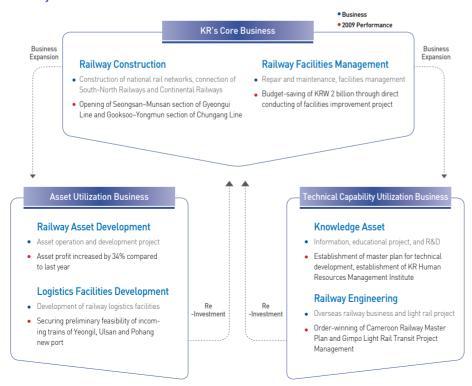
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installed in China in order to efficiently manage engineering service work of Chinese railways which has been conducted since 2005.

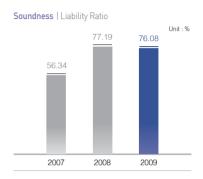
#### **KR Management Performances**

Unlike other public enterprises, KR has limited financial discretion as a commissioned execution type quasi-governmental organization. In accordance with basic principles of government's financial support, KR independently raises 50% of High Speed Railway project expenses through bond issuance and liabilities for loans are repaid with rail access fee collected from KORAIL which can not cover even the interest of liabilities for the loans. The analysis for major financial ratio in soundness, profitability, and growth showed that the liability rate will be increased, that sales operating profit will maintain 20% level, and that the sales will rapidly increase at the time of opening High Speed Railway and then decline. Accordingly, in order to resolve financial risks, KR created profit by expanding business area to technical capability utilizing projects (knowledge asset, railway engineering) and asset utilization projects (railway asset development, logistics facility development) on the basis of railway construction and facility management which are KR's core businesses, and reinvested the profit again to core major businesses, creating a virtuous circle system between core businesses. Further, KR is reviewing the measures to cope with introduction of IFRS(International Financial Reporting Standards).

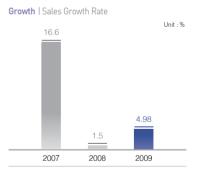
#### **KR Major Business**



#### **KR Management Performances**







## **KR Future Management Strategy**

#### Establishment of 2020 KR Future Management Strategy

KR changed the paradigm from 'Internal Capability' at the inception of its foundation to the paradigm of 'Expansion of Business Boundary' at now, and carried out re-establishment of mid-to-long term management strategy from August 2008 to March 2009 by reflecting governmental Low Carbon Green Growth policy. And KR extracted SWOT strategy and strategic goals after analyzing internal capabilities and external environments with active participation and support of its employees.

#### Diagnosis of Organizational Culture



#### **Review of Internal Capabilities**

KR reviewed internal capabilities such as organization, finance, business structure, and organizational implementation capabilities such as employee satisfaction survey, diagnosis of organization culture and matrix analysis. The result positively showed that the number of field staffs has increased through the transference of PM function to sites, and that enterprise-wide bond of sympathy was created for new businesses on the basis of stable financial structure. On the other hand, it was negatively analyzed that promotion congestion was ever becoming serious, that accumulated liabilities were on the increase, and that new business capabilities were insufficient because internal capabilities were concentrated in railway construction and administrative works. Accordingly, KR extracted implications of efficient manpower operation, development of new profit business, and reorganization of core businesses.

#### Education for Technical Engineers



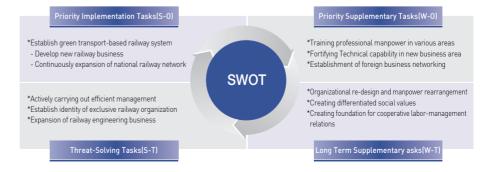
#### **Analysis of External Environments**

As the result of close review of external environments such as policy, market, technical environment, it was shown that railway investment is being increased in SOC share, and that overseas railway market is also rapidly growing with the High Speed Railway construction plan of many foreign countries being announced one after another. It is a new opportunity for KR that professional railway manpower is being produced inside KR with its increased number of employees who obtained the certificate of technical engineers. On the other hand, it is playing the role of threatening elements that substitutes of eco-friendly transportation means such as electric cars and fuel cell cars are on the increase, that competitors are on the increase such as China emerging in overseas railway market, and that railway R&D infra is insufficient. As the result of this analysis of external environments, it was shown that KR is in need of coping strategy to reinforce its competitiveness in railway market such as expansion of railway investment and securing the patents for new technology.

#### **Extraction of 4 Strategic Goals**

KR extracted 4 SWOT strategies through internal and external environmental analysis, and accordingly established 4 strategic goals such as pursuing sustainable growth with the establishment green rail network, securing financial soundness through increase of future value of railway, reinforcing the capabilities for new growth business, and realizing customer and social value.

#### SWOT Strategy



Sustainabl Manage-

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#### Reestablishment of Core Values

Through active participation of employees such as survey and management workshop, KR selected 3 core values which are sharing values as well as code of conducts which impose the sense of unity on employees. These newly established 3 core values are 'Sustainable Management' on national level, 'Professionalism' on internal level, and 'Mutual Trust' on customer's level.

Make continuous efforts for development of capabilities to become the best professional in railway sector

Profession alism

Respect and be considerate with each other, and pursue common prosperity on the basis of mutual trust

Fulfill social responsibility imposed on us and

pursue sustainable growth and development

#### Management Workshop



#### Establishment of Sustainable Future Management Strategy

In establishing KR's future management strategy, KR upgraded the level of sustainable management by reflecting sustainable strategy which was supplemented in 2008. Specifically, KR extracted 10 sustainable development elements such as customer, environment, ethics, and efficiency, and connected them to 10 companywide strategies. Also, systematic foundation for sustainable management is being arranged by Sustainability Strategy Division of Planning and Coordination Office in overall charge of establishment of management strategy and feedback. Newly established KR's mission is 'Railway Network to Realize a Safer and Better World', and the newly established vision is to realize 'The Global Partner for Future Value of Rail Network and Green Growth'. Further, in order to accomplish its mission and vision, 4 strategic goals, 10 company-wide strategies, 20 strategic tasks and 108 implementation tasks were systematically selected and allotted to each relevant department, and the bond of sympathy for this was expanded through enterprise-wide presentation. KR is monitoring the degree of accomplishment of strategies of each department through consolidated performance management system.





#### Integrated Performance Management System



## The Global Partner for Future Value of Rail Network and Green Growth

Railway Network to Realize a Safer and Better World

4 Strategic Goals

Mission

2020 Vision

10 Company-wide Strategies Pursue sustainable growth through the establishment of green rail network

Total rail extension 5,000km

Expand eco-friendly railway construction

Enhance cost efficiency of railway construction and facility management Secure financial soundness through increase of future value of railways

New business profit KRW **3,000** billion/annua

Expand engineering

business

Improve the value of railway facility assets

Strengthen capability for new growth business

Strengthen capability for railway construction technologies as company's assets

Reinforce human capabilities for conducting new business Realize customer and social value  $% \label{eq:customer} % The \ensuremath{\mathbf{1}}^{\mathrm{st}} \ \text{place in customer}$ 

satisfactionquality

Establish corporate culture of mutual trust

Continuous improvement of customer satisfaction

Realize environmental management system

Accomplish social responsibility oriented management

## Governance

#### Operation of Board of Directors

#### Organization of Board of Directors

KR's Board of Directors is composed of 6 executive directors and 7 non-executive directors and it reviews and decides on 15 items such as management goal, budget operation, settlement of accounts, and business plan and its revisions. In order to reinforce the role of Board of Directors, KR has prepared and carried out the plan for securing the fairness, strengthening the timeliness, and utilizing the professionalism.

Name	Remark
Cho, Hyun-Yong	Chairman and CEO
Kim, Sang-Gyun	Vice Chairman
Choi, Kyun	Head of Administration Headquarter
Jung, Ui-Ha	Head of Facility Operation Headquarter
Shin, Yong-Sun	Head of Construction Headquarter
Lee, Gang-Jae	Head of Engineering Headquarter
Cho, Yong-Guk	Director of National Council of Green Consumers' Network in Korea
Bae, Jung-Geun	Former Editorial Writer of Hankook Ilbo
Jang, Joo-Hyo	Director of Yeonggwang Educational Institute(Daegu University Foundation)
Park, Woo-Sup	Former head of Nam-gu office, Incheon
Yang, Myung-Jo	Professor of Department of Law, Ewha University
Kim long-Guk	Former head of Busan Regional Port Authority,
Min, Jong-Ouk	Ministry of Construction and Transportation
	Cho, Hyun-Yong Kim, Sang-Gyun Choi, Kyun Jung, Ui-Ha Shin, Yong-Sun Lee, Gang-Jae Cho, Yong-Guk Bae, Jung-Geun Jang, Joo-Hyo Park, Woo-Sup

## Appointment Procedure for Non-executive Directors

Organize director recommendation committee

Hold the first director recommendation committee

Open recruitment of candidates

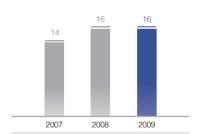
Hold the 2nd director recommendation committee

Review and decision of public organization operationcommittee

Result notification to MLTM

#### Number of Board of Directors Meeting

Unit : number



#### On-site Board of Directors



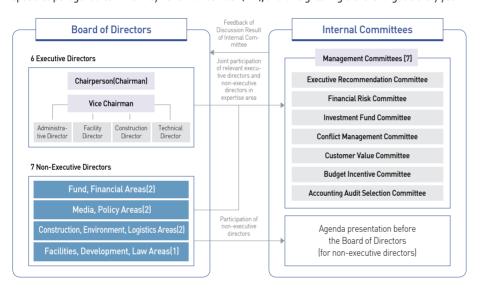
#### Role of Board of Directors

KR holds regular Board of Directors on the 4th Thursday of every month, and temporary Board of Directors in case emergent decision-making is needed. In 2009, 11 meetings of regular Board of Directors and 5 meetings of temporary Board of Directors were held, through which 88 items on the agenda were handled. Particularly, the Board of Directors played an important role in anticipatively coping with governmental policy of modernization of public organizations by intensively deliberating the agenda item of management efficiency which emerged as core managerial pending issue.

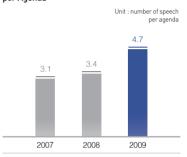
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#### Active Utilization of Specialty of Non-Executive Directors

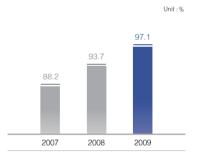
KR's non-executive directors are participating in 7 management committees including budget incentive committee according to their specialty, influencing the decision-making of major policy departments. In addition, in order to enhance the understanding of non-executive directors on managerial pending issues, prior presentation is held 1 week before the Board of Directors. Consequently, request for management data from non-executive directors increased as their understanding of the management was enhanced. In order to more actively utilize the specialty of non-executive directors, KR manages activity index of non-executive directors which combines Board of Directors attendance rate, management committee attendance rate, and the number of speeches per agenda item with Key Performance Index (KPI), and is heightening the level of goals every year.



## Number of Speech of Non-executive Directors per Agenda



#### Activity Index of Non-executive Directors



#### Reflection of Opinions to Board of Directors

By operating various communication channels between management, employees and labor union, KR is making efforts to deliver the opinions of employees to Board of Directors without any adjustments. Through this effort, organizational culture of participation and cooperation is being created inside KR.



#### Chat Room with the Chairman



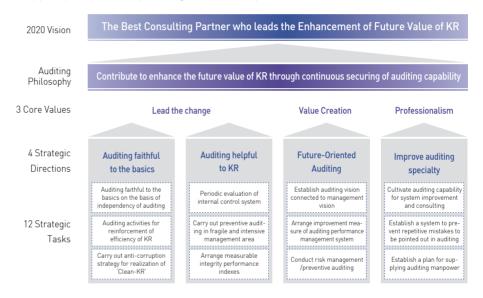
## **Auditing System**

#### Development of Internal Auditing System Infrastructure

#### Establishment of Mid- to Long-Term Auditing Strategy

In order to secure the independency of auditing, KR established auditing office directly responsible to the audit and is carrying out auditing activities which is faithful to the basics, which leads KR in right direction and which increases the future value of KR through continuous securing of the auditing capabilities. For systematic internal control, KR established enforcement regulations for auditing standard in February 2009 and established mid-to long-term auditing strategies in December 2009. Also, KR is by itself independently improving auditing every year by comprehensively reviewing the result of last year.





#### E-Auditing System



#### **Establishment of E-Auditing System**

For more efficient internal control, KR minimized the blind spot of auditing by establishing KRAS (KR Audit System) in December 2009. Under the KRAS system, auditing office made the database of auditing information so that it could be shared with whole company, and efficient monitoring was made possible by integrating independently dispersed computing system into one system. KR will continuously reinforce internal control by more developing this KRAS system in the future.



#### Improvement of Management Efficiency through Auditing

#### Reinforcement of Proactive Auditing

KR is trying to enhance management efficiency through prior and post auditing by placing professional manpower of each area in auditing office. In 2009, KR completely removed non-essential budget-wasting factors in advance by conducting 657 daily auditing which should be compulsorily carried out just before the approval of the final decision-maker, and is preventing the irrationalities in advance through intensive inspection on vulnerable areas by way of selection and concentration by establishing constant auditing system. In addition, KR is enhancing the transparency of its business by efficiently removing corruption-inducing factors through 10 improvement advices in evaluation of corruption effects for all KR's regulations.

#### Performance on Strategic Special Auditing

In 2009, auditing office achieved the result of correcting unreasonable advance payment by enforcing 4 special auditing including auditing on budget execution status. The audit is completely checking the management of public insitution which can be liable to be laxly operated by way of expressing his opinion and explaining the result of internal/external auditing in the Board of Directors.

Title	Purpose Result		Performance	
Status of budget execution	Inspection on Budget- wasting factors	17 Improvements including Brochure producing	4 Improvements including revision of business travel- ling expense regulation	
Status of advance payment	Inspection on execution of Advance payment	10 Improvements including Non-payment of advance payment	Correction of unreason- able payment of KRW 20.8 billion	
Railway material Quality management	Quality inspection on major Materials on the construc- tion Site	57 Improvements including Inspection quantity standard	Making KR standard for major materials	
Sleeper crack in High Speed Railway	Inspection on track Concrete sleeper crack	Censure on those involved	Improvement on business flow chart	

#### Performance on Improvement of Management Efficiency through Auditing

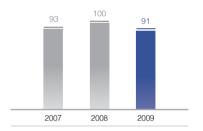
Further, through 3 times of general auditing on overall businesses of regional offices and through active prior and post auditing activities such as intensive auditing on land and property areas, KRW 161.2 billion, 2.6% of total project expense, of budget could be saved. Futher, 187 cases of correction and improvements recorded which increased by 57% from last year. KR is aiming at auditing performance which improves business rather than simple point-out auditing.



#### Professional Manpower in Auditing Office

Auditing Team	Expertise Area
Integrity Planning Auditing Team	Planning, Clerical Work, Accounting, Integrity
Facility Auditing Team	Civil Engineering, Architecture, Track
System Auditing Team	Electricity, Signal, Machinery, Communication

### Attendance Rate of Audit in Board of Directors Meeting



## Reinforcement of Risk Management

#### Reestablishment of Risk Management System

#### Background for Establishing Company-wide Risk Management System

The concrete sleeper crack event at the 2<sup>nd</sup> section of Gyeongbu High Speed Railway in January 2009 provided KR with important opportunity to reestablish its risk management system. This was an accident which was overly interpreted into the problem of quality and delay of construction period in overall process of Gyeongbu High Speed Railway due to poor initial response stage and overheated press reports for a small problem of faulty buried equipments in the construction site. KR used this occasion to combine risk management systems, establishing company-wide risk management system focused on prevention of event, in which company-wide resources can be planned, organized, enforced, adjusted, and controlled.



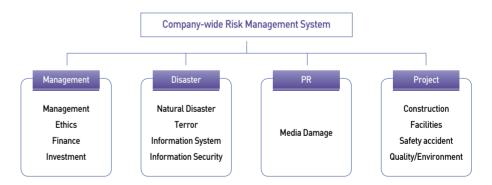


Site Inspection of Governmental Joint Survey



#### Integration of Risk Management System

Until 2008, KR had coped with emergent situations through the meeting of relevant organization. As the result, connectivity of business decreased due to dispersed management of risk, with some limits in efficient risk management. From the lesson of above sleeper crack event, KR combined existing 12 risk management areas which were separately operated into 4 areas of management, disaster, PR, and project. Management area was defined as 4 parts including management and ethics, disaster area was defined as 4 parts including natural disaster and terror, PR area as media damage and project area as 3 parts including construction, facilities and negligent accident. Consequently, KR could unify the commanding system centered on the Chairman and reinforce business efficiency in case of company-wide risk.



#### **Establishment of Prevention-Focused Management System**

Through risk management conversion table, KR prepared risk-coping procedures according to 4 risk levels, reinforcing risk management focused on prevention. Risk response teams are organized by team head in case of D level (Attention) of risk situation, by department head in case of C level (Caution), by division head in case of B level (Warning), and in case of A level (Serious), company-wide risk coping teams are established and operated centered on the Chairman.

#### Operation of Company-Wide Risk Management System

#### Operation of Problem-Solving Process

KR arranged basic directions and overall standards for risk management system by making company-wide risk management guidelines in September 2009. All departments of KR are managing risk factors in a way that they voluntarily develop potential risk factors and establish measures for them. In case potential risk factors are expanded to pending issues or in case risk pending issues accidentally arise, response measures are carried out in accordance with company-wide risk management guidelines, which KR named '3 Step-5R' system. That is, 1 Step covers D level to B level which are the levels before the risk, and in case the risk level is transferred to A level, 2 Step and 3 Step proceed until the risk situation is resolved based on processes. In case the risk reaches A level, the chairman installs Risk Measure General Headquarters and extracts the solutions with people concerned, taking control of the site. Further, through risk management system where reference is available by level, department and risk, all pending issues are being systematically monitored and the result of monitoring is intensively discussed in risk management inspection meeting which is held every month with the presiding of the Chairman.

#### Risk Management System



#### 3Step-5R System

#### 1STEP

Data Collection and Reparation Stage

#### 1R (Reduction) : Reduction Stage

Minimization of damage with legal, technical, and educational measures
Reinforcement of organization and education
Evaluation of risk and management index

#### 2R (Readiness) : Readiness Stage

Education, Communication channels Preparation for risk situation

#### On-site Command of Chairman



#### Risk Management Inspection Meeting



#### 2 STEP

Risk Situation Stage

#### 3R (Response) : Response Stage

Decision of warning level

> Decision of KR's position

Application of relevant manual

Operation of major reporting channel

Such as public opinion

Coping with the press

rompt understanding of

#### 3 STEP

Risk Recovering Stage

#### 4R (Recover) : Recovering Stage

Appropriate ex-post responses according to progress of risk situation Ex-post responses to relevant organizations and hold the meeting for internal reporting and

#### 5R (Result Evaluation) : Evaluation Stage

Self-evaluation of risk solution and situation analysis

Revision and supplementation of manual and system

## Our Approach

#### Stakeholder Management Process

KR published this report by reflecting stakeholders' interests according to stakeholder management process. GRI (Global Reporting Initiative) guidelines which this report complies with recommendation that sustainable management performances be reported by reflecting the interests of stakeholders. Accordingly, KR redefined the stakeholders by reflecting internal and external changes of management environments and conducted the materiality test on sustainable management issues by each stakeholder. The issues analyzed through the materiality test are reflected on strategic tasks and KPI which are two pillars of management strategy, serving as the foundation for sustainable management. KR will announce the performances of sustainable management created in the communication with stakeholders every year through this sustainability report.

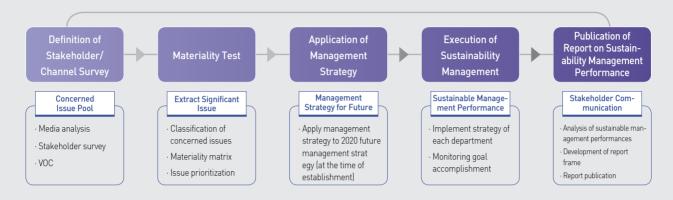
#### Redefining Stakeholder

Recognizing that stakeholder management is closely connected to sustainable management, KR is making efforts to accomplish its newly established mission through communication with stakeholder, 'Realize Rail Network which Makes Safe and Convenient World'. For efficient communication with stakeholders, KR reclassified the stakeholders into 'Value-Influencing Customers', 'Value-Producing Customers', 'Value-Delivering Customers', and 'Value-Purchasing Customers'. Value-producing customers refer to internal employees and partners, and the value of railway which is realized by value-producing customers is delivered to railway passengers and ordering customers who are value-purchasing customers through KORAIL who is value-delivering customer. In the base of this value flow, the political will of government and local community who are value-influencing customers are influential throughout the overall processes.

#### **Definition of Stakeholder**

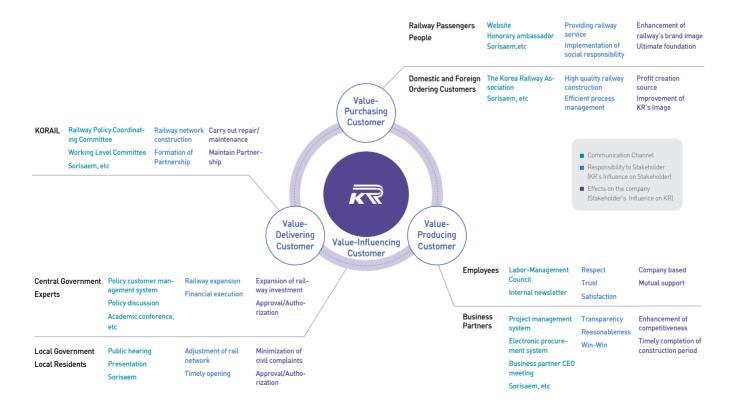
Value-Influencing	Central Government, Experts	Central government and experts are important customers of KR who decide on new railway lines and Investment. KR is continuously expanding railway investment by establishing railway networks through policy discussions and academic conferences, etc.
Customer	Local Government, Local Residents	For timely opening of railway lines, KR is trying to smoothly resolve the conflicts with local government and local residents and to reshap inter- relationship. With open and forward-looking attitude, KR is making efforts to maintain consistent policy directions while pursuing the agreements with local governments and residents.
Value-Producing	Employees	KR is based on the respects and trust from its employees who are internal stakeholders. KR is making continuous efforts to enhance the satisfaction in the areas of employees' interests such as compensation, welfare, and personnel system.
Customer	Business Partners	Business partners are playing the leading role in construction of high quality railways along with KR. KR is establishing transparent and reasonable business system with partner companies by utilizing contract management system and meeting with CEO of cooperating business partners, etc.
Value-Delivering Customer	KORAIL	KORAIL is a companion who goes with KR for development of railway industry. KR is jointly establishing the optimum rail networks with KORAIL by expanding the area and period of working level railway committee.
Value-Purchasing Customer	Railway Passengers, Common people	Railway passengers and common people are core customers who provide the ground for KR's existence. By utilizing its website and honorary ambassador. KR is trying to enhance the understanding of railway and to expand its positive image.
	Domestic and Foreign Ordering Customers	Domestic and foreign ordering customer refers to Korean local governments and foreign countries to which KR should provide satisfaction through railway construction and other projects. Through the medium of the Korea Railway Association composed of railway-related 13 associations and 96 private companies, KR is making efforts to receive orders of domestic and foreign railway orders.

#### KR Stakeholder Management Process



#### Reinforcement of Each Stakeholder Communication Channel

By establishing a communication channel suitable for each stakeholder's interest, KR is trying to cope with stakeholder's requirements with open mind. For this, KR is establishing a system where KR carries out customized sharing activities by utilizing academic symposium, presentation, website, and honorary ambassador, and reflects the analyzed result to business plan of next year. Also in the future, KR will reinforce 'customer's satisfaction-first' policy by developing various communication channels and by actively conducting sharing activities.



## Our Approach





In order to reflect the expectations of stakeholders to its management activities, KR conducted materiality test on sustainable management related issues. KR introduced sustainable management in 2007, and analyzed and extracted sustainable issues of KR. On the basis of this, this materiality test selected the first 24 issues by more segmenting or combining the issues by reflecting political/regulatory changes and market/social changes. Each issue is being reflected to KR's sustainable management with order of priority decided through questionnaire survey and face-to-face interview with each stakeholder. In this result of materiality test of 5 points of perfect score, the degree of interest of internal stakeholders is shown on X axis, and the degree of interest of external stakeholders is shown on Y axis of the graph.



#### **Connecting to Future Management Strategy**

KR established 2020 Future Management Strategy which reflected the result of 2009 materiality test. KR connected major issues of economy, environment, and society of stakeholder's interest to strategic tasks and KPI, carrying out efficient and systematic sustainable management by allotting them to relevant departments after establishing achievement goals and period. Particularly, KR is improving the strategic task performance rate and KPI achievement rate in natural way by establishing a system in which they are reflected to department evaluation and connected to personnel and compensation, through which company-wide engine for sustainable management is secured.



#### Performance on Future Management Strategy

Core issues through materiality test are concretized as each strategic task of future management strategy and become the foundation of KR's sustainable management with the goals established and accomplished. Externally, KR achieved the result of improvement of railway investment ratio and timely construction of Gyeongui and Chungang Lines and other facility projects through expansion of investment in railways which will play the role of driving force of 'Low Carbon Green Growth' and through strategic communication activities with stakeholders for establishment of railway networks. In addition, as the result of active efforts to advance into foreign market for expansion of overseas railway construction, KR received the order for establishment of Master Plan for Cameroon Railway. Internally, KR established greenhouse gas inventories and is establishing environmental management system including management of pollutants and wastes through development of environmental management indexes. Also, KR laid the foundation for enhancement of core capabilities of human resources by establishing KR Human Resources Development Institute in 2009. For safety and efficient operation of railways, KR and KORAIL are cooperating with each other for efficient business through operation of railway policy coordinating committee and working level railway council. These efforts of KR for sustainable management activities according to customized strategy for each different stakeholder are actually achieving tangible results such as improvement of customer satisfaction.



#### Reestablishment of Future Management Strategy

In order to reinforce sustainable management, KR will reflect the result of 2010 materiality test in reestablishing its future management strategy. This means that the reporting procedure of sustainable management performances is playing the role of substantial stakeholders' communication. Feedback with stakeholders serves as foundation for KR's continuous moving forward to new objectives. KR is reestablishing strategic tasks and KPI Pool every year by analyzing and reviewing goal achievement rate and necessities of objectives. Particularly, when reestablishing its KPI Pool, KR is flexibly adjusting the goals of next 5 year by reflecting the performances of previous year. Through this, KR is expanding the culture for sustainable management inside its organization, and will ultimately leap into 'The Global Partner for Future Value of Rail Network and Green Growth' which is the goal of 2020

Value-Delivering Customer

#### Result of Materiality Test

External

# Communication with Government Social Contribution Ethical Management Activities Effect of Railway Construction Operation of Local Economy centered Policy Brand Management Activities Effect of Railway Construction Customer Safety Management Risk and Opportunity of Climate Chang Efforts for Conservation of Eco-Environment Prior Efforts to reduce Environmental impact Efforts to Recycle Closed Lines and Stations Management of Pollutants Customer Safety Management Customer Safety Management Customer Safety Management Creation of Economic Value

O Govern-

Customer's Information Security

Compliance

nomic Value

Energy Management and Reduction

Cooperative Labor-Management Policy

• Efforts for Protection of Human Right • Welfare Policy for Employees

Coro Issue

	Core Issue
Communication with Gov- ernment	26
Ethical Management Activities	46~49
Ripple Effect of Railway Construction	26~27
Brand Management, Promotion	36, 64
Efforts for Conservation of Eco-Environment	29, 34
Prior Efforts to reduce Environmental Impact	29
Customer Safety Manage- ment	65
Risk and Opportunity of Climate Change	32
Customer Satisfaction	64
Efforts to recycle Closed Lines and Stations	28
Management of Pollutants	30~31
Compliance	29, 47, 64~65
Creation of Economic Value	28, 58~59

Internal

#### Major Performances on KR's Sustainability Management

Area	Major Issue	KPI		Performance			
Alea	Major Issue			2007	2008	2009	2010
	Communication with Government	Number of Participation in Basic Policy	case	-	1	2	1
	Operation of Local Economy Centered Policy	Achievement Rate of Priority Purchase of SME Products	%	101,00	61,80	148,65	100
Economy	Effect of Railway Construction	Business Expense Execution Rate	%	96,60	97.78	98,84	99,50
	Creation of Economic Value	Total Railway Extension	km	3,395,0	3,425,6	3,435,9	3,603,3
	Governmental Incentive	Government Management Evaluation Level	rank	2 <sup>nd</sup>	С	A	А
	Energy Management/ Reduction	Reduction Rate of CO <sub>2</sub> Emission	%	-	107,28	96,84	95,00
	Efforts for Conservation of Eco-Environment	Number of Application of New Eco-Friendly Technology/Method of Construction	case	-	-	8	10
	Proactive Efforts to Reduce Environmental Impact	Environmental Management Index	point	-	39.8	60,5	65
Environment	Risk and Opportunity of Climate Change	Reduction Rate of CO <sub>2</sub> Emission	%	-	107,28	96,84	95,00
	Efforts to recycle Closed Lines and Stations	Number of Development Project Conducted	case	-	1	1	1
	Pollutants Management	Recycle Rate of Construction Wastes	%	84,84	89,28	85,19	86,68
	Employees' Health and Safety	Degree of Satisfaction for Welfare and Working Environment	point	67,80	69,40	69,45	70,98
	Brand Management, Promotion	KR Awareness	point	64,76	72,84	74,60	77,14
	Compliance	Number of Violation of Environmental Laws and Regulations	case	0	0	0	0
	Customer Satisfaction	Government Customer Satisfaction	point	83,6	88,2	89.3	90,39
	Customer Safety Management	Disaster Rate	%	0,19	0,21	0,17	0,106
	Ethical Management Activities	Degree of National Integrity	point	8,68	8,12	8,55	8,70
Society	Securing Diversity of Employees	Achievement Rate of Priority Employment of Men of National Merit	%	100	81,1	100	100
	Employees' Education and Training	Capability Development Satisfaction	point	69,3	70,1	69.9	71,41
	Cooperative Labor-Management Policy	Degree of Employees Satisfaction	point	70,40	67,95	68,55	70,12
	Efforts for Protection of Human Rights	Achievement Rate of Priority Purchase of the Products Made by the Disabled	%	101,00	61,80	63,59	66,77
	Social Contribution	Social Contribution Mileage per Employee	point	149	190	257	200
	Customer Information Security	Degree of Satisfaction in Handling Civil Complaints	point	46,6	57,7	59,8	61,8
	Employees' Welfare Policy	Degree of Satisfaction in Welfare and Working Environment	point	67,80	69,40	69,45	70,98

## Stakeholder Communication

#### KR's Response to Stakeholders' Opinions

Through the meetings of teams in charge of sustainability report, KR selected representative customer of each value-influencing customer (experts and local government), value-producing customer (employees and business partners), value-delivering customer (KORAIL), and value-purchasing customer (railway passengers and domestic ordering customer), and conducted in-depth interview with them. KR will also make efforts to sufficiently reflect precious opinions of stakeholders to its management activities in the future.

Value-Influencing Customer (Expert): Choi, Jinsuk / Research Member of the Korea Transport Institute



#### Economic Ripple Effect of Railway Construction

Railway construction is closely connected to regional development, but specific effects of the construction have not yet been suggested. So, I think that KR should pay more attention to regional development effects of railway construction and should put emphasis on ethical management as a public organization in charge of large scale construction.



KR will scientifically analyze the cost and benefits to local community when carrying out new rail-way construction, and will continuously reinforce ethical management and customer satisfaction management.

Value-Influencing Customer (Local Government) : Ahn, Junjoo / Head of Civil Engineering 2 Team, Daegu Metropolitan City



#### Minimization of the Number of Civil Complaints

Complaints of local residents are increasing due to noise and vibration from construction. Accordingly, KR should have more positive attitude toward local residents' requests for solvilng on their complaints and for compensation. The attitude of only sticking to regulations and procedures can not solve the civil complaints in early stage. In addition, I think that KR should closely cooperate with local government in overall processes of the project.



KR will establish its railway construction plan which can minimize the number of civil complaints from the early stage of the construction, and will make efforts to faithfully settle the raised civil complaints within the stipulated time by utilizing civil complaint management system.

Value-Producing Customer (Employees) : Kim, Youngwoo Head of Planning and Coordination Division of KR



#### Shift to Railway-focused Transportation System

In accordance with Low Carbon Green Growth pursued by the government, the value of railway in 21st century transportation network plan is increasing accordingly. The construction of railway, which is an eco-friendly means of transportation, is greatly contributing also to revitalization of local economy. Particularly in Korea with high population density, the railway which can provide mass and long-distance transportation is the best means of transportation.



In this era of railway Renaissance, KR will make its best efforts so that the railway can play the pivotal role in Korean transportation system and can also enhance the national prestige by advancing into overseas market.



#### Value-Producing Customer (Business Partner) : Park, Jungku / Head of Engineering Team, Soosung Engineering



#### Mutual Trust for Specialty

KR should make continuous efforts to achieve the goals with the mutual respect with business partners in the stage of design, construction, and engineering when carrying out railway construction. In addition, considering that many stakes are intertwined in the expansion of railway networks, KR can expect voluntary cooperation from people only when KR treats this matter wisely.



Escaping from the sense of superiority of project owner, KR will make efforts for timely construction of railway networks on a mutually equal footing with business partners.



## Value-Delivering Customer (KORAIL) : Song, Pomyung Assistant Manager of Planning & Coordination Division



#### Reinforcement of Organic Relationship

As the relationship between the rail and train is inseparable, so is the relationship between KR and KORAIL. Insufficient communication resulting from the separate organization can be connected to negligent accidents or profit decrease. I think that bright future of railway can be opened only when KR and KORAIL seek for the common value and share the vision.



KR will reinforce the mutually supplementary relationship with KORAIL by utilizing railway policy adjustment committee and working level railway council which are regularly held.



#### Value-Purchasing Customer (Railway Passengers) : Lee, Gyungjae Operator of NAVER Subway Information Café

**Enhancement of Customer Satisfaction** 



Many efforts are needed in the sectors of safety and facilities due to the characteristics of railway, and railway passengers can have the conveniences depending on those efforts. Further, I think that KR should enhance customer satisfaction by sufficiently reflecting customers' opinions on double track and electrification projects which will be in progress in the future.



KR is constantly collecting customers' suggestions through its website. KR will do its best so that customers' opinions can be reflected to KR's policies in the future.



#### Value-Purchasing Customer (Domestic Ordering Customer): Kim, Jinman

Head of Light-Rail Team, Cheonan City

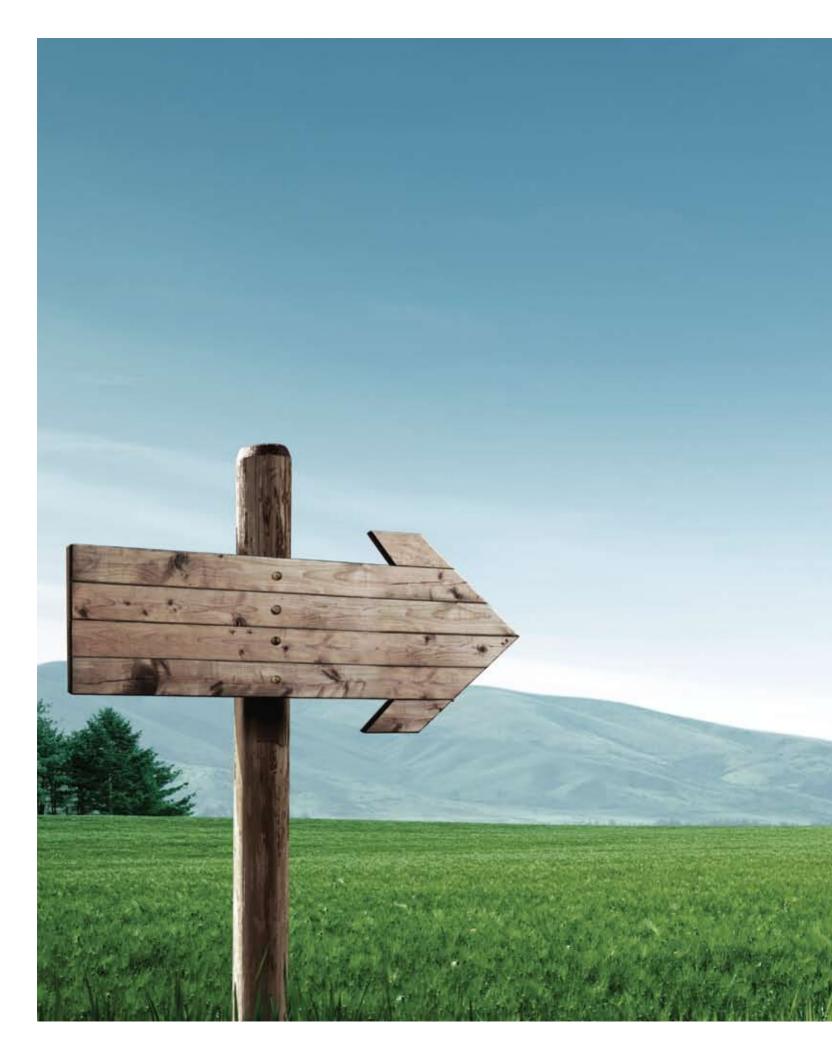


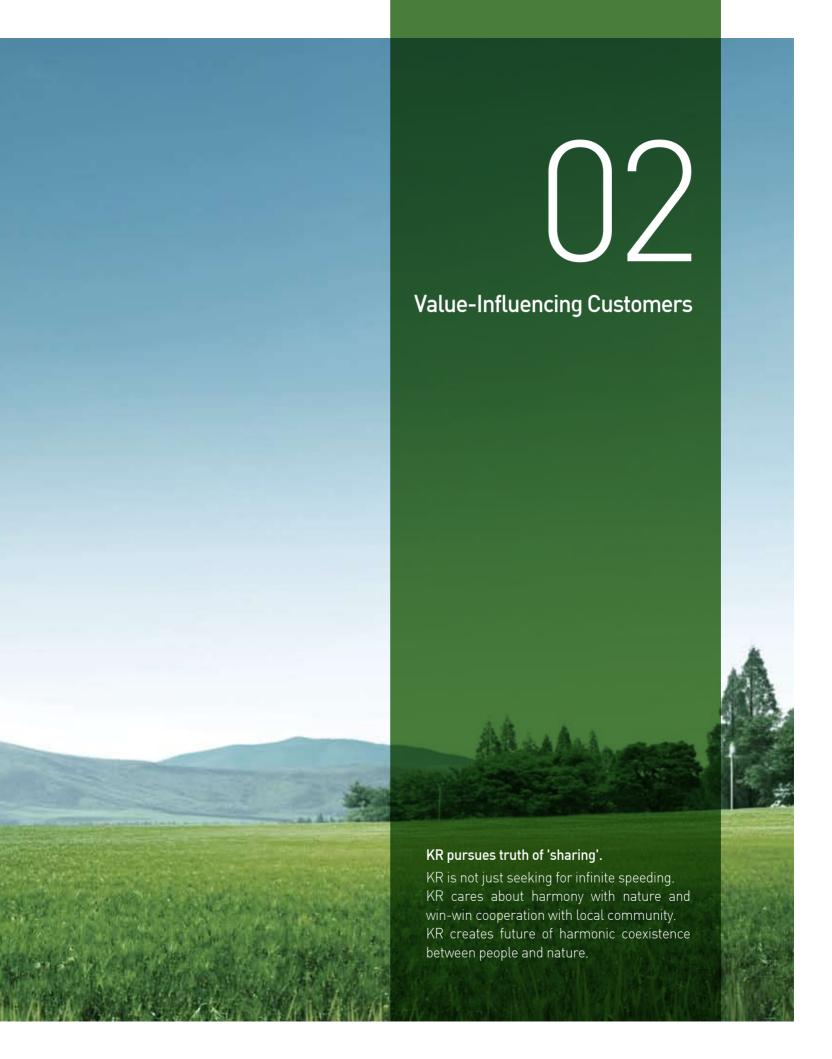
#### **Creation of Companion Partnership**

For successful construction of light-rail, creation of sound partnership between KR and ordering customer is necessary most of all. When business know-how of KR is combined with the drive of ordering customer, synergy effects can be properly demonstrated. In addition, KR should make efforts to maintain high level of integrity which is a basic virtue of partner.



KR will try to kindly and promptly handle the requirements of ordering customers, and will make efforts to become 'KR which is trusted by ordering customers' by reinforcing self education on integrity.





## **Expansion of Transportation Conveniences for People**

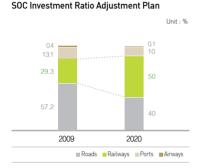
#### Establishment of Railway-Centered Transportation Paradigm

#### Shift of Transportation Policy

As the governmental policy of 'Low Carbon, Green Growth' is actively carried out, lively discussions about ways to reduce greenhouse gas of each sector are under way. For reduction of greenhouse gas in transportation sector, Ministry of Land, Transport and Maritime Affairs and Ministry of Knowledge Economy established green transportation strategy and announced in November 2009 that current road-centered transportation system be reorganized to railway-centered transportation system. Accordingly, the government plans to expand the ratio of railway in total SOC investment ratio to 50% in 2020 from current 30% as of 2009.

#### Spreading Consensus about the Value of Railway

In November 2008, The National Assembly adopted '100 Men Declaration for Railway 100 Years' with the participation of social celebrities including the Chairman of the National Assembly, Chairman of Land and Maritime Committee, Minister of Land, Transport and Maritime Affairs. It has a big significance since it suggested long term vision for development and cultivation of railway industry and created social consensus. Following the 100 Men Declaration Ceremony, international symposium for green revolution was also held in the National Assembly in February 2009 with the participation of about 300 people such as Chairman of National Balanced Development Committee and Minister of Chinese Railway. KR carried out strategic sharing activities targeting public opinion influencers for expansion of investment in railways. In addition, KR efficiently spreaded consensus about the value of railway by playing the essential role in legislating 'Special Act for Expansion and Use of Railway' and 'Act for Development and Use of the Station-Adjacent Areas'.



100 Men Declaration Ceremony for Railway 100 Years



#### High Speed Railway Line Map



#### Expansion of Railway Transportation Using Area

#### Expansion of Benefit Area of High Speed Railway

KR made efforts to expand the benefit area of High Speed Railway through preparation for opening of the 2<sup>nd</sup> stage of Gyeongbu High Speed Railway, early construction of Honam High Speed Railway, and promotion of Metropolitan High Speed Railway. KR held process meetings of relevant departments to smoothly conduct the 2<sup>nd</sup> stage construction project of Gyeongbu High Speed Railway which is just about to be opened in 2010, appointing and operating the responsible person for pending sites. When the 2<sup>nd</sup> stage of Gyeongbu High Speed Railway is completed, the time required from Seoul to Busan will be reduced by 22 minutes from now and 30 minutes when construction of Daejeon and Daegu downtown sections is also completed. In order to secure national trust according to government's promise to reduce construction period, KR successfully started to construct Honam High Speed Railway in early stage in September 2009 by rapidly developing business plan approval and land purchase work. Further, KR was able to resolve bottleneck phenomenon between Seoul and Siheung in Gyeongbu Line, and to provide High Speed Railway service in Southeastern region of Metropolitan area in accordance with announcement of basic plan for construction of Metropolitan High Speed Railway between Suseo and Pyungtaek. In 2014 when core processes are finished in Gyeongbu, Honam, and Metropolitan High Speed Railway, major cities throughout the country will be connected in 2-hour life zone through High Speed Railway service revolution.

#### Promoting Speedup of Major Railways

KR is carrying out speedup pilot project to improve the speed of double track Gyeongchoon Line to 200km/h. For this, KR organized joint team with KORAIL in April 2009, and prepared detailed implementation plan in August. When Gyeongchoon Line speed up in 2011, the time required from Shinsangbong to Choonchun will be reduced to 45 minutes from current 89 minutes. By utilizing the know-how of Gyeongchoon Line speedup, KR will actively start to carry out the speedup projects of 5 major railways such as Chungang and Jeolla Lines. When speedup projects for major railways are finished, positive effects such as reduction of running time, securing of railway competitiveness, and balanced regional development are expected to occur.

Project	Line	Reduction Time	Operation Time
Gyeongchoon Line	Shinsangbong-Choonchun	44min	2011
Chungang Line	Cheongnyangni~Jecheon	39min	2013
Jeolla Line	Iksan~Yeosu	11min	2011
Gyeongjeon Line	Milyang~Jinju	20min	2012
Donghae Line	Pohang~Samcheok	12min	Under review
Janghang Line	Cheonhan~Gunsan	59min	Under review

#### 6 High Speed Lines to be Constructed



#### Timely Opening of Gyeongui and Chungang Line Construction Project

KR laid the foundation to carry out timely construction of railways by establishing plans for 2009 construction in December 2008, and mid term construction projects until 2013 in January 2009. On the basis of this, KR contributed to provision of transportation conveniences to local people and to revitalization of local economy in compliance with 2009 opening plan. For timely opening of Gyeonqui and Chungang Lines construction projects, KR checked the project processes and costs every month through opening inspection meetings and systematically managed the status of each process such as joint inspection, opening inspection, general inspection, and business transition by utilizing combined process management system. As the result, KR was able to open double track railways between Seongsan and Munsan of Gyeongui Line in July 2009, and double track railways between Guksoo and Yongmun of Chungang Line in December 2009. With the opening of Gyeongui Line, double tracking and electrification of this section were completed, with the rail capacity of 150 times a day which was increased by 112 times from previous and running time reduced by 25 minutes. Also with the opening of Chungang Line, double tracking of this section was completed, with the rail capacity of 136 times a day which was increased by 85 times from previous. KR is carrying out post evaluation within 3~5 years after completion of railway construction, and suggesting the problems and ways for improvement of the projects by comparing the effects before and after the projects. KR is utilizing the result of post evaluation in establishing the plan for new construction projects and in analyzing economic value creation.

#### Annual Opening Project

Year	Opening Situation
2004	6 Projects including Honam Line
2005	7 Projects including Soowon-Cheonan Line
2006	3 Projects including Jochiwon-Daegu
2007	5 Projects including Incheon Intl Airport Railway
2008	3 Projects including Janghang Line
2009	2 Projects including Gyeongui Line
2010	5 Projects including the 2 <sup>nd</sup> stage construction project of Gyeongbu High Speed Railway

## Efficient Management of Railway Facility Assets

#### Challenging Efforts to Create Asset Profit

#### **Discovering Hidden Property**

KR started overall inspection on status of hidden properties such as donated land property with expired term and management omission land according to substituted land, except government railway assets. After organizing exclusive team in each division for discovering hidden property, workshop was conducted for reinforcement of capabilities of men in charge. Moreover, the procedures for discovering hidden property were established with overall inspection on donated land properties. As the result, 215 land lots worth KRW 19 billion and 3 buildings worth KRW 16.8 billion were recovered, creating KRW 1 billion of asset profit by collecting relevant usage fee and compensation.

#### **Expected Profit for Multiplex Station**

Multiplex Station	Expected profit for 30 years
Gwangmyung Station	KRW 93 billion
Hongdaeipgu Station	KRW 108.4 billion
Gongduk Station	KRW 144.4 billion
Songdo Station	KRW 24.8 billion
Seogang Station	KRW 16.5 billion

#### **Development of Station-adjacent Area**

KR is making efforts to construct multiplex station as landmark of station-adjacent areas. Feasibility study was conducted for development of Gongduk and Hongdaeipgu stations of Gyeongui Line and Songdo station of Suin Line. As the result of public offering for selection of private business operator, an investment company was established for operation of Gongduk and Hongdaeipgu stations. In the future, Hongdaeipgu station area will be developed as pedestrian-focused streets you want to walk with triple transfer structure of airport railway, sub-way, and railway. Gongduk station area will become a landmark as business district. In case of Gwangmyung station which will be developed as multiplex transfer center, around KRW 93 billion of profit will be created for future 30 years. KR will actively develop government properties also in the future by utilizing creative ideas from private sectors.

#### Chungang Line, Rail Bike Section



Janghang Line, Eco-Park in Daechun Stream



#### Contribution to Revitalizing Local Economy

#### Development of Closed Line Site and Idle Site

In order to secure financial soundness and as a part of contribution to revitalization of local economy, KR is developing large scale closed line sites and idle sites. 77km of expected closed line site will be utilized as eco-friendly Greenway, and closed line site of Chungang Line will be utilized as rail bike, landscape train, and train pensions. Further, KR signed MOU with Mungyeong City for project expansion of rail bike of Mungyeong Line and for development of tourism resources, with Asan City to construct train theme park of Janghang Line, and with Busan Metriopolitan City for development of tourism resources of Donghaenambu Line, respectively. These efforts will be connected to reduction of management expense of closed lines and to efficient utilization of government properties. In addition, KR transformed closed railways of Daechun stream section of Janghang Line to eco-friendly eco-park, provided tunnel runoff of Bundang Line to streamlets and fountains, and constructed neighborhood sports park and downtown parking lots by utilizing the lot under overhead railway of Guri section of Chungang Line and Uijeongbu section of Gyeongwon Line, contributing to win-win cooperation with local governments which are value-influencing customers.



## Promotion of Systematic Environmental Management

#### Enhancing Environmental Management System

#### Establishment of Environmental Performance Evaluation System

As the environmental importance emerged from the problem of global warming, and transportation policy is transferred to railway-centered paradigm, KR developed KR-EMI (Environmental Management Index) in order to establish/manage quantitative goals in environmental sector and to efficiently measure the level. KR-EMI is composed of 10 indexes by conducting environmental management workshop and questionnaire survey on employees. Also, we are making continuous efforts to improve environmental management indexes by way of monitoring quarterly environmental performances and reporting them to management and announcing the environmental management indexes to whole company.

#### Improvement of Environmental Management Process

For systematic environmental management, KR revised business process for construction wastes, implemented the discussed contents in environmental impact evaluation in timely manner, and established eco-friendly design process. Further, we secured the transparency of wastes management by utilizing on-line system, and promptly resolved the discussed matters in environmental impact evaluation. KR also tried to minimize environmental conflicts by making and distributing eco-friendly railway construction handbooks and design case-books, and purchased KRW 689 million of eco-friendly products.

#### Efforts to Reduce Environmental Impact

#### Maintenance and Recovery of Environmental Ecosystem

In order to reduce environmental damage in railway construction and operation, KR conducts environmental impact evaluation prior to construction. As the result of environmental impact evaluation conducted for construction of Honam High Speed Railway, endangered species of wild animals were discovered in expected construction sites of water source conservation zone, wild animals and plants sanctuary, and nature and city parks. Accordingly, KR installed wildlife passage, minimization of cut slope of tunnel head part, and installation of slope protection works by applying eco-friendly design method. Also for minimization of environmental damage in construction, KR installed eco-passage for prevention of ecosystem cut-off in 11 sites such as Sangcheon station of Gyeongchoon Line, afforested slopes and tunnel inlet and outlet parts of 197 sites such as Daegu section of Gyeongbu High Speed Railway with native plants, and planted 30,351 trees in 27 sites such as Changwon station of Gyeongjun Line. By building 5.77km of soundproof walls in 50 sites including Gwngmyung~Cheonanasan section of Gyeongbu High Speed Railway, KR provided comfortable living environment to local residents along the railway who suffered from noises. As the result of systematic efforts to reduce environmental impacts, KR had no case of violation of environmental law in 2009.

#### Efforts for Reduction of Energy Use and Greenhouse Gas Emissions

KR is actively taking part in governmental energy policy by organizing energy-saving committee and 'Energy Keeper', reasonably using electrical equipments, and by utilizing high-efficiency energy equipments. Specifically, KR reinforced air-conditioning and heating standard, and is carrying out overall light-off during lunch time and after business hours, and operating elevators on floor-separating basis. KR is operating compulsive 'No-Driving Day' system, but excluded the carpool vehicle, compact car, and hybrid car from the system. In constructing new office building, KR removed energy-wasting factors in advance by installing geothermal air-conditioning and heating system, peak electricity automatic management system, and lighting facilities automatic control system, and is enhancing the efficiency of management by outsourcing the management of new office building to a professional organization.

#### KR-EMI

- The number of cases pointed out for non-implementation of discussed contents in environmental effects evaluation

  Fine charged
  Improvement rate for the matters pointed out in internal/external inspection
- Completion rate of environmental education
- Product reuse rate
- O Purchase rate of eco-friendly products
- Recycling rate of construction wastes
- Basic unit of construction waste generation
  Installation rate of soundproof facilities
- The number of holding green railway advisory committee

#### Endangered Species of Wild Animals in Cheongwon~Gwangju Section of Honam High Speed Railway

Level	Wildlife
1-level	Otter, Spoonbill, Hawk, Serpent
2-level	Wild Cat, Whooper, Goshawk, Korean Buzzard, Kentish Plover, Narrow- mouthed Toad, Leopard Long-Tail Snake, Falco Vespertinus, Wild Goose, Marten, Flying Squirrel, Harrier, Golden Frog, Korean Terrapin

#### Nature Reserve in Cheongwon~Gwangju Construction Section of Honam High Speed Railway

Nature Reserve	Number
Water source conservation zone	14
Wild animals and plants sanctuary	31
Nature and city parks	591

## **Promotion of Systematic Environmental Management**

KR is systematically managing total volume of input material such as energy use, raw material use, mold use, and water use. Input material data for 2007 and 2008 were collected from 127 construction sites and input material data for 2009 were collected from 208 construction sites. Particularly, KR is achieving the result of continuously improving the rate of reused materials from total input materials in accordance with advanced environmental management system.

#### **INPUT**

Railway Construction Sites (Business Partners)

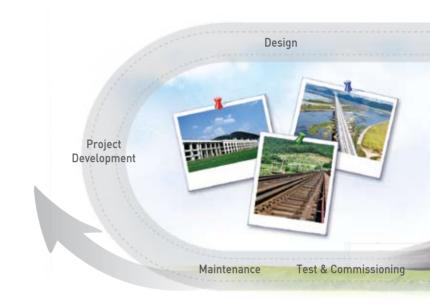
Energy Use			
(G1)	2007	2008	2009
Total	2,776,875	2,982,253	2,932,945
Boiler	291,725	367,025	485,532
Vehicle	151,311	208,141	166,308
Construction Machinery	2,333,838	2,407,088	2,281,105

#### Material Use

(ton)		2007	2008	2009
Rail Use	(Total)	14,676	33,307	53,608
	New Material	13,202	31,487	49,259
	Reuse	1,474	1,820	4,348
Sleeper Use	(Total)	130,324	132,384	156,455
PC Sleeper	New Material	108,489	124,453	142,469
	Reuse	17,506	7,066	11,472
Wood Sleeper	New Material	1,503	486	797
	Reuse	2,826	380	1,717
Rebar Use		219,527	262,667	572,681
Aggregate Use	(Total)	1,662,709	1,972,166	1,861,086
	New Material	1,635,616	1,951,063	1,789,679
	Recycled Aggregate	27,093	21,103	71,407

#### Water Use

(ton)	2007	2008	2009
(Total)	1,366,884	1,420,691	1,589,683
Recycled Water	175,843	282,915	164,400



#### KR (Main Office and Regional Offices)

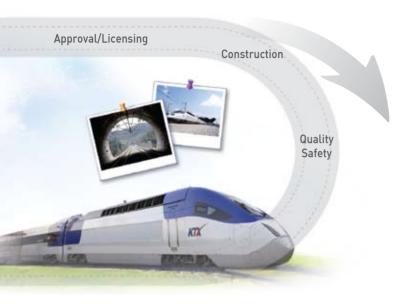


<sup>\*</sup> Rail and sleeper Use: 5 Railway sites of regional offices

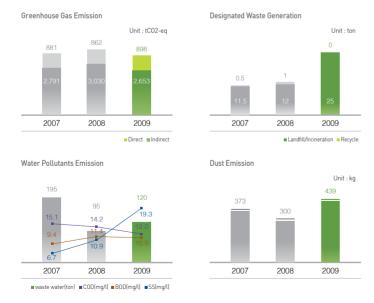
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Like input material, KR is managing total volume of emissions such as wastes, air pollutants, and water pollutants. Data collection boundary from 2007 to 2009 is same as input material data collection boundary.



#### KR (Main Office and Regional Offices)



- \* Greenhouse gases emission: In accordance with greenhouse gases emission measurement guideline for company by KEMCO[Korea Energy Management Corporation]
- \* Zero emission of NOx and Sox
- \*Waste water emission: Chatan Stream, North Han River Branch, Woonjung Stream, Seoho Stream, Incheon Sea, Stream, Osan Stream, Hwapo Stream, Musongsoha Stream, Chungang Stream, Nam River, Yuha Stream, Choman River, Nakdong River Branch, Sooyung River, Songjung Stream, East Sea, Geumho River Branch, Daejeon Stream, Hyungsan River Branch, Induk Stream, Jeonju Stream, Heuk Stream, South Han River, Sum River, Samsam Stream Branch, Jangpyung Stream, Mudo Stream, Osip Stream

## **OUTPUT**

Railway Construction Sites (Business Partners)

Greenhouse Gas Emissi	on		
(tCO <sub>2</sub> -eq)	2007	2008	2009
(Total)	183,217	196,593	190,611
Boiler	15,185	18,648	24,281
Vehicle	10,209	14,099	11,189
Construction Machinery	157,823	163,847	155,141
Waste Generation			
(ton)	2007	2008	2009
(Total)	567,577	715,794	1,037,164
Construction Waste	534,639	678,705	980,643
Recycle	453,564	605,924	835,407
Business Site Waste	29,149	33,418	55,160
Recycle	7,780	16,666	30,660
Designated Waste	3,789	3,672	1,361
Designated Waste  Recycle	3,789 372	3,672 210	1,361 323
	372	210	323
Recycle  Air Pollutants Emission	2007	210	323
Recycle  Air Pollutants Emission  Dust(kg)	372	210	323
Recycle  Air Pollutants Emission	2007	210	323
Recycle  Air Pollutants Emission  Dust(kg)  Number of Operating Sites with Air	2007 2,422 5	2008 2,297	2009 1,305
Recycle  Air Pollutants Emission  Dust(kg)  Number of Operating Sites with Air Pollutants Emission Equipment	2007 2,422 5	2008 2,297	2009 1,305
Recycle  Air Pollutants Emission  Dust(kg)  Number of Operating Sites with Air Pollutants Emission Equipment	2007 2,422 5	2008 2,297 4	2009 1,305 6
Recycle  Air Pollutants Emission  Dust(kg)  Number of Operating Sites with Air Pollutants Emission Equipment  Water Pollutants Emiss	2007 2,422 5 ion 2007	2008 2,297 4 2008	2009 1,305 6
Recycle  Air Pollutants Emission  Dust(kg)  Number of Operating Sites with Air Pollutants Emission Equipment  Water Pollutants Emiss  Waste Water Emission (ton)	2007 2,422 5 ion 2007 4,238,355	2008 2,297 4 2008 4,977,145	2009 1,305 6 2009 2009 3,207,309
Recycle  Air Pollutants Emission  Dust(kg)  Number of Operating Sites with Air Pollutants Emission Equipment  Water Pollutants Emiss  Waste Water Emission (ton)  BOD (mg/l)	2007 2,422 5 ion 2007 4,238,355 4	2008 2,297 4 2008 4,977,145 4	2009 1,305 6 2009 3,207,309 4

# Realization of Eco-Green Railway

Establishment of Response System for Convention on Climate Change

# Establishment of Goal for Greenhouse Gas Reduction

In November 2009, Presidential Committee on Green Growth announced its goal to reduce total greenhouse gas emission of Korea by 30% from expected emission until 2020. And the goal for greenhouse gas emission of transportation sector was established as 33~37% of expected total emission. Accordingly, in order to actively cope with climate change, KR established its anticipative CO2 reduction goal of total 20 million tons until 2020 such as 3.55 million tons in high speed and common railway, 12 million tons in metropolitan railway, and 4.7 million tons in industrial railway.

# Establishment of Greenhouse Gas Inventory

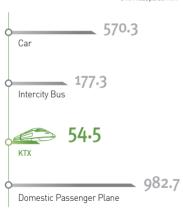
It is important to think about eco-friendliness of all railways in operation and construction, and to prepare the mid-to-long term strategy to cope with climate change in preparation for compulsory reduction of greenhouse gas. Thus, KR is carrying out the establishment of greenhouse gas in railway sector. Greenhouse gas inventory refers to overall greenhouse gas management system which indentifies, records, calculates, and reports all greenhouse gas emitted by company activities. In 2008, KR studied the status of greenhouse gas emission and started the research tasks for reduction of greenhouse gas in 2009. KR will establish greenhouse gas inventory for railway construction sites until 2010 and will develop the ways to reduce greenhouse gas which is appropriate for the characteristics of railway construction sector by figuring out the status of greenhouse gas emission of each area in railway construction sites.

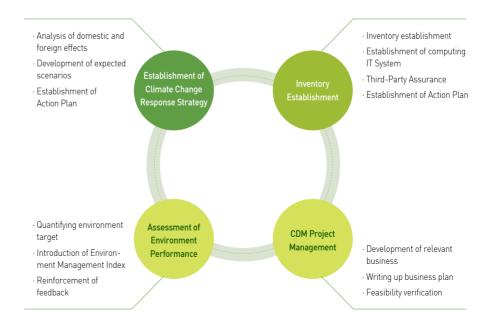
# Greenhouse Gas Emission of Each Means of Transportation $\label{eq:Unit: property} \mbox{Unit: } \%$



# Energy Use of Each Means of Transportation

Unit : kcal/person-km





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# CDM (Clean Development Mechanism) Project

In order to actively comply with governmental policy of 'Low Carbon, Green Growth' through reduction of greenhouse gas caused by the railway construction, and to secure Certified Emission Reduction (CER), KR is conducting CDM project. CDM project, a clean development system, is a system which allows industrialized countries that have to reduce greenhouse gas in accordance with Kyoto Protocol to bring or sell greenhouse gas reduction amount gained through investment in developing countries with comparative more room for reduction of greenhouse gas to CER. Through the review of CDM project feasibility for railway projects, KR decided to carry out Honam High Speed Railway construction as CDM project. When Honam High Speed Railway CDM project is completed, annual greenhouse gas reduction is estimated to reach 130,000 tons. KR will make efforts to expand CDM projects in the future such as new CDM projects of Metropolitan High Speed Railway construction and double track construction between Sosa and Wonsi.

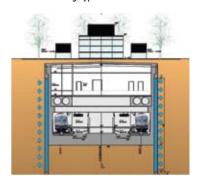
# Establishment of Eco-Station

KR is securing core competitiveness for sustainable management by utilizing new and renewable energy in railway facilities and by expanding the use of high-efficiency equipments. KR saved annual KRW 212 million of maintenance and operating expense by applying 602,866 kcal/h of geothermal energy in 7 stations including Wolgot station in 2009. Further, KR installed photovoltaic facilities in 8 stations including Songdo station of Sooin Line and 58,860 high-efficiency equipments of 9 kinds such as LED lighting fixtures in 21 stations including Choonchun station of Gyeongchoon Line. As the result, annual 1,808,492 Kwh of electricity could be saved and annual 238.3 tons of CO2 emission was also reduced. KR will continuously reduce CO2 emission by continuously developing new and renewable energy and by intensively applying high-efficiency equipments in designing new stations.

# Promotion of DST (Double Stack Train) Intruduction

As a part of efforts to reduce greenhouse gas, KR decided to carry out ways to revitalize railway logistics through DST, a double stack train system. As the cargo load volume will be increased with the introduction of DST, it is expected that annual transportation volume will be increased from 1.27 million TEU to 2.66 million TEU, and train operation expense and train maintenance expense will be reduced by 34% and 45% respectively as of 2015.

# Resource-Saving Type Station



# Photovoltaic Facilities



Double Stack Train





# Optimization of Eco-Friendly Design of Honam High Speed Railway

Resolving Environmental Conflicts on Mt.Gyeryong Section of Honam High Speed Railway

# Organizing Environmental Ecosystem Joint Investigation Team

KR designed Honam High Speed Railway so that it can pass through underground of Mt. Gyeryong National Park. However, environmental groups and Buddhism circle organized 'Buddhists Alliance against Damaging of Mt.Gyeryong' and 'Daejeon Chungnam Alliance to Save Mt.Gyeryong' since 2005, strongly protesting to this project on the grounds of noise generation and environmental damage. Taking the Mt. Cheonsung environmental conflict of Gyeongbu High Speed Railway as a lesson, KR started to protect environmental ecosystem around Mt.Gyeryong and to cut off expected conflicts in overall process of construction in advance. As the first step, KR helped establish basic agreement on joint survey of environmental ecosystem between Ministry of Land, Transport and Maritime Affairs and environmental groups, and organized Honam High Speed Railway environmental ecosystem joint survey team composed of 10 KR-related people and 10 environmental group-related people. This Honam High Speed Railway environmental ecosystem joint survey team held 5 times of Environmental Ecosystem Monitoring Committee until May 2009, and gradually narrowed their differences while continuously conducting site ecosystem survey.

# Revitalizing Eco-Communication

Reflecting the opinions of Honam High Speed Railway environmental ecosystem survey team, KR applied eco-friendly design to cultural asset dispersion area, ecosystem conservation area, and water source protection area in 19 construction sites between Osong and Gwangju. Further, KR installed wildlife passages and prevented the beauty of the view from detraction by carrying out landscaping in the bridge area. As the result, the plan for Honam High Speed Railway construction was finally fixed in April 2009, and the conflicting relationship between KR and environmental groups turned into cooperative relationship. Through this, KRW 2.5 trillion of financial loss which was expected in case of 1 year delay could be prevented beforehand and it could be imprinted that railway plays the leading role in the means of eco-friendly transportation. Further, KR demonstrated its efforts for ecosystem conservation internally and externally by making and distributing 600 environmental ecosystem reports which organized these performances. As seen in the case of ecosystem joint survey of Mt. Gyeryong section of Honam High Speed Railway, KR is carrying out environmental protection program with the cooperation of NGO, and is leading environmental protection activities jointly with environmental groups.



Environmental Ecosystem Monitoring Committee



# With Local Community

# Establishment of Strategic Social Contribution Activity System

# Establishment of Implementation Plan for Social Contribution Activities

KR more reinforced its social contribution activities program to faithfully implement the role of public organization contributing to people and local community. Particularly, KR included 'Accomplish Social Responsibility oriented Management' in 10 company-wide strategies in establishing future management strategy, and selected 'Social Contribution Mileage' as common KPI which should be implemented by all departments. Accordingly, social contribution activities are being carried out in KR as a part of important management strategies for sustainable management, rather than simple one-time voluntary activity. For systematic and directive social contribution activities, KR established 6 implementation plans which people can relate to such as 'With Local Community', 'Support of Neglected Class of People', and 'Environmental Keeper System' and connected them to 6 themes such as 'Community Based Activities', 'Festival Type Voluntary Activities', and 'Activities focused on Areas along Railways'.

# Operation of Social Contribution Activities Infra

For continuous social contribution activities, KR founded its 'KR Volunteer Group' in 2005 and as of 2009, 42% of total employees joined it and are carrying out periodic social contribution activities. As a leader of 'KR Volunteer Group', the Chairman takes the lead of overall social contribution activities, and the Vice-Chairman is taking charge of Social Contribution Committee covering annual social contribution plans and fund operation plans.





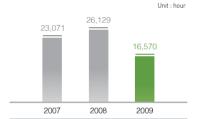
# Settlement of Social Contribution Activities

As the result of data analysis of 2009 social contribution activities which KR manages through social contribution systems such as social contribution mileage and social contribution fund, KR accomplished the results which exceeded the original goals in all items. Social contribution mileage with original goal of 200 points per 1 person recorded 257 points, and social contribution fund with original goal of KRW 204 million recorded KRW 209 million. KR could confirm that social contribution activities are being settled inside the organization particularly from the result of issuing certificates for social contribution activities increased by 196% from 2008.

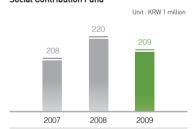
# Number of Volunteer



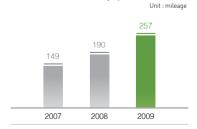
### Volunteering Time



Social Contribution Fund



# Social Contribution Mileage per Person



# With Local Community

# Executing Systematic Social Contribution Activities

# Briquette-Delivery of Love



'1 Company-1 Village' Volunteer Activity in Gapa Village



Cultivating 'Beautiful Playground'



Award from Ministry of Food, Agriculture, Forestry and Fisheries



# Co-Existence with Local Community

KR's social contribution activities are conducted divided into Main Office and regional offices. Main Office is conducting social contribution activities focused on Daejeon Metropolitan City, but is extending its targets by way of paying KRW 42 million of KR Scholarship to 34 youths in the whole country. Main Office hosted the event of 'Day of the Disabled' jointly with Daejeon Metropolitan City in April 2009, and carried out farm village volunteer activities by dispatching KR Volunteer Group to Gapa Village with '1 company-1 Village' agreement in sowing and harvest season. At the end of the year, KR delivered 10,000 briquettes to 50 poor families and donated 35,000 briquettes to briquette bank. In addition, for revitalization of local economy, KR improved contract system by way of giving extra points up to maximum 15% of PQ evaluation points to local companies when they participate in tenders since April 2009. Regional offices are conducting continuous social contribution activities after making their social contribution activities suitable to the region into the brands such as 'After School' and 'One Mind Program'.

# Distinguished Railway Organization

As an exclusive railway public organization, KR conducted overall renovation of children's playgrounds along the railway of Daejeon Metropolitan City, and provided the children living near railway with the opportunity to visit 2nd stage construction site of Gyeongbu High Speed Railway and railroad museum.

Further, KR delivered Kimchi made by employees' and holiday presents to the elderly living alone and neglected families, and the employees with various jobs such as civil engineering, architecture, machinery, and electricity directly replaced briquette boiler, roof, and electric facilities by demonstrating their expertise.

# **Enhancing Brand Image**

KR's specialized social contribution activities were reported in the media for about 30 times as excellent cases and KR received awards from all walks of life including Ministry of Foods, Agriculture, Forestry, and Fisheries as excellent organization. KR's continuous social contribution activities were added by economic and environmental performances for sustainable management, contributing to the improvement of KR's national image index to 76.69 points from 58.07 points in 2008. KR will leap into public organization beloved by national people and local community by developing and leading specialized social contribution activities which only KR can carry out, rejecting fragmentary social contribution activities also in the future.

# Carrying out Social Contribution Activities Customized to the Region

After conducting brand social contribution activities in Main Office and 5 regional offices, KR shares the result with the whole company through company newsletter.

# Seoul Metropolitan Regional Office (Seoul)



### Cultural Experience of the Disabled

KR helps cultivate the emotions of the disabled by carrying out excursion experience to Seoul every month with the cooperation of Yongsan Protection Center for the Disabled.

# Main Office (Daejeon)



# KR Green Forest of Love

KR provides rest places to local residents by constructing and managing green forest of love in 26,136m2 area along Shintanjin railway of Daejeon Metropolitan City.

# Honam Regional Office (Soonchun)



# One Mind Program

On 'The Day of the Disabled' every year, KR is carrying out visual impairment experience, catering service, and recreations with the persons who are visually impaired, helping their rehabilitation.

# Gangwon Regional Office (Wonju)



### Meal of Love

KR is practicing the love for the neighbors in need in local community by participating in catering service for the homeless every week.

# Chungcheong Regional Office (Daejeon)



# KR Study Room

KR is supporting the children to cultivate their dreams by way of guiding their studies and holding birthday parties for them.

# Yeongnam Regional Office (Busan)



# After School

KR is trying to create academic environment through establishment of 'Love-Railway Camp' and book donation for the children invited from sisterhood schools every year.



# 03

Value-Producing Customers

# We share the happiness of success.

Competiveness of KR comes from people. KR cultivates creative human resources, and develops communication between labor and management. KR pursues fair and reasonable win-win culture. Based on efforts from all employees, KR is opening a successful future.

# **KR toward Performance Improvement**

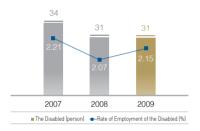
# Status of Men and Female Employment

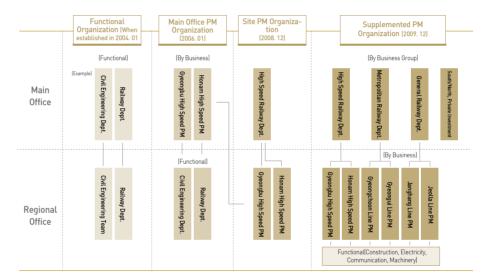


# Establishment of Strategic Site PM Organization

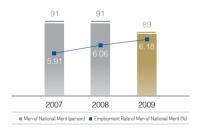
KR started its business with functional organizations divided into civil engineering, track, architecture, electricity, signal, communication in 2004. However, as the problem of low process rate occurred due to absence of combined function for construction project, the necessity to reshuffle to project organization emerged. Accordingly, KR prepared to introduce PM (Project Management) organization such as operation of PM Academy and training of PMP (Project Management Professional) until 2005, and conducted overall reshuffle of functional organizations of Main Office to PM organization in January 2006. After that, in December 2008, KR established site PM organization which reshuffled regional Main Offices to PM organization, and extended the manpower rate of regional offices to 56.5%. As of December 2009, KR is operating site-focused matrix type PM organization which was improved by adding functional organization to PM organization.

# Status of Employment of the Disabled





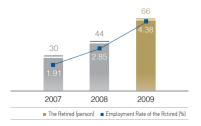
# Status of Employment of Men of National Merit



# Efforts for Balanced Social Recruitment

KR is carrying out its social responsibility imposed on public organization by actively carrying out balanced social recruitment. As of 2009, there are 127 female employees out of total 1,441 employees, with the same basic salary in the same position. KR even received employment incentive for the disabled awarded by Ministry of Labor by accomplishing the employment of the disables and men of national merit more than the number of compulsory employment stipulated in the law. KR's wages for new employees are 242% compared to legal minimum wage. Particularly in order to help resolve the problem of unemployment among young people, KR employed 123 youth interns which correspond to 2 times of governmental recommendation standard, among whom 66 interns, 54% of total employed interns, were selected from females, men of national merit, the disabled, and low income bracket, giving top priority to the class of the weak with comparative little opportunity of employment. The wages for youth interns were covered by wage return (KRW 888 million) of the employees and operating expense saving (KRW 330 million) in 2008 and 2009, restraining the necessity for additional expense as much as possible. Not limiting to simply employing youth interns, KR is carrying out mentoring system for improvement of business capability, and is operating productive youth intern system by way of conducting quarterly evaluation of job performance capability and its feedback. Meanwhile, affected by governmental policy for advancement of public organizations, the number of new employees increased by 6 persons, but the number of the retired more increased.

### Status of the Retired



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# Advancement of Performance Management

# Introduction of Positional Performance Contract System

KR is encouraging the performance improvement of each employee by way of selecting all employees as the target of internal evaluation and organizing performance rate of strategic tasks and KPI achievement rate as the items of evaluation. Specifically, CEO made performance contracts with directors and division heads, and CEO made job contracts with department heads. And department heads and department members are carrying out MBO system. In order to reinforce responsible management, KR is conducting semiannual internal evaluations, and reflecting the result to personnel management and wage payment. In June 2009, KR is contributing to accomplishment of future management strategies by establishing combined performance management system which can monitor KPI achievement status in real time by combining various kinds of information system.

# Performance Contract with Director and Division Head



# aluation Targe

- Director(Executive)
- Division Head(Level 1 )
   Department head
- Team Head (Level 2~3)
- · Team Member

[Level 1~2]

# Connection to Man-

- Performance rate of strategic tasks and implementation tasks
- · KPI achievement rate of divisions and departments

# Contract with CEO

- Director and division head Performance contract
- Department head and team head ► Job contract
- · Team member ►MB0

### Utilization of Evaluation Result

- Promotion, demotion, transference, dismissal
- Differential payment of honus

### Job Contract with Department Head



# Agreement on Ways to Improve Management Efficiency

KR extracted the ways to improve management efficiency through working level discussion between labor and management in October 2009. As they made a consensus in November, KR is just about to enforce the ways in 2010. When various ways to enhance management efficiency are carried out such as capability reinforcement program for those with low performance for 2 consecutive years, kick out system for those with poor performance, position cap system which transfers long-serving employees in the same position to specialized employees, and wage peak system which reduces the wage from 3 years before the retirement age, organizational constitution will be greatly improved such as resolution of personnel congestion and improvement of high-wage system.

Agreement on Ways to Improve Management Efficiency



# Ways to Improve Management Efficiency

Division	Main Contents
Kick Out System for Those With Poor Performance (Targeting 1,2 Level)	Those with poor performance in the result of work performance evaluation for consecutive 2 times (within 10% of 1 Level, 5% of 2 Level)  -Capability Enhancement Training > Reappointment after reevaluation, demotion, and discharge
Position Cap System (Targeting 1,2 Level)	Position change for those who served more than 10 years (1 Level) and 12 years (2 Level) to specialized employees, 10% wage reduction every year  -When relevant employees want before application of position cap system, they can be demoted to 3 Level
Wage Peak System (Including Union Members Above 3 Level)	Retirement age guarantee type: Application 3 years before retirement age (age of 58~60 Years) •10% Wage reduction every year Employment extension type: 3 years before retirement age+ within 2 years after retirement •12% wage reduction every year

# KR toward Reinforcing Internal Capability

# Establishment of Systematic Education and Training System

### KR Academy

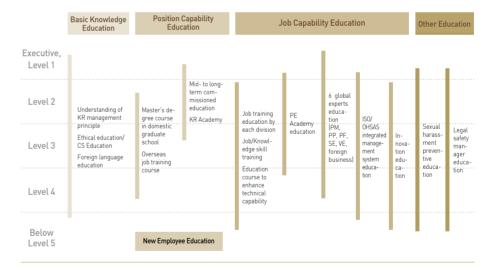
Course	Completed
Innovation Academy	257
PE Academy (Professional Engineer)	372
QM Academy (Quality Management)	149
PM Academy (Project Management)	707
ENG Academy (Engineering)	40

# Establishment of KR Human Resources Development Institute

As a part of efforts to accomplish 2020 KR Future Management Strategy, KR established KR Human Resources Development Institute in exclusive charge of training human resources in September 2009, and set up 'Professional Employee', 'Creative Employee', and 'Social Emplyee' as KR's desired 'Right People', making efforts to cultivate all employees as core personnel through career development. KR's education can be divided into basic knowledge education, position capability education, job capability education, and other educations. Basic capability education which cultivates basic knowledge of all employees include CS education, position capability education for those employees in certain position includes KR Academy, job capability education for those employees who conduct specific business includes 6 global experts education, and other irregular educations include education on prevention of sexual harassment. KR's employees can freely select various courses which can improve their business capabilities.

### KR Academy Entrance Ceremony





### Sexual Harassment Preventive Education



# Improvement of Educational Program

For substantial reinforcement of capabilities of employees, KR carried out 2009 language education on group basis by inviting native-speaking instructors rather than simply staying at simple cyber education, and dispatched 22 employees which increased by 5 employees from last year to commissioned education which trains next generation directors. Further, KR reinforced the education on professional engineers directly connected to improvement of railway quality, greatly contributing to producing 88 professional engineers until 2009. KR Academy, which was founded in 2004 together with KR's establishment, offered various courses, which more than 90% of Main Office team leaders completed. Besides, as the result of promoting gender equality and female development through education on prevention of sexual harassment conducted in December 2009 following 2008, there happened no case of sexual discrimination.

Value-Delivering Customers

# Efforts to Improve Educational Satisfaction

In 2009, KR invested KRW 2.016 billion educational budget in 257 educational courses on 9,636 man-days. The number of education per 1 person was 6.7 times, with the educational hours per 1 person of 128 hours which were increased by 6 hours from previous year. In addition, educational facilities such as lecture room were significantly expanded, and KR Human Resources Institute was established in September 2009. Through these efforts, KR is reinforcing educational system for training core human resources by providing productive educational services



Education for major employees (Design expert)

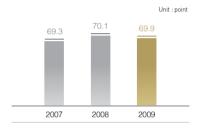
and improving educational satisfaction of the employees. However, satisfaction in capability development in 2009 recorded 68.9 points which decreased by 0.2 points from previous year. It can be analyzed as the result of insufficient educational benefits to comparatively many employees because mid-to-long term commissioned education which is position capability education was expanded in 2009. Accordingly, KR will carry out the ways for many employees in various positions to share educational opportunities in 2010.

# Executing Capability Enhancing Program for those with Low Performance

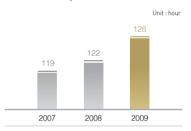
To enhance business capability of those employees with low performances, KR carried out capability reinforcement program from March to October 2009. Targeting 33 employees such as 8 employees in 1-Level and 14 employees in 2-Level, the education consisted of basic knowledge education for 2 weeks, task implementation education for 1 week and 3 months of research task implementation and site OJT (On the Job Training) education. In operating the program, KR attracted the changes on individual level by conducting personality test, aptitude test, and capability diagnosis, and at the same time, promoted the changes on organizational level by emphasizing value change and organizational innovation. The result of the program operation showed the improvement of capabilities of more than 80 % of those who received education, proving the effectiveness of the program. By preparing STEP (Study, Training, Execution, Program) system which more systematically improved the program in December 2009, KR is promoting the improvement of capabilities of those with low performance and enhancing the productiveness of the organization.



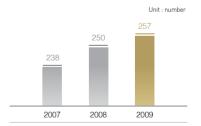
# Satisfaction in Capability Development



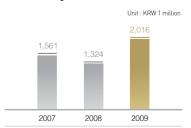
### **Education Hours per Person**



# Education Process



# Education Budget



# **KR toward Respecting Employees**

# Efforts for Reasonable Welfare System

# Opening of KR Kindergarten



# Operation of Cafeteria



# Operation of Performance-focused Compensation System

Right after its establishment, KR has been carrying out annual salary system for 1,2-Level employees, simplifying compensation system by continuously expanding the portion of base pay. For base annual salary of 1,2-Level employees, max. 2% of differentiated salary increase is applied, and for those employees with excellent performance covering 10% of total employees, 2% of salary increase is applied, and for those employees with middle performance covering 80 % of total employees, 1% of salary increase is applied, and for those employees with low performance covering 10% of total employees, salary is frozen as previous salary. By also expanding the differentiated incentives of 1,2-Level employees up to 72%, KR is promoting the establishment of performance-focused culture.

# Improvement of Employee Satisfaction

For improvement of business immersion of employees, KR is continuously reinforcing its welfare system. In order to solve the problem of housing for those employees with no connection, KR is trying for '1 room for 1 person' in employees' lodgings. KR reinforced the preparation for disasters and illnesses by expanding the limits of collective insurances, continuously operating free legal consulting system for employees and at the same time expanding the targets of the consulting to common visitors. In the meantime, KR expanded the facilities and the number of children of kindergarten as workplace childcare facilities. We also increased the number of health check-up items, and promoted qualitative improvement of check-up services by designating multiple check-up organizations. KR improved its fitness center in new office building, and is operating the cafeteria. Further, as the results of efforts for establishment of retirement pension system, retirement pension subscription rate was increased to 69-3%, with the substantial subscription rate of 94% in case of including public-employee pension subscribers, and KRW 16.2 billion of DB and DC reserve was accumulated. KR's efforts to improve the welfare of employees proved in the result of employee satisfaction survey which increased by 0.6 points from previous year.

Division	Activity Details	Effects	
Improvement of Employees' Lodging Operation	Resolving the problem of insufficient lodging, Main Office (117 rooms) Regional (130 rooms)	Resolving housing problems for those who ar not local employees	
Extensive Operation of Work- place Childcare Facilities	Expansion of the Number of Children in Kindergarten (32 children > 82 children), New Installation of 5-year-old Children Class	Resolving the Problem of Insufficient Childcare Facilities for Employees' Children	
Loan Support for University Expenses	The Number of Cases: 352 Amount: KRW 1.177 billion	Alleviating the Burden of University Expense of Employees	
Expansion of Collective Insurance	Disaster Death: KRW 120 million ►200 million, Disturbance, Illness Death: KRW 70 million ►100 million	Improvement of Employee Satisfaction through Preparation for Disaster and Illness	
Support for Legal Consulting through Advisory Lawyer	Legal Consulting [88 cases▶137 cases], Operation of Free Legal Consulting System for Visitors for the first time [11 cases]	Active Support for Employees' Individual Laws	
Advancement of Health Check-Up	Expansion of Health Check-Up Items, Multiple Designation of Check-Up Organiza- tions (1 organization • 5 organizations)	Increase of Discovery Rate of Serious Illnesses, Improvement of Service Quality through Encouragement of Competition between Check-Up Organizations	
Improvement of Fitness Center	Extensive Opening of Fitness Center, Improvement of Exercise and Shower Facilities	Significant Increase of Daily Average Users (30 persons > 80 persons), Contribution to Improvement of Physical Strengths Of Employees	
Operation of Cafeteria	First Operation of Main Office Cafeteria, Daily Number of Users: 800	Promotion of Employees' Health by Providing Sanitary Meals	

# Creation of Win-Win Labor-Management Culture

# Rearrangement of Strategy for Advancement of Labor-Management Relations

Reflecting the changes in governmental policy and labor environments, KR rearranged the strategies for advancement of labor-management relations in October 2009. In order to accomplish the vision of 'Continuous Realization of KR's Management Efficiency through Advancement of Labor-Management Relations', KR selected 9 strategic tasks such as 'Improvement of Collective Agreement to the Level of Developed Countries', 'Improvement of Organizational Constitution through Creativity and Innovation', and 'Improvement of System through Labor-Management Council' in accordance with 3 strategic directions such as 'Establishment of advanced Labor-Management Relation System', 'Creation of Strategic Labor-Management Relations', and 'Increase of Productivity through Labor-Management Cooperation'. Every year, KR is checking the achievement rate of strategic tasks and holding the labor-management strategic workshop to analyze obstacle factors.

# Operation of Labor-Management Council

KR guarantees the freedom of association and collective bargaining by observing Labor Union Act and Labor Relations Adjustment Act, and any employee below 3 Level can accordingly join the labor union. With 82% of the rate of those who joined labor union as of December 2009, KR is providing the labor union office in its Main Office, supporting union activities such as overall deduction of union fees when paying the wages. In addition, labor and management jointly organized KR Development Committee for reinforcement of organizational competitiveness in September 2008, the ways to improve management efficiency were extracted in May 2009.

Apart from KR Development Committee, labor and management are narrowing their differences through various forms of labor-management consultative bodies such as Industrial Safety and Health Committee with the same number of labor and management members, Labor-Management Council, regular meetings, and TFT for solution of pending issues. In collective agreement which was concluded in December 2008 and is effective until December 2010, safety and health items are separately provided from article 120 to article 137, making efforts for safety protection and health of employees. In case of important matters such as liquidation, split-off, merger and transfer of the organization, KR is supposed to notify the labor union until go days before the action, and KR is eradicating child labor and forced labor in accordance with Labor Standard Act.

# Operation Result of Labor-Management Consultative Bodies

Category	Major Activities	Consultative Body	Major Activities
Labor-Manage- ment Council	Final Decision-Making for Pending Issues and Labor-Management Guidelines	Personnel System TFT	Discussions on Ways to Improve Personnel System such as MB0
KR Development Committee	Extraction of Ways to Improve Management Efficiency and Re- solving Personnel Congestion	Education and Training TFT	Development of Customized Education Courses
Working Level Labor-Manage- ment Council	Prior Coordination of Opinions for Issues in Collective Wage Bargaining	TFT for Movement of Regional Office Building	Feasibility Study and Establish- ment of Plan for Movement of Regional Office Buildings
Organization Design Consultative Committee	Carrying out Consultation on KR's Organization Design	Other Labor-Management TFT	Organization of Team in case of Pending Issues

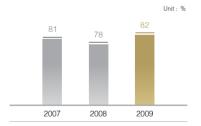
### Labor-Management Joint Workshop



Labor-Management Council



# Rate of Labor Union Members



# KR toward Rationality and Transparency

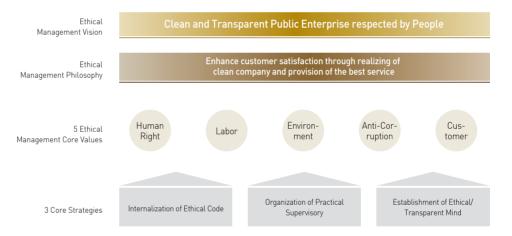
# Establishment of Sustainable Ethical Management System

### **Ethcial Management Committee**



# **Establishment of Ethical Management Framework**

KR suggested 'Transparent and Clean Public Enterprise Respected by People' as the vision for Ethical Management, and established systematic framework to accomplish the vision. In order to comply with 10 principles of UN Global Compact and to realize clean company, KR established Human Rights, Labor, Environment, Anti-Corruption, and Customer as its core values. In addition, on the basis of strong will of the Chairman who emphasizes the importance of sustainable management, KR is implementing 'Internalization of Ethical Code', 'Practical Supervisory Organization', and 'Establishment of Ethical and Transparent Mind' as its 3 core strategies.



### Creativity & Innovation Executive Committee



Ethical Practice Leader Workshop



# Reinforcement of Ethical Management Organization

To expand ethical management, KR is operating company-wide ethical management system. Ethical management strategies, which were established in Ethical Management Committee and notified to the whole company, are constantly checked by auditing department and integrity inspection team. On the basis of that, customer ethical team is reestablishing the measures for improvement every year. Creativity & Innovation Executive Committee is managing ethical activities of each division, and Corruption Effect Team is discovering and improving corruption-inducing factors, and the ethical practice leader of each division leads internal integrity activities. Internal integrity is inspected in real time through phone-monitoring on external stakeholders, and integrity ombudsman is requesting for the correction for integrity-vulnerable areas. In addition, KR Human Resources Development Institute is promoting the internalization of ethical management by providing various educational courses for reinforcement of ethical capabilities of employees. Particularly, KR expressed its strong will for ethical management by immediately firing 1 employee exposed for accepting bribery in 2009

Value-Delivering Customers

# Efforts for Efficient Anti-Corruption

# Advancement of Ethical Standard

KR's ethical standard is composed of code of ethics, code of conduct for employees, guidelines for official treatment of report, and 10 directives for integrity obligation on the basis of Ethical Charter made in September 2004, and KR is making more advanced ethical standard by revising codes of conduct of employees every year. In its 7th revision in 2009, the obscure contents of code of ethics were specified, and the provision for prohibition of private use of position was newly included, prohibiting the profit through public properties. In addition, in preparation for ISO 26000, guidelines for report of corruption activities and criminal charge were newly installed, and as a result of efforts to prevent unfair competition and monopoly activities, there was no case in violation of relevant laws. KR is also abiding by Political Fund Law which prohibits the provision of political fund and kind donation in the name of corporate body.





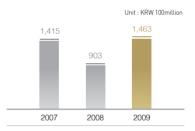
# Improvement of Business Partners' Satisfaction

KR is enhancing the satisfaction for business partners by way of fundamentally removing the corruption factors. KR revised contract-related regulations for 3 times since January 2008, and cares for the socially weak class of people by way of giving priority to purchase of medium and small company products and the products of the disabled. For prompt and clean business with business partners, KR is also utilizing contractor project management system, civil complaint management system, and electronic procurement system. Through these efforts, customer satisfaction of business partners recorded 84.4 points in 2009 which increased by 2.1 points from previous year.

# Ways to Enhance Customer Satisfaction of Business Partners

Advancement of Contracting System	Contents : Revision of contract regulations for 3 times after 2008  Effects : Annual saving of KRW 1.309 billion of documentation cost through introduction of electronic contract documents and electronic deliberation system
Contractor Project Management System	Contents : Online communication with business partners in real time Effects : Saving post cost through online approval
Issuance of Civil Complaint Documents though Internet	Contents: Issuance of civil complaint documents within 1 day through internet  Effects: Saving annual KRW 187 million of post and visiting expense
One-Stop Civil Com- plaint Management	Contents: 1 step reduction of civil business treatment procedures (3 steps 2 steps)  Effects: Enhancement of customer satisfaction through prompt treatment of civil complaints
Electronic Procurement System	Contents : Contract business utilizing online for the first time in public enterprises  Effects : Annual saving of KRW 2.691 billion through online application of contract deposit

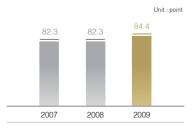
### Purchase Amount of SME Products



# Contractor Project Management System (CPMS)



# Business Partners' Satisfaction



Survey Result of Internal Integrity Level

81.4

Organization

88.6

Relevant

Organization

KR

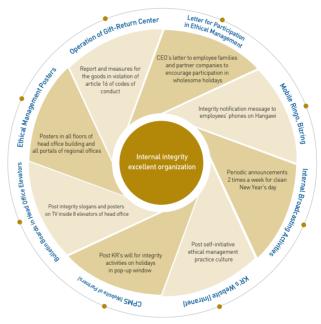
Unit : point

# KR toward Rationality and Transparency

# Efforts to Enhance Integrity

# Selected as Excellent Organization in Internal Integrity

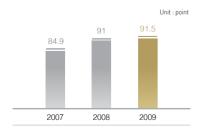
KR had commissioned integrity survey conducted by external organization for 1 time a year until 2008, but had difficulty in feedback of low reliability and insufficient integrity. Accordingly, KR secured the reliability of survey by establishing self online integrity survey system for the first time public construction enterprises in 2009, and checked the status of integrity of each division and each business in real time. By carrying out companywide integrity culture campaign on national holidays when unethical activities are concentrated. In addition, for reinforcement of employees' ethical minds, KR carried out special mentoring education on 38 employees working in integrity-vulnerable areas such as land compensation, property management, and site inspection. KR internalized ethical minds with recording the high completion rate of 98% of all employees. As a result, KR was selected as excellent organization in internal integrity announced by Anti-Corruption and Civil Right Commission.



# Electronic Procurement System



### Satisfaction in Electronic Procurement System



# Realization of Transparent Management

# Award of the Best Organization in Information Release

KR is satisfying the right of customer for knowledge by extending management public announcement items to 75 items from 58 items of 2008, and is anticipatively providing its core information to specialized customers by utilizing PCRM which is political customer management system. Particularly, KR is releasing information such as new ordering plan, contract, and project expense execution status, promptly and transparently to business partners through contractor project management system and electronic procurement system. Through these efforts, KR was selected as excellent organization by Ministry of Land, Transport and Maritime Affairs by acquiring the best level of information release in 2009, and KR will also make efforts to lead transparent management in the future.



# KR Integrity Ombudsman

# Zero Blind Spot of Integrity through KR Integrity Ombudsman

# Establishment of Ombudsman Representing Korea

KR is operating 'KR Integrity Ombudsman' (hereinafter referred to as 'Ombudsman') which was recognized as domestic standard model of Ombudsman by Anti-Corruption and Civil Right Commission for 2 terms. As a part of activities stipulated in agreement on transparent society by public enterprises, KR introduced Ombudsman system in March 2007 and started the first term Ombudsman system in June 2007 and operated it until June 2009 with the members recommended by Anti-Corruption and Civil Right Commission. The first term Ombudsman played the role of window where stakeholders officially raised objections through its activities for 43 times, and distributed the result to the whole company in activity report.

# Members of KR's 2<sup>nd</sup> Term Integrity Ombudsman

Δrea	Name	
Aled	Name	
Academic Circle	Prof. Oh, Joongeun	
Civil Society	Accountant Lee,Sanggeun	
Civil Engineering Expert	Dr. Ryu, Jungsoo	
Electric/Electronic Expert	Prof. Kim, Wooje	

Observing Design Change of Bundang Line

# Standard Model for Public Organizations

After the completion of the first term Ombudsman activities, the Chairman made it clear that he would reinforce Ombudsman activities. Accordingly, considering the unsatisfactory site-focused activities and lack of electric/electronic experts as insufficient sides of the first term Ombudsman, KR started the second term Ombudsman which supplemented the first term Ombudsman in July 2009. The second term Ombudsman which is operating every other week secured the transparency by revising design change procedures in August. It also secured the transparency of contract by recommending separate ordering in each construction site unit of system area in November. Particularly, the second term Ombudsman greatly contributed to finalizing the deliberation without any accident by observing and inspecting overall schedules of design deliberation of alternative design-build tender of Honam High Speed Railway which was the biggest crisis of ethical management. KR's Ombudsman model was selected as excellent case of Ombudsman in business report (2010.1) of Anti-Corruption and Civil Right Commission, and achieved the honor of being spread to other public agencies.

# KR Integrity Ombudsman Operation Process



 $\cdot \text{Decision on 5 major activity guidelines of the secondary integrity ombudsman (2009, 06)} \\$ 

- Focused on the sites, Expansion of activity boundary, Joint activity with management team, Surveillance on corruptio

\*Appointed additional integrity ombudsman in fragile system area

Practice

- Revision of 'Design Change Procedure' which was a practice of 100 years of railway construction history (2009. 08 )
- Drastically changed the head of design change committee of the site and excluded KR employees
- Arrangement measure to recommend confirmation of purposiveness of major contract projects of 2009 [2009.11]
- Carried out separate ordering in each unit of system area construction lot (Reflect to '10 projects)
- Urgent introduction of KR's ethical management contingency situation in 2nd half of 2009 (2009, 11–12)
- Attended and watched all procedures of design review of turn-key and alternative tende for Honam High Speed Railway

Sharing

- · Implementation of Ombudsman education for all employees
- · Publishing internal news
- $\cdot \ \mathsf{Publication} \ \mathsf{of} \ \mathsf{Ombudsman} \ \mathsf{activity} \ \mathsf{report}$





# **Growth through Communication**

# Establishment of Cooperative Communication Channel

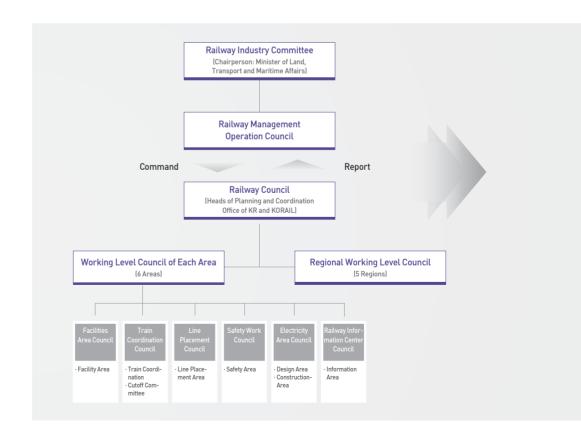
# Railway Committee Operation Performance (2004~2008)

Division	Contents	
Foundation	Aug. 4, 2004	
The Number of Meetings Held	10	
The Number of Agenda Items	52	
The Number of Resolved Items	49	
The Number of Pending Items	3	
Processing of Pending Issues	Submitted to Railway Manage- ment Operation Committee [Chair: MLTM, Railway Policy Officer] and the discussion completed	

# Background for New Installation of Railway Policy Coordinating Committee

In accordance with railway industry structural reform for qualitative improvement of Korean railway industry, KR was born in January 2004, and KORAIL in January 2005. KR is an organization formed by the merger of Korean Express Railroad Construction Corporation and KNR (Korean National Railroad) Construction Headquarters, and KORAIL is an organization started from KNR Operation Headquarters. As a core customer who uses railway products constructed by KR, KORAIL maintains close relationship with KR.

As the time passed, however, the organizational ties between KR and KORAIL started to become weaker and sometimes there were even conflicts between both organizations. So the channels for communication were maintained through the operation of Railway Committee chaired by heads of Planning and Coordination Offices of both organizations and Railway Management Operation Committee conducted by Ministry of Land, Transport and Maritime Affairs. Meanwhile, as the two Committees were closed due to the revision of enforcement ordinance of Basic Law for Railway Industry Development, the necessity to establish new communication channel raised its head. Accordingly, KR and KORAIL decided to enhance business efficiency by creating new railway committee with their movement to new office building to be used by both organizations





Value-Delivering Customers

# **Establishment of New Cooperation Channel**

KR and KORAIL are reasonably coordinating different opinions between both organizations by establishing Railway Policy Coordinating Committee co-chaired by Vice Chairmen of both organizations in August 2009. In addition, KR promoted the efficiency of operation by establishing working level committees of 9 areas in Main office and 5 working level committees in each regional office under Railway Policy Coordinating Committee. Further, in order to smoothly operate various committees, KR established 'Railway Cooperation Joint Department' composed of KR and KORAIL employees just under vice chairman in September 2009. Railway Cooperation Joint Department is managing Railway Policy Coordinating Committee and Working Level Committee and developing the cooperation between both organizations.

# Operation of Railway Working Level Committee

KR improved the business efficiency by resolving 93 cases out of 95 cases of controversial issues through the operation of Main Office working level committees together with KORAIL. As a typical case, in 11 times of working level committee on line placement, 67 cases were discussed and processed such as civil complaints regarding construction of the access road to Jeongeup Station. Rate of timely consultation was recorded 92.9% which is improved by 4.5% from that of previous year. Further, 91.52% rate of timely supplementation was recorded for the items pointed out in general test jointly conducted by both organizations before the opening, achieving the result of increase by 6.01% from previous year.

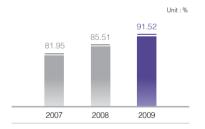
# Result of Processing Agenda Items in Each Working Level Committee

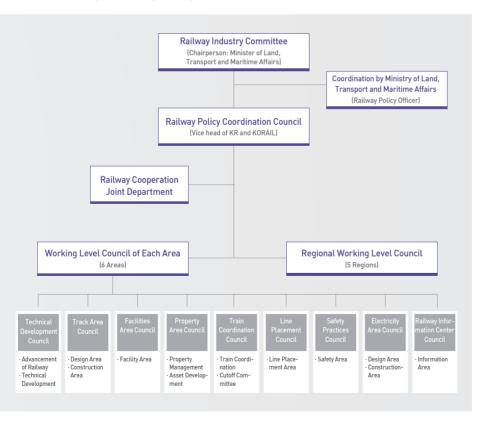
Total number of Items	Resolved Items	Pending Items
95	93	2

# Working Level Committee on Station



# Rate of Timely Supplementation in General Test





# **Cooperative and Sharing Partner**

# Performance of Business Efficiency through Win-Win Cooperation

# **Carrying Out Joint Inspection**

KR is improving business efficiency and reinforcing the safe operation of trains by carrying out joint site inspection with KORAIL in various fields such as inspection on sites with high frequency of railway accidents and defect inspection. With KORAIL, KR inspected 826 dangerous sites of car-drop near railroads and completed the reinforcement of 326 sites among them, carried out precise inspection on 53 tunnels and 105 bridges of Gyeongbu High Speed Railway, and repaired 5 cracked bridges by conducting joint safety inspection on truss bridges.

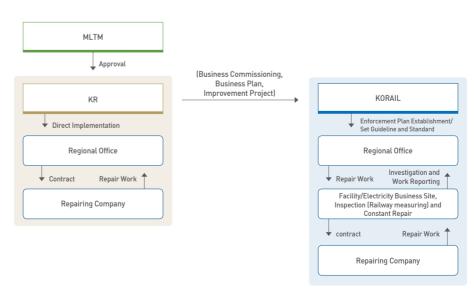
# Promotion of the Introduction of Tilting Train

From October 2008 to November 2009, KR and KORAIL constituted a joint exclusive organization to promote the operation of tilting train and tried to find the way to reduce running time. When tilting train, which can speed with tilted train body, is introduced to Chungang Line, Yeongdong Line, and Taebaik Line with many curved railroads, the speed on curved railroad will be greatly improved, reducing the running time by as many as 136 minutes from current 391 minutes on Mugunghwa Train from Seoul to Gangneung.

# Railway Facilities Management System

# Structure of Railway Facilities Management System

In accordance with railway industry structural reform, government-owned railway facilities assets are managed by KR on behalf of Ministry of Land, Transport and Maritime Affairs, and working assets invested in kind in KORAIL are managed by KORAIL. As an organization in charge of management of High Speed Railway facilities, KR is delegating repair and maintenance work to KORAIL. On the other hand, Ministry of Land, Transport and Maritime Affairs is delegating repair and maintenance work of common railway directly to KORAIL. KR is checking the appropriateness of budget compilation and execution of KORAIL.



Site Working Level Discussion



Tilting Train



# Improvement on Common Railway facilities Improvement Business System

In March 2009, considering the safe operation of trains and budget-saving, KR established the plan to directly carry out a part of facility improvement business of common railways which was to be delegated to KORAIL. In view of the early stage of the project, KR selected 4 areas of comparatively easier business such as boarding and alighting facilities and tunnel disaster prevention facilities as its direct performance areas. KR is also compensating the defects through quarterly inspection on real conditions and reflecting them to future management plans. As the result of direct conducting facility improvement project, KR could save KRW 2billion of budget and achieve the improvement of technical capabilities of employees in facility area. Further, KR conducted feasibility study of detailed plan for common railway facility improvement projects established by KORAIL, and recommended the ways to improve the problems discovered in inspection of 4 times on actual conditions of commissioned projects.









Inspection on Actual Condition of Commissioned Project

# Timely Collection of Railway Access Fee

KR has had different opinions from KORAIL about the period and scope of payment of railway usage fee which KORAIL should pay to KR. But through discussions with Ministry of Land, Transport and Maritime Affairs and KORAIL, KR signed contract on use of common railway and High Speed Railway in March and April 2009 respectively. In addition, KR succeeded in timely collecting of KRW 623.2 billion which was the goal at the beginning of the year by managing various items such as details of railway usage fee, payment detail of repair and maintenance, and liability status by utilizing computing system. High Speed Railway usage fee collected from KORAIL is used for debt redemption, and common railway usage fee is offset by repair and maintenance expense delegated to KORAIL. Currently, common railway usage fee is calculated as 70% of repair and maintenance cost, and High Speed Railway usage fee is account for 31% of operating profit, but KR is making efforts to secure its financial soundness by devising the ways to recalculate the railway usage fee.

# Value-Purchasing Customers

# KR focuses on potential of 'future.'

KR does now satisfy in the present. Rather, KR is taking its steps to the world. To respond diverse needs from customers, KR reinforces customer satisfaction(CS) management. In customer requests, KR sees the future.



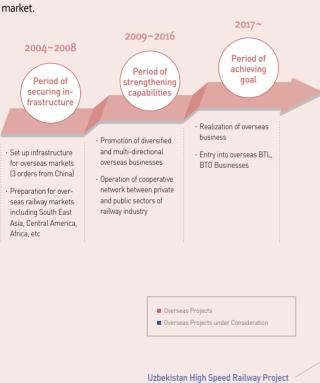


# Development of New Market

# Leaping to Be a Global Partner

# Plan to Enter Overseas Market

KR carried out the supervision service of three Chinese lines such as the Shouning-Chongqing Trial Line, the Wuhan-Guangzhou Line, and the Harbin-Dalian Line until 2008, based on the construction know-hows accumulated in Korea. As High Speed Railway construction plans were announced globally, in countries such as Brazil and the US, upon the advent of railway renaissance, KR established detailed action plans to enter the global railway market.



350km Railways Construction of Tashkent-

**Azerbaijan Railway Revision Project** 503km of Railway Reconstruction of Transnational Line between

Samarkand Line

Baku-Georgia

Kuwait Railway System

Advisory Service on Technical
Parts, Feasibility Study and

Business Management (PM)

# Establishment of Railway Industry Cooperation Network

As a result of systematically executing the three supervision services in China, KR could win an advantageous position to take additional orders from the China High Speed Railway Construction Project. KR was selected as an excellent organization in the Wuhan~Guangzhou Line supervision service evaluation, overtaking railway-advanced contries such as Germany. China Branch held the Korea-China Railway Technology Exchange Committee in December 2009 in order to promote excellence in Korean railways and to strengthen the relationship with China. KR established the Railway Industry Cooperation Network among the government, the Korea Railway Associa-

tion, KORAIL, business partners, R&D centers, and financial organizations. Korean railway industry will be further strengthened by distributing clear roles to the government, public organizations, and private sector.



Korea-China Railway Technology Exchange Committee



# African Railway Market Development

KR's efforts to enter the overseas market through the Railway Industry Cooperation Network have resulted in being selected as a partner of the Cameroon Railway Master Plan Consulting Project in September 2009. Also, in November, we succeeded in obtaining the technical advisory service contract of the Dacca-Jessore feasibility study in Bangladesh. During 2009, KR tried to secure a bridgehead to diversify its overseas channels by submitting business proposals to Brazil, the US, and Uzbekistan and contracting MOU with them. From the perspective of raising the national prestige, KR is positively considering including human right articles when making MOU contracts or entering into overseas market.

### Railway Projects in China

Shouning-Chongqing Trial Line Supervision Service (May 2005): Shouning-Chongqing Wuhan-Guangzhou Line Section No.1 Supervision Service (Jan 2006): Wuhan-Guangzhou Harbin-Dalian line(Advisory) Supervision Service (Mar 2008): Harbin-Dalian Gamchung-Shingan Line Technical Advisory (May 2010): Lanzhou-Hong Ryuha-Urumqi, Hanyang-BoGye

JinJin Line, Ha Chi Line, Ban Young Line Technical Advisory (May 2010): Tianjin-Jinwhan, Harbin-ChiChi Haral Bangum-Shin Heyseong

# Vietnam Railway Construction Project 412km Railway Construction of Ho Chi Minh-Nah Trang Line

### Mogolia Railways Construction Project

370km of Tavan Tologi-Chun Bayan Line 550km of Chun Bayan-Choilbalsan Line

Brazil High Speed Railway Project

520km of Rio-San Paulo-Campinas Line Railway Construction

# 11 Lines, 12,500km, Promotion for participation of California and Florida High Speed Railway Business

US High Speed Railway Project

### **UAE Railway Project**

Total Expansion of 264km (three lines)

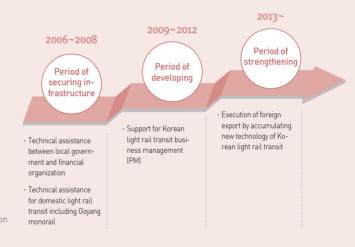
# Saudi Arabia Railway Construction Project

Establishment of Master Plan for Years 2010-2040

# Entry into New Technology Railway Market

# Light Rail Transit Introduction Plan

Until 2008, Korean Light-Rail Transit business was promoted by local governments and its business management authority used to soley belong to foreign companies. KR equipped with the railway project management capacity decided to enter the light rail transit market in order to prevent the outflow of foreign currency and to create business profits at the same time. Having secured the experts pool in April 2009, KR conducted intensive and professional training programs to enhance technical capacity. Technical consultations related to light rail transit carried out in Yongin and Uijeingbu in Gyeonggi-do, Cheonan in Chungchoengnam-do, and Sokcho in Gangwondo provided chances to prove KR's excellent capability and to earn profits.



# **Entry into Light Rail Transit Market**

KR's efforts to enter into the light rail transit market resulted in obtaining the contract of the Gimpo Light Rail Transit Business Management. KR began to establish plans to participate the Gimpo project since January 2009 and organized a T/F team, making a joint agreement with Seoul Metro in April to obtain the contract and completed all preparations for the project in the first half of the year. As a result, made a successful contract with Gimpo in Gyeonggi-do in December, which is worth KRW 26.4 billion. KR also conducted three kinds of R&D projects of building Trial Lines for Magnetic Levitation Trains. KR will consistently participate to make a new business and profits in light rail transit, magnetic levitation trains and other railway projects where top notch technology is required.

# Reconstruction of Customer Satisfaction Management System

# Reestablishment of CS Strategy for the 3rd Term Management

# CS Key Employees Interview



# CS Strategy Verification Workshop



The 3<sup>rd</sup> Management CS Vision Declaration Ceremony



# Continuous CS Strategy Improvement

Since its establishment in 2004, KR has been persistent to realize CS activities and to consistently improve CS strategies. To meet the increasing demands of customers and to secure conformity between 2020 KR Future Management Strategy and CS Strategy, KR began a new CS strategy project.

# Declaration of CS Vision for the 3rd Term Management

With the active supports of the KR executives and employees participating in surveys, interviews and workshops, KR composed a T/F team to set up for the 3<sup>rd</sup> Term Management CS Strategy in August 2009. As a result, a new CS vision of 'Futer-creating Green Railway for Customer Satisfaction' was emerged along with the 4 strategic directions including 'People-friendly Green Railway' and 'Sophistication of VOC Management System' as well as the 18 practices including 'People's Participation Increase' and 'Method to Make VOC Asset' in order to conduct CS activities tailored to each stakeholder. KR held the CS Vision Declaration Ceremony in the last December to promote its specialized CS service for each stakeholder.



Value-Delivering Customer

# **Redefining the Customers**

Through customer performance and employee awareness surveys, KR executed a process to redefine customers that fit with the 3<sup>rd</sup> Term Management CS Strategy. By doing so, people, railway users and overseas/domestic contractors were selected as the core customer of the 3<sup>rd</sup> Term Management. KORAIL, a previous value-purchasing customer, was redefined as a value-delivering customer. In addition, CS keywords were selected by each customers for more systematic promotion of CS strategy.





# Establishment of CS Management System

# Company-wide CS Promotion Organization

KR operated a company-wide CS organization to create sustainable CS performances. Strategic Management Committee is in charge of review and vote of major strategies and Customer Ethics Team sets up the detailed plans. CS Leaders and Helpers assigned in each organization are playing active roles for company in general according to CS detailed plans. CS employees in Customer Help Team and Call Center in head quarter and local branches respond to external stakeholders at firsthand. Our CS activities toward internal/external stakeholders are continuously improved by inspection of Customer Ethics Team.

# **Operation of Customer Value Committee**

For differentiated customer value and effective CS system operation, KR established Customer Value Committee consisted with 5 external experts and a director of KR Planning Department in 2008. Purpose of this half-yearly committee is to review CS activities in a comprehensive manner and to advise on CS plan for next year. Especially, two times of Customer Value Committee that took place twice in 2009 thoroughly reviewed the 3<sup>rd</sup> Management CS Strategy, playing an important role to reestablish the new CS strategy.

### Customer Value Committee Members

Organization	Name
Hannam Univ.	Lee, Gyu-Hyun (Professor)
Green Consumer Network in Korea	Cho, Yong-Guk (Director)
Consumers Union in Korea	Kang, Nan-Sook (Vice President)
Join Consulting	Lee, Sang-Min (CEO)
Hyundai Marine Insurance	Hwang Gyu-Jin (Managing Director)
KR	Kim, Young-Woo (Manager)

# **Customer Value Committee**

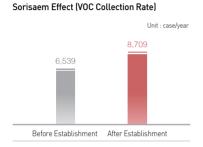


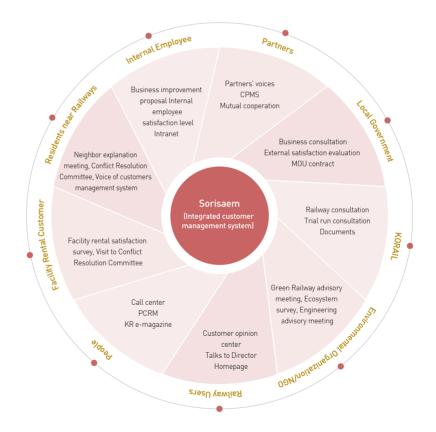
# Enhancement of Customer Satisfaction Management Capability

Sophistication of CS Management by Operating "Sorisaem"

# 'Sorisaem' Sophistication

KR established an integrated customer management system called 'Sorisaem' which reflects various contact points and characteristics of corporate/individual customers since December 2007. Sorisaem manages 27 channels specified by stakeholders and conducts 8 types of online customer satisfaction surveys. Moreover, Sorisaem Sophistication Process to strengthen the CS statistics analysis function and to complement VOC system was completed in May 2009.





# Sorisaem Patent



# 'Sorisaem' Patent

As Sorisaem was introduced, business document-handling period was reduced to 3 days from 9 days. Since stakeholder-tailored response by analyzing VOC type is possible, the VOC feedback process becomes more efficient. Enhanced Sorisaem became a benchmarking target from about 40 public organizations such as Korea Transportation Safety Authority and Health Insurance Review and Assessment Service. In November 2009, KR applied for patent of 'Sorisaem' for the first time among public organizations.

# Systematic Operation of CS Program

# **Carrying out CS Education**

By conducting various education programs, KR continuously strengthens employees' CS execution capabilities. 2009 CS education courses were processed based on comprehensive results of government customer satisfaction survey in the last year, education performance evaluation, and employee VOC. The education courses include CS education of multi-contact employees for conflict management, CS leader helper workshop, outsourcing education for CS professionals, mentoring for poor satisfaction group, and CS cyber education for all employees. With outsourcing education for CS professionals, CS master and instructor are trained every year and the CS experts are assigned to help poor-groups as mentors. KR reflects the results of CS education satisfaction evaluation, which are collected from employees who completed the courses, on the next year's CS education plan.

Courses	Contents	Schedules	Member	Satisfaction Level
CS Education of Multi- contact Employee for Conflict Management	Conflict resolution and service delivery quality improvements	2009.06	122	75.3
CS Leader & Helper Workshop	CS practices plan and operation know-how	2009.02-12	185	79.0
Outsourcing Education for CS Professionals	CS master, In-house instructor training	2009.03~12	9	-
Poor CS Performance Group Mentoring	Understanding of government customer satisfaction level and improvement of customer service	2009.07	43	78.6
CS Cyber Education for All Employees	CS management necessity and methodology of customer service	2009.09~10	1,432	-

### Poor Satisfaction Group Mentoring



# **Execution of CS Innovation Tasks**

KR resolves a variety of VOC collected from domestic/overseas satisfaction level surveys. Depending on VOC level, simple problems are handled by CS clinic to be resolved immediately. Normal tasks are categorized as immediate implementation CS problem, which takes about a month to resolve, and complex problems that require over 6 months are handled by company-wide CS Improvements. All of the tasks data are accumulated in the knowledge management system as DB. As for company-wide CS improvements, after making an agreement to promote the project between Chairman and department head. KR conducts monitoring on all steps of projects through project management system and executs tollgate for quality improvement on a regular basis. In 2009, KR successfully resolved 230 cases of immediate implementation CS tasks, 45 cases of company-wide CS improvements and made creative CS values.

# **Excellent CS Employee Rewards**

KR reflects CS Activity Index to evaluate department's performance, and encourages employees to actively participate in CS activity by awarding excellent CS employees. CS Star Award, which selects in each quarter, provides an awardee with family travel change, and Best Service King is also selected in each quarter with rewards. KR's CS performance system aims to have CS culture taking root within the organization.

# CS Experts

Year	CS Master	CS Instructor
2007	1	1
2008	1	5
2009	3	6

# Best Service King Award



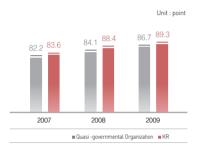
# Sentiment Improvement of Customer Service

# Efforts to Construct Railway for Customers Satisfaction

# Improvement of Customer Satisfaction Level

In order to improve railway customers' conveniences, KR built 253 units of elevators and screen doors in 35 stations in 2009, and rebuilt a waiting area at Cheonan-Asan station. To improve convenience for the customers who visit KR in person, KR additionally extended area of parking lot, customer service center and customer convenience equipments such as computer.

Government Customer Satisfaction Level



**Prior Construction** 



Post Construction



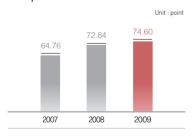
KR Honorary Ambassadors



Systematic Management of Voice of Customers

For more effective resolution of customers' complaints, KR classified issues specifically into engineering, construction, site facility and asset, and conducted a monthly evaluation about voice of customers, which results are shared by all employees. Among 9,109 complaints cases collected during 2009, most of them are related to sites and construction and none of cases is related to customer data loss. Customer satisfaction-oriented CS activity bore the good fruit of recording 89.3 score in 2009 government customer satisfaction level, which score has been increasing 6 years in a row since KR established in 2004.

# KR Reputation



# **Reputation Improvement**

KR opened a blog in August 2009 and assigned entertainer Seo, Kyungseok and dance group '4 Minutes' as KR honorary ambassadors to improve KR's image. By inviting the honorary ambassadors to the opening ceremony and groundbreaking ceremony, KR is trying to promote the conveniences of railways. Every effort made by KR to upgrade its reputation complies with laws in product information, service supply and marketing, and no related articles have been violated by KR in 2009. Despite KR's reputation that increased by 1.76 points to 74.60 points in 2009, many people still confuse between KR and KORAIL and other facility management organizations under local governments. Therefore, on the occasion of Kyeongbu 2<sup>nd</sup> stage opening, KR is planning to improve its reputation by thoroughly reviewing CI strategy to have a new CI that reflects KR status and mission.

# Customer Safety Focused Service

# **Efforts for Accidents Prevention**

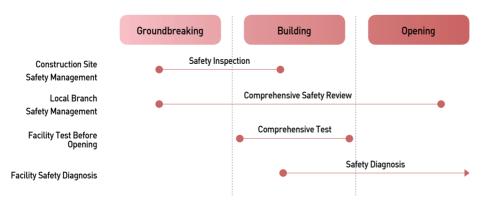
KR makes its best effort to provide customers with highly qualified railway services by classifying construction sites by risk level and adapting a signal lamp system to keep construction sites safe from any incidents and disasters in advance. In winter and summer, KR operates disaster management situration room and carries out the joint training program with other organizations to reinforce the disaster response capability. To place top priority on customers' safety, KR builds screen doors in platforms, and establishes the earthquake detection system. After analyzing causes of accident, depending on accountability of accidents, KR imposes penalty points to business partners and workers in charge. As for excellent companies in terms of safety management, KR also gives incentives up to 3 points. By doing this system, KR can encourage business partners and related companies to strengthen their safety measures.

# **Enhancing Safety Management Capability**

For more effective safety management, KR's 13 lecturers executed internal safety educations for 4,158 workers in 156 construction sites, and cultivated 18 experts of safety diagnosis and 138 safety managers of railway operation were cultivated by 2009. KR also strives to enhance co-work relationships with external safety professionals organizations. In June 2009, KR made a joint agreement with KOSHA (Korea Occupational Safety and Health Agency) for prevention of construction accidents and executed construction workers training programs, by publishing a safety management magazine. In addition to that, with KISTEC (Korea Infrastructure Safety and Technology Corporation), KR contracted a Technology Exchange Agreement in terms of railway facility safety management in September and carried out joint diagnoses on facility safety.

# Establishment of Safety Management Inspection System

From 2009, KR headquarter has taken the main role in inspection system instead of having inspections led by supervision team and local branch in order to intensify the inspection system as a whole. Safety diagnosis T/F team was established for the first time in 2009, and safety diagnosis equipment such as rebound hardness measuring equipment was improved to execute 25 cases of safety diagnosis in 15 sites including Kyeongbu High Speed Railway 2<sup>nd</sup> stage. KR can reduce budgets by KRW 10.6 billion by conducting diagnosis. Revised items of comprehensive safety inspection brought about the fairness of inspection. KR also effectively executed comprehensive facility test before opening by figuring out current issues in advance. KR's systematic safety activity and law-abiding attitude resulted in decreasing of accident rate by 19% to 0.17% year on year.



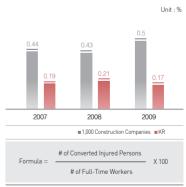
# Concrete Quality Test of Tunnel Walls



### Safety Education of Railway Construction



# **Accident Rate**



# **Appendix**

Independent Assurance Statement
GRI Index
Voice of Customers

# Independent Assurance Statement

To the readers of Sustainable Management Report 2010 - Korea Rail Network Authority

# 1. Preface

I have received a request for assurance of Sustainability Report 2010- Korea Rail Network Authority (KR hereinafter). Responsibilities regarding creation of the report belong to the management of KR. The assurer's responsibility is to provide honest opinion on whether the report has been created according to the GRI G3 Guideline.

# 2. Scope of Assurance

Sustainability Report of KR categorizes and describes the organization's efforts in sustainable management activities and the outcome by client according to the value creation flowchart. The assurer has verified the following matters.

- Data on financial performance have been appropriately extracted from financial reports of KR for the years 2007, 2008, and 2009
- The information on society and environment do not carry any critical errors or biases and the data management system is reliably operated

# 3. Criteria

The assurer has verified the report based on CAU-APSR, Chunq-Ang University, Assurance Protocol for Sustainability Reporting.\*

\* CAU-APSR is a sustainability assurance standard based on followings.

Global Reporting Initiative (GRI) Sustainability Reporting Guidelines 3.0

AA1000 Accountability Principle Standard (2008)

# 4. Independence

The assurer is independent from KR and only performs independent assurance service for KR. The assurer is not in any form of beneficial or profit-related relationship with KR.

# 5. Key Assurance Procedures

The following procedures are adopted by the assurer to assess validity of the report.

- Step 1 Established assurance plan with a representative of investigating organization and reviewed the draft of the report by searching through various types of resources to perform assurance.
- Step 2 Conducted an interview with the representative of assuring organization, confirmed the contents of the draft report for truthfulness, and evaluated the quality of the data management system.
- Step 3 Combined the results of assurance and analysis. Documented the contents of analysis and discussion. Compiled a report on assurance.

# 6. Conclusions

In judgement of the assurer, the contents of the report by KR sincerely follow the GRI G3 Guideline and are free of critical errors or biases. Details of evaluation based on the assurance principles are as follows.

Materiality	Materiality test process included in the report is judged to be appropriate and selected core issues by area meet the requirements of stakeholders.
• Completeness	There are no omissions of important information in terms of the scope of report, boundaries, and period, and the report deals with a variety of information in balance.
<ul><li>Neutrality</li></ul>	In selecting and reporting the information related to sustainable management performance, the report prevents possibility of affecting, or bringing bias to the judgment of readers by providing balanced information free of bias.
• Reliability	Accuracy and comparability of the information included in the report are maintained. Collection and recording of information as well as the quality of delivery system are evaluated to be reliable.
<ul><li>Responsiveness</li></ul>	Disclosure level of the report, policy explanation of the company, and strategy and plan are judged to be sufficient for the readers to evaluate the capacity and efforts of the company to respond to sustainability issues.
Stakeholder inclusiveness	The company has selected and led participation of stakeholder in an effective, and systematic way. Requirements of stakeholder are appropriately reflected in the corporate strategy and mission.

# 7. Recommendations for Improvement

The following recommendations were made by the assurer after completing the assurance procedures stated in this document, and the company has agreed to make changes accordingly.

- Comparability with the report from 2007 is insufficient due to drastic changes in the structure of the report for 2010. There is a possibility of degrading the ability to understand reports due to this matter. Structures of the future reports must be managed to maintain comparability for different periods.
- A strategic approach is necessary for the public management performance and the environmental/societal performance of sustainable management of KR to be connected to the brand value of KR.



2010.09

Head of CAU-APSR, Chung-Ang University and Professor Chair of CDP-Korea Committee/Ph.D. in Business Adminstration

Chang, Ji-in



# **GRI Index**

Code	Index Contents	2010 KR Index	Page		
Strategy a	nd Analysis				
1.1	Statement from the most senior decisionmaker of the organization (e.g., CEO, chair, orequivalent senior position) about herelevance of sustainability to the organization and its strategy	CEO Message	4~5		
1.2	Organization and sustainability : Major Impact, Risk factor and Opportunity	Internal capacity and external environment review	10		
Organizati	ional Profile				
2.1	Name of the organization	Company name	8		
2.2	Primary brands, products, and/or services	6 core business	9		
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures	Organization chart	8		
2.4	Location of organization's headquarters	Organization chart	8		
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report	China Branch	8		
2.6	Nature of ownership and legal form	Quasi-government organization	8		
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries)	Nation-wide and overseas	8		
2.8	Scale of the reporting organization	# of employees and management performance	8~9		
2.9	Significant changes during the reporting period regarding size, structure, or ownership	No Change	8		
2.10	Awards received in the reporting period	External organization evaluation	Front Wing		
Report Pa	rameters				
3.1	Reporting period (e.g., fiscal/calendar year) for information provided	Jan. 1. 2009~ Dec. 31. 2009	Front Wing		
3.2	Date of most recent previous report (if any)	2008	Front Wing		
3.3	Reporting cycle (annual, biennial, etc.)	Every year	Front Wing		
3.4	Contact point for questions regarding the report or its contents	Planning Department, Green Business Strategy Office	Front Wing		
3.5	Process for defining report content	Materiality test	18~23		
3.6	Boundary of the report [e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers]. See GRI Boundary Protocol for further guidance	HQ, Local branch, Construction Site	Front Wing		
3.7	State any specific limitations on the scope or boundary of the report	Excluding China branch	Front Wing		
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations	Construction Site	Front Wing		
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	Time series analysis	Front Wing		
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g.,mergers/acquisitions, change of base years/periods, nature of business, measurement methods)	Including performance in 2007	Front Wing		
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	Extension of data collection site	Front Wing		
3.12	Table identifying the location of the Standard Disclosures in the report	GRI Index	70~73		
3.13	Policy and current practice with regard to seeking external assurance for the report	Indepentent assurance statement	68~69		
Corporate Governance, Commitments and Engagement					
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	Board of directors	12		
4.2	Indicate whether the Chair of the highest governance body is also an executive officer	Concurrent position of chairman	12		
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members  Board of directors Composition				

Code	Index Contents	2010 KR Index	Page					
Corporate	Governance, Commitments and Engagement							
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest gover- nance body	Various conversation channel	13					
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance)							
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided Pre-explanation meeting and management committee							
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics	Designation process of none executive director	12					
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation	3 core values	11					
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles	Regular and provisional Board of directors	12					
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance	None executive director activity index, performance based contract	13, 41					
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization	Risk management system	16~17					
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	Membership organization	Front Wing					
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic	Membership organization	Front Wing					
4.14	List of stakeholder groups engaged by the organization Stakeholder interviewees							
4.15	Basis for identification and selection of stakeholders with whom to engage  Stakeholder interviewees							
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group In-depth interview							
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting	KR's response to stakeholders interview	22~23					
Economic	Performance Indicators							
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compen- sation, donations and other community investments, retained earnings, and payments to capital providers and governments	Management performance	9					
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Climate change convention response system	33					
EC3	Coverage of the organization's defined benefit plan obligations  Employees welfare benefits							
EC4	Significant financial assistance received from government	Government subsidy	8					
EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation	New employees' income ratio compared to local min. wage	40					
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation	When recruiting the youth internship, prefer the weak	36					
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement	Railway business open, high speed major railway	26~27					
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts	Social contribution activities	35~37					
Environme	ental Performance Indicators							
EN01	Materials used by weight or volume	Rail, sleeper, iron bar, aggregate use	30					
EN02	Percentage of materials used that are recycled input materials	Water, rail, sleeper, aggregate reuse	30					
EN03	Direct energy consumption by primary energy source	Fuel use for air-conditioning and heating system, Fuel use for vehicle	30					
EN04	Indirect energy consumption by primary source Electricity use							
EN05	Energy saved due to conservation and efficiency improvements	Geothermal energy application, high-efficient material installation	33					

# **GRI Index**

Code	Index Contents	2010 KR Index	Page		
Environme	ental Performance Indicators				
EN06	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives	Geothermal energy application, high-efficient material installation	33		
EN07	Initiatives to reduce indirect energy consumption and reductions achieved	Energy saving policy such as light out campaign	29		
EN08	Total water withdrawal by source Water use				
EN09	Water sources significantly affected by withdrawal of water	Major water resource	30		
EN10	Percentage and total volume of water recycled and reused	Reuse water use	30		
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Protection area list of Honam High Speed Railway construction sector	29		
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	In engineering and building, efforts to reduce environ- mental pollution	29		
EN13	Habitats protected or restored	Installation of wildlife passage, afforestration fo native plants, planting trees	29		
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	Eco system co-work	34		
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	List of endangered animals in the Honam High Speed Railway construction sector	29		
EN16	Total direct and indirect greenhouse gas emissions by weight	Amount of direct and indirect greenhouse gas emission	31		
EN17	Other relevant indirect greenhouse gas emissions by weight	Amount of greenhouse gas emission in railway construction sites	31		
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	Establishment of greenhouse gas inventory			
EN19	Emissions of ozone-depleting substances by weight	None	31		
EN20	NOx, SOx, and other significant air emissions by type and weight	None	31		
EN21	Total water discharge by quality and destination	Water pollutants emission amount	31		
EN22	Total weight of waste by type and disposal method	Wastes emission amount	31		
EN23	Total number and volume of significant spills	None	31		
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	None	31		
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	Area for water pollutants emission	31		
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	Installation of wildlife passage, afforestration fo native plants, planting trees	29		
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	Development of closed line area	28		
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	None	29		
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce	No-Driving Day campaign	29		
EN30	Total environmental protection expenditures and investments by type	Amount of green procurement	29		
uman Rig	hts Performance Indicators				
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.	To be actively reviewed	59		
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken  Preferred purchasing of SME product and products produced by the disable				
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained				
HR4	Total number of incidents of discrimination and actions taken	None 42			

Code	Index Contents	2010 KR Index	Page				
Human Rig	ghts Performance Indicators						
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights	Labor union and labor related law compliance	45				
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor  The Labor Standards Act Compliance						
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor  The Labor Standards Act Compliance						
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations  Education of exports to manage application companies						
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	Complaints case and resolution procedure	64				
Labor Peri	formance Indicators						
LA1	Total workforce by employment type, employment contract, and region	F/M, the disabled, men of national merit employment status	40				
LA2	Total number and rate of employee turnover by age group, gender, and region	Retirees status	40				
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations  Employees welfare benefits						
LA4	Percentage of employees covered by collective bargaining agreements  Rate of labor union members						
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements  Statement of Labor Collective Agreement						
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs  Same ratio						
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region  Disaster rate						
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	Employees welfare benefits	44				
LA9	Health and safety topics covered in formal agreements with trade unions  Statement of Labor Collective Agreement						
LA10	Average hours of training per year per employee by employee category Education hours per person						
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings  Program to increase capacity of poor performers						
LA12	Percentage of employees receiving regular performance and career development reviews  All employees						
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	Board of directors members and F/M employment status	12, 40				
LA14	Ratio of basic salary of men to women by employee category	F/M same basic payment	40				
Product Li	ability Performance Indicators						
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improve- ment, and percentage of significant products and services categories subject to such procedures	Safety management inspection system	65				
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	None	65				
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements  Integration of diverse channel through Sorisaem						
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	None	64				
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	Government customer satisfaction level	64				
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship  Related regulation compliance						
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes						

# **GRI Index**

Code	Index Contents	2010 KR Index	Page					
Product L	Product Liability Performance Indicators							
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	None	64					
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	None	64					
Society Po	erformance Indicators							
S01	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting	Environmental impact evaluation	29					
S02	Percentage and total number of business units analyzed for risks related to corruption	Honam High Speed Railway, alternative bidding design inspection	49					
S03	Percentage of employees trained in organization's anti-corruption policies and procedures	Participation rate of cyber ethical education	48					
S04	Actions taken in response to incidents of corruption	Layoff	46					
S05	Public policy positions and participation in public policy development and lobbying	Efforts to spread common understanding on value of railway	26					
S06	Total value of financial and in-kind contributions to political parties, politicians, and related organizations by country	None	47					
S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	None	47					
S08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	None	47					

# **Voice of Customers**

"We care about what you think"

Your valuable opinions on our 2010 Sustainability Report will be an important source of information to foster sustainable management of Korea Rail Network Authority. Please contact us via the following if you have any comments or feedbacks.

	O Address: Sustainbility Strategy Division, Planning and Coordination Office, 264 Sinan-dong, Dong-gu, Daejeon, Republic of Korea (300-731)								
O Telephone: +82-42-607-3156		O Fax: +82-42-607-3159		○ E-mail: historyace@naver.com					
	O Website: www.	kr.or.kr							
0 <b>1</b>	01. Which of the following applies to you?								
	☐ Government	□ Expert	□ Local Go	vernment	□ Local Re	esident	□ Korea Rail	Network Auth	ority Employees
	□ Partner	□ Korail	□ Ordering	Customer	□ Railway	User	□ Others (	)	
02	. How did you lea	arn about sus	tainability rep	ort of Korea	Rail Network	k Authori	ity?		
	□ Korea Rail Ne	etwork Authorit	y Website	□ Semi	nar · Lecture		Newspaper · M	agazine	☐ Other Websites
	□ Korea Rail Ne	etwork Authorit	y Employees	□ Other	rs ( )				
03	3. In which sectio	n(s) are you m	nostly interest	ed?					
	□ Korea Rail Ne	twork Authority	and Sustainabi	lity Managem	ent 🗆 Valu	ue-Influen	cing Customers	□ Value-Pr	roducing Customers
	☐ Value-Delivering Customers				□ Valı	□ Value-Purchasing Customers			
04	. Which section(s	s) of the repor	t do you think	need to be i	improved?				
☐ Korea Rail Network Authority and Sustainability Management ☐						☐ Value-Influencing Customers ☐ Value-Producing Customers			
	□ Value-Delivering Customers □ Value-Purchasing Customers								
0	5. How useful wa	s this report i	n understand	ng sustaina	bility manage	ement of	Korea Rail Net	work Authori	ity?
	□ Very useful	□ Modera	ately useful	☐ Somew	/hat useful	□ Not	very useful	□ Not at all	useful

06. Please share with us your views on this report and sustainability activities at Korea Rail Network Authority.



# People who participate in making KR Sustainability Report 2010

Publisher Chairman&CEO Hyun-Yong Cho

Editor Director of Planning & Coordination Office Young-Woo Kim

Executive Editor Director of Sustainability Strategy Division Byung-Guk Noh

Edit Member General Manager of Management Strategy Team Jae-Woo Lee

Seung-Sang Yoo, Byung-Ha Jeon, Hee-Hyun Yang, So-Yeon Shin

Writing and Review Dong-Guk Kim, Min-Jung Kim, Hak-In Kim, Ho-Jung Kim,

Hun Kim, Kyung-Jin Noh, Jin-Sik Min, Rae-Hyun Park, Jong-Ho Park, Jun-Tae Park, Jun-Hyung Bae, Myung-Young Seo,

Kwon Song, Sang-Hoon Shin, Seung-Seop Shin, Seong-Seok Ahn, Su-Jin Ahn, Jeong-Hee Yoo, Hyun-Min Lim, Sang-Min Jeon, Mi-Young Jeong, Jeong-Seon Jin, Seong-Wook Han, Jeong Hur,

Byung-Bok Hwang,

External Advisory Eco-Frontier



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