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## **About this Report**

#### Meaning of writing a report

This report is the 3rd report written by Korea Rail Network Authority (hereafter referred to as "KR") every year continuing from 2008 to 2010. The purpose of this report is to satisfy the demand of persons concerned on the company's social responsibility; and KR's economical, social and environmental goal for sustainable development and promoting will for future are included in its contents.

#### Report's range and duration

KR is publishing this report annually and the reporting duration of this report is from January to December, 2010. In case of any trend analysis in the past is needed, outcomes of 3 years from 2008 to 2010 are listed and partial activities and outcomes of 2011 are also included. The range of report targeted a head office and 5 regional headquarters (metropolitan area, Yeongnam area, Honam area, Chungcheong area, and Gangwon area), Jungang technology group and 267 construction sites; and partial content of global project is also included. The Currency unit of this report is indicated in the basis of Korean won ((USD1=KRW1,106 as of 27th June, 2011) and ton,  $m^2$ ,  $m^3$ , km, TOE were used for quantitative units and units other than those were valued and given.

### **Standard for Report writing**

This was written in the basis of GRI G3.1 guideline and any relevant items are specified in the Appendix's GRI Index.

#### **Report Verification**

To secure the reliability of any reporting description of this report, third-party verification was implemented through independent and subjective verification institution and its result are included in the appendix.

#### **Characteristic of report**

KR had received ISO 26000 implementation level from Korea Standard Association and confirmed as the highest standard of social responsibility management, IV; thus, we indicated them with logo on the top of report.

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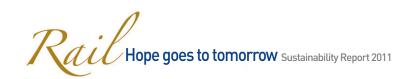
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## We will jump up to be global partner leading the sustainability management.

## Respectable persons concerned!

Our Korea Railroad Network Authority is supporting the principle of UN global compacts and prompting the sustainability management since joining the UN global compacts in 2007. This report is 3rd report briefing the outcomes of our authority to any persons concerned. Since the last year, we are pleased to have you in here to review our sustainability management report with us.

Last year, 2010 was very meaningful year that the amicable environment for railroad business was created even in the financial crisis. We were able to achieve them through our ability to manage the crisis and nation's right decision that the answer to the low-carbon green growth is railroad.

Based on the nation's entire confidence and support, KR opened 5 construction projects including Gyeongbu high-speed railroad in 2 phases on right time; created a base connects all nations within 90 minutes by determination for construction strategy of KTX high-speed rail network; and obtained the contract of 8 construction supervisions and technical advises at China; thus, we could achieve many economical goals including creating new business profit. In addition, KR promoted the construction project of Honam high-speed rail with CDM project and put effort to environmental issues including ecosystem restoration by using a cooperation fund. Along with this, KR promoted win-win cooperation with small business and community for realizing the fair society and created social goals including first being chosen as an excellent organization providing customer satisfaction service under its foundation by our efforts through varied methods including operation of 9 minutes meeting system and acquired the certification, Sorisaem.

As well as for 2011, KR will be grown into a model organization realizing sustainability management by putting all of our strength for creating economical, environmental and social goals at the corporate level.

Our public corporation already has started the construction of high-speed railroad in metropolitan area for the first half of this year and achieved many goals including being chosen as the best established construction public enterprise and received national Sinmungo award from the president. We will not be conceited on this for the last half of this year also and promote sustainability management constantly. Especially, sustainability management would be decided by core value and we plan to implement the core value education for all employees from this year to the next year.

We kindly ask any persons concerned to see our corporation to be soared up to the world under your tender glance. If we have your kind support, we are confident that our corporation will be grown as global railroad institution in the near future.

Thank you.



## Provide a base for continuous green rail network

With 4 chairmen including president and green growth committee in attendance on the 1st of September, 2010, KR had decided the strategy to build a KTX high-speed rail network which combines and connects the nations to one metropolitan area within 90 minutes until 2020 and contributed to the presentation. For realization of national rail network sustainability, we expect to improve the economic feasibility by 25~40% with reforming the preliminary feasibility guideline item of railroad. In addition, we are promoting the advancement of railroad technology through the localization of core materials for rail and establishment of test track.



## Enhance the status of powerful country in railroad by entering in the overseas business

KR achieved second leap in the China rail market by winning the contracts in 8 construction supervisions and technical advice business services in China in 2010. For winning overseas rail contracts in Brazil,

USA and Mongolia, KR made a MOU agreement and established the overseas branches. Through this, KR provided the base for growing as power nation in advanced rail not only in Asia, but in worldwide. Also, KR world's secondly started construction in magnetic levitation railway demonstration line; thus, provided an opportunity to secure independent technology.



## convenience through the expansion of green railroad network

Through the opening ceremony of 5 stations in October 28th, 2010, KR has opened 5 construction businesses of Gyeongchun line proving double-track train service between Sinsangbong Station and Chuncheon; Gyeongchun line proving duble-track train service between Samrangjin and Masan; Busan New Port entry real railroad; phase 2 section of the Incheon airport railroad; including phase 2 section of the Gyeongbu high-speed railroad on time. Also,

we continuously promote the arterial railroad rapid transit and take the lead in low-carbon green growth. We also determined our status as a representative public institution proving nation's convenience.



## Improve financial soundness by increasing the value of railway assets

KR had achieved the performance objectives to increase the usability and profitability of asset per person as much as up to 1,350,000 won compared to the performance in last year by operating an exclusive team for finding hidden assets and introducing the assets management by objectives. KR also actualized the social responsibility management of

Public Institution by developing the bridge substructure in Namchuncheon station of Gyeongchun line with Pungmul market. With revision of rail construction law, KR provides a base for Gongdeock station development project investment company; thus, We created an opportunity to make profit of 144,400,000,000 won for 30 years in future.



## Promote a clean development mechanism business to secure the CERs

As the necessity for green house gas emission reduction strategy is raised in worldwide, KR had decided to promote the construction project of Honam highspeed railroad with CDM project for realizing the low-carbon green growth in 2010. KR had submitted the declaration of intent for CDM project to UN and office of the prime minister and faithfully collected any necessary documents to

write up a project plan until December. Once we get an approval for CMD project of Honam high-speed railroad from UN, we will secure the CO2 emissions of 63 billion won for 21 years with green house gas reduction of 130,000 ton annually.



## 2010 Top Highlights

## Efforts to construct the Eco-Rail considering ecosystem

For KR's contributions to the low-carbon green growth through the eco-friendly activities in 2010, KR received the President's award on "Environmental Day 2010" This was Boryeong-si, Chunggheong province which was land for retired Janghang line, restoring the resident facilities and contributing to community society by using a corporation fund awarded the grand prize from natural environment sponsored by Ministry of Environment. KR also donated all prize fund for good precedent of social responsible management.





## Build the rational labor-management relations and promote the management efficiency

KR operated the performance enhancement program in cooperation with management and unions for win-win labor partnership and received award from the Minister of Employment and Labor in December, 2010. In addition, KR enforced the innovative

term of high ranking officials, salary peak system, and position ceiling. By destroying the rank for the first time as a public corporation, KR built the virtuous circle in human resource management system and improved the management effectiveness.



## Efforts to win-win growth for realization of fair society

KR held a discussion with partners under the supervision of chairman since January, 2010 which was before the government was promoting win-win growth policy. After, KR set a win-win cooperation promoting group and established the win-win growth strategy for the visions of advancement of rail construction and creating continuous growth engine; thus, win-win growth was implemented systematically. KR constructed and

operated the win-win growth conference by area and quickly solving out any concerns and difficulties of small business by setting the small business combined center; and also transferring the advanced technological skills.



KR operates customer meeting system within 9 minutes at the very first as the public institution in February 2010. KR also promotes varied customer satisfaction management activities including patent for unified customer management system, "Sorisaem" and certified in voice of customer-management system (AAA); thus, KR jumps up to be the first excellent customer satisfaction organization. KR will keep putting utmost efforts for CS vision, "rail of customer surprise" to be realized.





# Revolution of Korea Traffic by KR

## Rail Network makes safe and convenient world

Over 110 years of Korean railroad history, KR moves into the world to stand out as a center of Northeast Asia's transportation, culture and distribution. Korea Rail Network Authority is in the center of global rail network for future.





## SUSTAINABILITY OVERVIEW





## Rail, and Tomorrow

KR aims at high-tech rail network for safe and convenient world and makes new transportation culture for future.

KR raises the quality of life and city's future value; and makes people's dreams come true.

## KR outline

KR was established in January, 2004 according to the rail industrial development law and Korea Rail Network Authority law. The purpose of its establishment was to increase nation's traffic convenience and contribute to healthy development of national economy by implementing effective management and construction of railway.

## **KR** status

KR had successfully completed the construction of gyeongbu high-speed railway in 1st phase since its foundation, 2004. In the following year, KR had obtained a contract in construction supervision in China and finally had taken the first step toward entering into overseas market. Also, KR had chosen as excellent organization from government management evaluation for 3 years in a row; established the 2020 KR future management strategy in 2009; and made a splendid achievement of entering overseas market besides China by winning a contract in railway master plan in Cameroon. In 2010, we had the honor of being in hall of fame firstly as a public organization. As the most official plant in railway, the second national rail network construction plan is confirmed and notified in April, 2011, we established goal to combine major points with one metropolitan city by connecting them within 90 minutes. Also, by transferring the traffic system to center of railway, our all employees are putting efforts to strengthen low-carbon green growth.

KR outlines (210. 12. 31as of 31st December, 2010)		
Name of Company	Korea rail network authority	
Date of Establishment	Jan 7, 2004	
Formation	Quasi-public institution	
Chief engineer	Jo, Hyun-yong (2008. 8. 8~current)	
Establishment basis	Rail industrial development law (article no. 9772of the law) Korea Rail Authority (article no. 9991of the law)	
Financial status	Property 38.4774 trillion won Capital 21.7026 trillion won Debt 16.7748 trillion won	
Number of employees	1440	
Location of head office	242 Jungang-ro, Dong-gu, Daejeon-si	

#### Locations of head office and regional headquarters



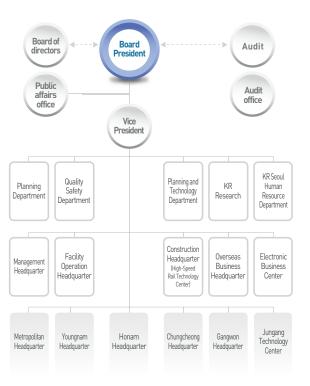
## KR's organization structure

KR's organization structure is composed of chairman of board affiliated 4 headquarters, 2 rooms, 3 organizations, 1 lab and 5 regional headquarters. Management, facility operation, construction and overseas headquarters are involved in 4 headquarters; planning adjustment and planning technology rooms for 2 rooms; quality safety, electricity and high-speed railway project of construction affiliated headquarter for 3 organizations. To manage rail network in nationwide effectively, 5 regional headquarters are installed in Seoul, Busan, Suncheon, Daejeon, and Wonju. Also KR installed the overseas branch in China to expand its business.

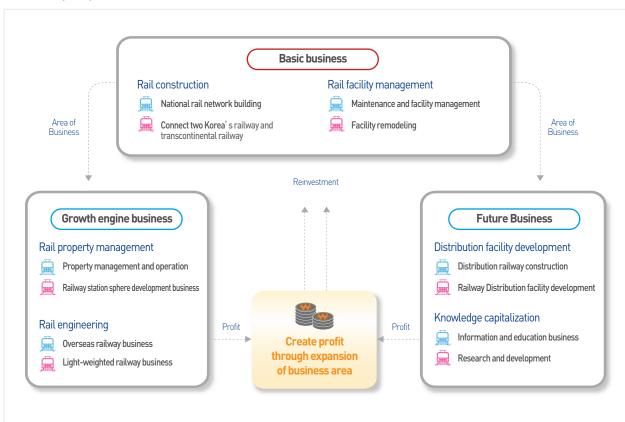
## KR's business structure

KR, as a quasi-public organization which does business for the government and railway construction, has a limitation on the discretionary authority unlike the public enterprise. KR uses 50~60% of high-speed railway project fund for self-loan. We redeemed the loan debt by collecting fees of railroad from Korail; however, accumulated debt is annually increasing since fees of railroad are not reaching the interests amount from loan debt.

To secure the financial healthiness, KR selected 6 core businesses to reorganize the business structure which is too much concentrated on the investment business; and diversify the profit structure. KR expanded the area of basic business to the future business for creating profits and built the virtuous cycle system among core businesses, which made the created profit reinvest in the business again.



### Virtuous cycle system between core businesses



## KR 2020 future management strategy

KR is continuously reestablishing the management strategy to achieve the purpose of its foundation and reflect the changes of condition. KR had established the 2020 future management strategy within the participation of all employees and reestablished the 2020 future management strategy in 2010 by reviewing the major issues according to the rapidly changing environment for management both internally and externally.

## Establish KR 2020 future management strategy

Under the mission, "realizing the rail network makes the world safe and convenient", KR set 'global partner leads the future value for railway and green growth' as a mission and drew 4 vision goals, strategic goal and 10 corporate strategies. For 4 vision goals, the followings are included: achieving 5,000km for total extension length of rail; creating annual profit of 400 billion won from new projects; taking 3rd place in the international level for Korea rail quality; and taking 1st place in the public organization proving customer satisfaction service are included.

To fulfill those, KR had set up the 4 strategic goals, including seeking for sustainable growth by building green rail network;

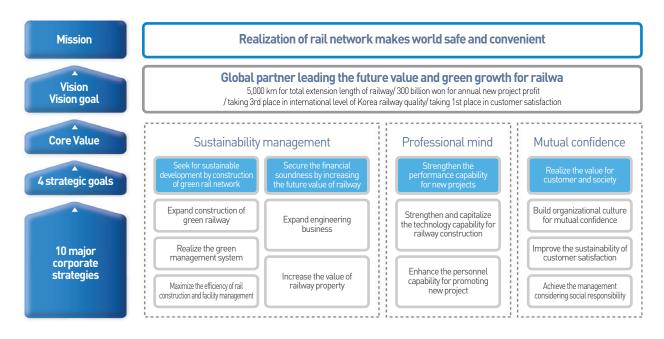
securing financial soundness by increasing the future value with railway; strengthening the performance capability of new growing project; and realizing the customer and society value. In addition, KR held 5 corporate presentations, 3 worships for core employees and 4 commissioned educations.

## Provide the turning point for sustainability development

When KR established the future management strategy, we created them based on the achievement of sustainability management. In other words, we combined the economic, environmental and social issues drew from internal and external management environmental analysis to future management strategy proposal. Especially 10 sustainable development elements such as efficiency, customer, morality and environment were drew from 4 strategic goals and connected with 10 corporate strategies. Based on these, KR developed strategic assignment, practical assignment, KPI and etc.

## KR 2010 future management strategy execution system

KR decided that along with reestablishment of strategy, the implementation of strategy is important; thus, KR built and operated the KR°Øs unique strategy execution strengthening system which the strategy, innovation, evaluation and compensation are fused. Also, KR transferred the management strategy establishment and management task controlled by



green project strategy department to result management department and built an organization system focused on the result with enhancement of efforts to achieve the corporate management strategy; and result evaluation. Hereby, KR secured a driving force to promote the sustainability management in effective way.

## Major proposals for sustainable development

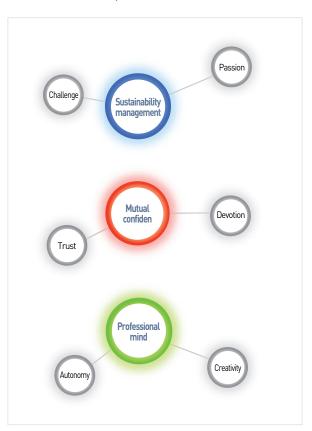
For sustainable development, KR decided major economic, environmental and social proposals with KPI when establishing the future management strategy; and determined the quantitative goal. For economic proposal, KR set a total extension of railway, electrification of railroad and project fund execution. For environmental proposal, KR set environmental management index, achievement of responsibility to purchase eco-friendly goods, and reuse of construction waste. For social proposal, KR set customer satisfaction, securing core personnel, mileage given for contribution to society. Also, by developing relevant quantitative with strategic and execution proposals, KR had achieved appropriate balance between non-quantitative and quantitative parts. To induce the achievement of determined goal in the beginning of year, KR designated the administrator for each department and monitored the achievement status. In that result, KR's strategic achievement received 98.4 points; thus, KR proved the sustainable management is going well.

Area	KPI	Performance			
Aled		2008	2009	2010	
	Total extension of railway(km)	3,427	3,436	3,624	
Economy	Percentage of railway electrification	55.53	56.45	61.08	
Economy	Execution of business expense(%)	97.78	98.84	98.92	
	Usability and profitabiliyt of national asset(million won)	643	802	846	
	Environmental Management Indix(Point)	39.80	60.54	105.40	
Environment	Achievement of responsibliyt to purchase eco-friendly goods(%)	89.70	60.46	88.16	
Elivii Olii lielit	Reuse of construction waste(%)	86.29	85.20	92.57	
	The number of regulation violation(Cases)	0	0	0	
	Customer satisfaction(Point)	88.20	89.30	93.20	
C	National Integrity(Point)	8.12	8.55	8.35	
Society	Securing core personnel(%)	20.94	26.54	30.77	
	Mileage for contribution to society	190	240	238	

## Core value of KR

For realization of vision and strategic goal, KR expressed the value which KR members are seeking for; thus, KR established 3 core values of cultural value, which can be settled down as an internalized universal value for organization. KR investigated the realization of core values for all employees and KR implemented

#### • 3 core values and 6 practical values



the core member workshop based in that result. KR drew the draft of core value resulted from workshop as 'sustainability management', 'professional mind', and 'mutual confidence' through the survey in participation of all employees.

### Definition of KR's practical value

After stabilizing the 3 core values, KR derived the analysis that the execution system to induce the voluntary participation of members is needed to be supplemented. CEO also commanded to draw measures for core values to be internalized when reporting the duty by department in 2010. Thus, KR analyzed the management outcome for last 1 year and finally defined the 6 practical values of, 'challenge and passion', 'autonomy and creativity' and 'devotion and trust' which are able to supplement the execution system of core value after core membership workshop and executives interview.

Also, after reflecting the detail execution assignment on activation of organizational culture, KR monitored those performances by quarter and awarded at the corporate level; thus, KR completed the strategic system as core value in a center and secured a driving force to achieve the future management strategy.

## Major projects

Low-carbon green growth policy according to the climatic change, energy management and development policy for alternative energy are promoted throughout the social and industrial aspects. As importance of energy and environment efficiency is emphasized, the preference of railway with higher energy efficiency is tended to increase.

## Railway construction project

## Connect the whole country within 90 minutes until 2020

The government provides base for low-carbon green growth by transferring the traffic and distribution system with rail-oriented; and promotes community balanced development and national competitiveness through the KTX high-speed rail network construction strategy as a construction plan for national rail network. Especially, the 'second national rail network construction plan' which was confirmed and notified on April, 2011 connected the major points in the country within 90 minutes for normal rush hours and set a goal to unify them by one metropolitan city. This is implementing by 4 proposals, including connecting nationwide major points with high-speed KTX network; building a board and express rail network connecting metropolitan areas within 30 minutes; building green rail distribution system; and creating an environment convenient railway uses.

This will be as followings with more details. First, KR tries to construct large frame of national rail network with "X" shape for express railways in Gyeongbu, Honam and metropolis as focused and build 'square' shaped network through the connection of west and east coast line and Gyeongjeon line. Second, to support the development of 5+2 great sphere economy's characterization and to relieve the traffic jam, KR reorganizes operation system from local train to express; and builds metropolis rail network within 30 minutes to approach the city through facility expansion. Third, transfers the current Gyeongbu and Honam lines for freight use for maximizing and rapid transit between industrial distribution points; and continuously promotes construction of distribution network such as expanding the incoming lines of coast and industrial complex, introducing 2nd phase loading railway with high transportation efficiency.

Fourth, for improving accessibility of express railway and general rail station, KR will expand the amenities and develop multi transferring center combined with industry, culture and work in earnest. Total 88 trillion won of KR's investment amount includes: 16 trillion won for express railway, 46 trillion won for general railway, 26 trillion won for metropolis railway; and will be supplied for government expenditure (59 trillion won), local government (3 trillion won) and private investment (26 trillion won). If we promote as this plan, sharing ratio of rail passenger transportation will be increased from 15.9% in 2008 to 27.3% in 2020; and sharing ratio of cargo transportation will be 8%in 2008 to 18.5% in 2020.

#### Second national rail network



Second national rail network construction network			
Clas	ssification	Current	2020
Transportation	Passenger	15.9	27.3
sharing rate (%)	Cargo	8	18.5
	Express railway	368.5	701.3
Rail extension (km)	General railway (Rapid transit railway)	3,082.5 (0)	3,789.7 [1,661.1]
	Metropolis railway	106.3	443.1
Rate of double line (%)		49.6	79.1
Rate of electrification (%)		60.4	85.0

## Improve rail investment system for securing new rail business

KR drastically reflected the green value through developing bond of sympathy for railway's environment-friendly. Especially, KR revised the preliminary feasibility test guideline as of January 2011 by incorporating actualization of environmental cost reduction benefit, actualization of travel time reduction benefit,

balancing evaluation system for railway and road and other. With these improvements of investment system, we are able to provide the systematic basis for securing new rail project if economic feasibility increases by 25–40%.

## Promote rapid transit of general railways

KR plans to secure the speed competiveness by expressing the major railways according to the national rail network construction plan. In case of railways already constructed, KR plans to improve the optimal construction speed from 150km/h to 200~230km/h through the construction speed validity verification to maximize the investment effects. In detail, KR will promote to begin the rapid transit for 5 major railways including Jeonlla line in earnest. KR expects to have positive effects, including reduction of operating time, competitiveness, community development with balance.

## Open construction project including Gyeongbu high-speed railway in 2nd phase on right time

Through a thorough process management and early execution of project fund, KR finally opened 5 projects including Gyeongbu high-speed railway in 2nd phase on the optimal time. Through this, KR provided traffic convenience to citizen, achieved creditability from citizen with responsible construction and contributed to the balanced development between regions.

Performanc	Performance of opening national rail network by year		
Year	Opening status		
2004	6 projects including Honam station		
2005	7 projects including Suwon to Cheonan		
2006	3 projects including Jochiwon to Daegu		
2007	6 projects including Incheon international airport railway		
2008	3 projects including Janghang line		
2009	2 projects including Gyeongui line		
2010	5 projects including Gyeongbu high-speed railway in 2nd phase		

## Railway facility management business

Railway facility is divided into facility and operation properties. The facility properties among the facilities related to high-speed railway are managed and decided by government at the Korea Rail Network Authority. General railways are managed by Korea Rail Network authority with its power entrusted by government. Improving project is to secure the performance, which is more than holding facility's safety and performance improvement. This is done by KR; however, it can be done by Korea Railroad Corporation (hereafter referred as to Korail) in case of unavoidable project for safe rail driving.

## Rail property management business

KR is commissioned by Ministry of land to manage the rail property of total 67 trillion won, including national property, 28 trillion won; construction property, 39 trillion won. Also during last year, 2010, KR contributed to create varied property profit including, operating exclusive team to find hidden property, implementing the property management target, exporting wood waste for first time, developing multi complex facility in Gongdeok station, developing bridge substructure in south Chuncheon station, modernizing the property information system and may others.

## Rail engineering business

As a public rail corporation, KR is diversifying the revenue-making business by applying the rail engineering's capability. 23 rail professional engineers are playing an active part in China rail market by obtaining contracts in 8 construction supervision and technical advices for China's railway. We are also participating in overseas rail construction by establishing MOU conclusion overseas branch for obtaining order in overseas railways in Brazil, USA, and Mongolia. Also through the world's secondly started construction in magnetic levitation railway demonstration line, KR secured independent technology. KR expects to enter into domestic and overseas light-weighted train market and economic and technical ripple effects of related field.

## Distribution facility development business

Through the activation of distribution facility development, KR reduces the distribution shipping charges. KR reduces distribution fees by increasing rail transportation sharing through opening Busan New Port entry real railroad. KR also improved the transportation efficiency through establishing the basic plans for Youngil New Port in Pohang and Inil railway in Ulsan New Port.

## Knowledge capitalization business

To accumulate the know-how, KR put efforts to develop an advanced technology for rail and localize the core materials. To support this, KR expanded and reorganized the KR researchers and they are researching and developing rail technology. Also, KR made and organized the KR personnel development department to promote the training project to provide the basis for internal and external personnel cultivation.

## Governance

KR positively operates the outside director supports program to improve the efficiency of directorate, gather the opinions of the persons concerned and apply them into management by using various communication channels.



## Composition and operation of directorate

On the authority of the law related to public organization operation, KR's directorate is composed of 13 persons, including 6 executive directors and 7 non-executive directors. KR holds a regular meeting on every 4th Thursday and temporary meeting in case of urgent matters for decision arose. Also, KR is holding a briefing week on the board to improve the understanding of management pending issues for non-executive directors. As the understanding of non-executive directors improved, the request for management references from non-executive directors were also reduced.

Director meeting is called by chairperson and request from 1/3 of directors present. 17 items including management goal, plan for budget and management, project plan and settlement are agreed by a majority of directors in attendance. But, the chairperson will hold discretion in case of a tie. Director meeting keeps executives in check by securing the specialty and independence of non-executive directors.

Permanent director		
Cho, Hyung-yong	Chairman and chairperson of board	
Kim, Sang-kyun	Vice-chairman	
Lee, Bong-chul	Director of management	
Jung, Eui-ha	Director of facility management	
Oh, Byung-soo	Director of construction	
Kim, Sun-ho	Director of overseas business	

## Designation process of non-permanent director

For designation of non-permanent director, KR firstly formed the executives recommending committee and decided designation procedure of non-permanent director and qualification. Then KR openly recruits candidates through main institutions' homepages, including department of planning and finance, Ministry of land, Alio and KR. Qualifications for non-permanent are qualification and capability as a senior officer, leadership, professional knowledge, experiences and performance plan's validity, ethicality and public contribution. After evaluating applicants' capability through the documentation and interview, the executive recommending committee is regulated to be appointed by the minister of land affair.

## Gather the opinions of the directorate

KR operates varied communication channels among executives, employees and unions to deliver employees' opinion to the

Non-permanent director		
Lim, Ju-sup	Chairmen of Busan facility management authority (former)	
Woo, Yong-rak	Vice president of Asia Pacific environment NGO, Korea headquarter (current)	
Yoo, Byeong-kon	(Former) Vice secretary-general of National Assembly	
Kim, Jong-kook	(Current) Auditor of Korea Road complex distribution	
Kim, Young-hwan	(Former) Auditor of Hongik Society	
Jung, Chan-mook	(Current) Foreign partner director of Woosong University, professor	
Chang, Joo-hyo	(Former) Direct of Deagu University, Branch manager of Deagu bank	

 $\times$  Director meeting is composed of all male

director meeting. Employees are internalizing the organizational culture of cooperation and participation through Ombudsman committee; and labor union is internalizing them through labor chief funeral discussion, labor conference and management discussion.

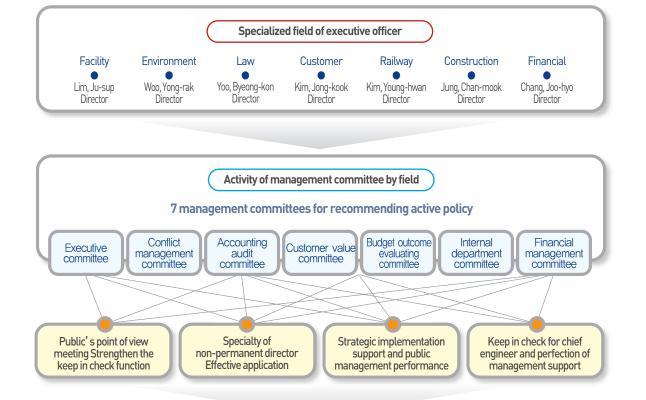
## Application of non-permanent director's specialty

Non-permanent director is involved in management committee by part and positively participating in KR's policy decision in the way of participating in case consideration, management advise and research suggestion. According to the specialty of non-permanent directors, they participating in conflict management committee including 7 management committees and they influence on the decision of major policy department. To use specialty of non-permanent directors more actively, KR manages performance index of non-permanent director combining attendance rate of committee and management committee and number of comment per case with KPI and increases the targeted standard.

## **Executive evaluation and indemnification**

According to the law related to operation of public organization, article 31seciton 6 (contract with chief engineer and etc.) and article 19, section 2 of the corporation association (dismiss of executive), director of board and permanent director will be entered into result contract. Based on the result contract, director of board evaluates permanent director's performance and provides incentive according to the performance. If a permanent director with low performance can be submitted to dismiss.

Classification		Major Contents
Contract m	nain agency	$\cdot$ Chairman of the board $\leftrightarrow$ Permanent director (director-treated included)
Asse	ssor	$\cdot$ Chairman of the board, external/internal management evaluation result
Evaluation	Leadership (50%)	Leadership evaluation (chairman of the board will evaluate)     Customer/Ethical indicator (customer satisfaction/integrity results)     Originality innovation indicator (Originality innovation propulsion)
ltem	Result (50%)  Government evaluation contribution (government management evaluation and management plan evaluation index achievement)  Contribution to achieve future strategy (strategy KPI achievement)	
Purpo evalu		· Aims to improve the management result and competitiveness by securing responsibility management system as the result in the center
Use evaluation result		Differential rate for incentive     Dismiss or submitted to dismiss when poor performance



Improve management transparency and secure the responsibility

## Audit system

In order to guarantee the independence of audit, KR undertakes strategic audit activities with its activities process circular system by establishing the activities office and performing audit activities independently.

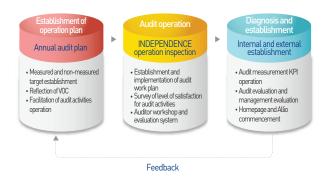
## Organization system of the internal audit system

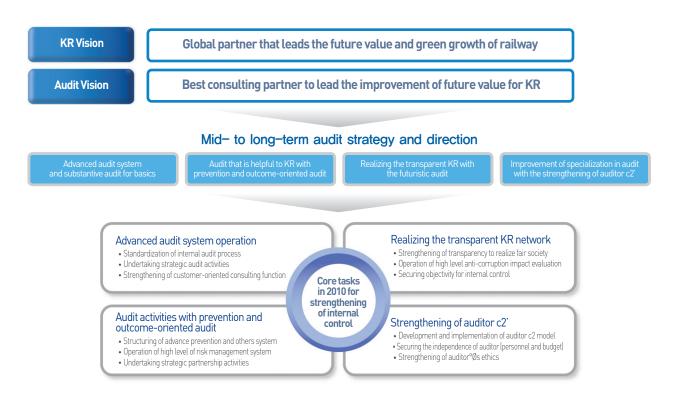
KR has established the audit motto in 'best consulting partner to lead the improvement of KR's future value' through the environment analysis at home and abroad and established the mid- to long-term audit strategy and audit plan for the applicable year to enhance the audit function. In particular, KR has set the 4 major tasks in 'advanced audit system and audit based on fundamental', 'audit to be of help for prevention and outcomeoriented KR', 'realizing transparent KR by futuristic audit' and

'improvement of specialization in audit with the strengthening of auditor c2' and efforts are made to accomplish the foregoing.

## Independent audit activities and structuring of improvement process

KR has undertaken 4-major tasks to enjoy diverse outcomes such as, active participation activities of audit in board of directors, introduction of cross audit system with KORAIL, implementing the integrity consulting of the Anti-corruption and Human Rights Commission, establishment of model for auditor c2, operation of independent personnel system on the office of auditor, securing of budget independence and others. KR operates independence evaluation and circular system on audit plan and activities for the substantiation of the audit activities.





## Transparent management

KR has set its transparent management operation direction for 'Easier', 'Faster' and 'More Accurate' through the internal and external management environment analysis and transparent management operation goal in 'satisfying the right to know of people and expansion of participation opportunity with the practice of transparent management'.

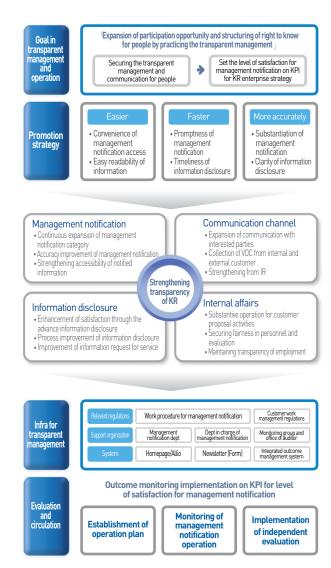
## Realization of transparent management through management notification

KR has established and operated the process systematically to secure the appropriateness of management notification and establish the management notification plan in 2010 for realizing the transparent management. In particular, in order to improve the accuracy of management notification, it has structured first confirmation of department in charge, second confirmation of managing dept for management notification and third confirmation with the office of audit and designated the supervisor and confirmer and operated. In addition, in order to satisfy the standard of OECD corporate control principle, KR has discovered the global-level of management notification category to notify on the homepage to undertaking the leading role as a public institution.

KR has fully revised its homepage for management notification in August 2010 for easier access. In the process, it has reduced 8-field and 128-category into 7-field 80-category to clear up any irrelevant or repeated categories.

## Realization of transparent management through VOC reflection

KR has structured communication channels linking with the needs of each interested parties and implemented actively for two-way communication to practice the transparent management. In addition, in order to realize the accompanied growth through the transparent management, KR has facilitated the contractor project management system, accompanied growth cyber center and overseas railway participation network. Furthermore, through the customer proposal system, it has collected the demands of external customers for system improvement and implemented diverse corporate value enhancement activities for opening the Comprehensive PR Hall for



railway. As a result, KR was selected as the most outstanding institution that opens information to the public (discloses) for 3 consecutive years from 2008 to 2010 by the Ministry of National Land and Marine Affairs. Thereafter, KR is committed to undertake diverse activities more actively to realize the transparent management.

## Strengthening of transparency through introducing the international accounting standard

The Korean accounting standard that KR has facilitated up to this point is difficult to compare with the overseas institution with the accounting standard reflecting the characteristics of Korea® sown. In the future, if the IFRS is introduced, the fairness will be heightened and the comparison with the overseas institution is possible to expect the transparency to improve. KR has analyzed the accounting impact and prepared the accounting policy in 2010 in anticipation of IFRS that will be introduced on trial basis from 2012 and it plans to modify the accounting system in 2011. Through these efforts, the transparent management of KR is to be matured one step higher.

## Ethical management

KR makes effort to be the public institution with trust of people by heightening corporate integrity and transparency. It has continuously advanced its ethical management system to lay down the global-level of ethical management.

## Ethical management system

KR has presented its vision for ethical management in 'realization of transparent and clean KR with respect from people' and established its core values in 'human rights', 'labor', 'environment', 'anti-corruption' and 'customer' to comply with the 10 principles of UN Global Compact. KR has established ethical management strategic system for realizing the sustainable public institution with trust and respect from people by fulfilling its s8.

## Effort to settle down the integrity culture

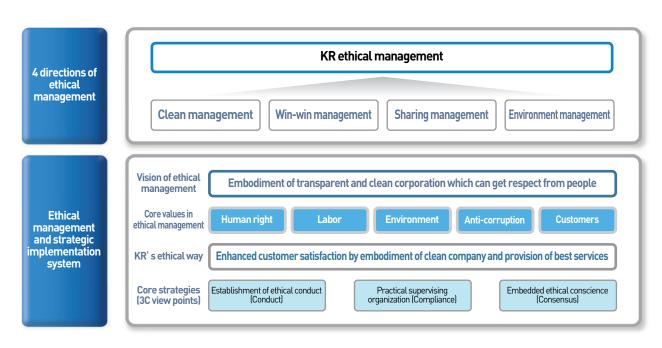
KR has solidified its will for ethical management with the

commitment on the oath of ethics from all officers and employees through its 'Ceremony of Oath for Ethics' within the company. Externally, it has gone through the 'Bull Session with CEOs of cooperative companies' to clarify the commitment for integrity of KR and exchanged the resolution to practice integrity between CEOs. The 'integrity campaign' is intensely undertaken during the vulnerable period of inspection during the holidays and celebration times, such as New Year's Day, and implemented cyber ethical education for all officers and employees, and it has implemented intensely on monitoring activities upon reviewing the turnkey works. In addition, in order to reduce the unnecessary visit from cooperative companies and contacts with employees, the customer satisfaction center has been substantially improved to process the works in one-stop in open space to improve the work efficiency as well as integrity and transparency.

## Establishment of special action plan for ethical management

KR was evaluated as an institution that lacked external integrity among 69 quasi-government institutions as a result of the Anti-corruption and Human Rights Commission survey in 2009. Therefore, KR has established special action plan for ethical management in January 2010 for preventing any corruption fundamentally and improving the level of integrity.

KR has organized enterprise Ethical Management Committee with the president and the head of the Committee and designated and operated the ethical practice team and ethical practice leader for each organization. In addition, the ethical



management improvement action plan has established facilities dept to report the result for each month and, for enhancing the efficiency of the ethical management works, the organization scattered in ethics, integrity, and monitoring was integrated into the office of auditor in December 2010.

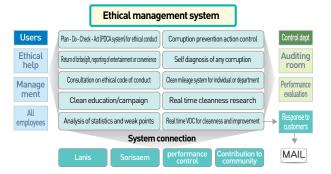
## Improvement in clean system

By applying the 6 Sigma, KR has established actions to take against three corrupt prone fields of national property management, purchasing of real estates and supervising of sites. According to the established actions, we have set up 61 items for improvement and checked them through the improvement task control system. In addition, IR has published a book showing good examples or cases for improved systems so that interested parties can share them for improvement in clean system.

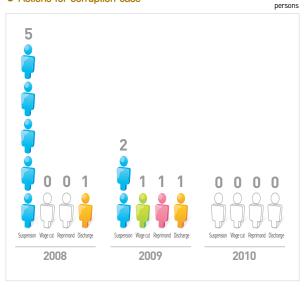
## Construction of ethical management system

KR has created a lot of performance by operating a total customer management system, or "Sorisaem" which helps to monitor both customer satisfaction and ethical management. In order to provide the ethical management action to management in December 2010 in fast and correct way, we have established the ethical management system called "Shin Baram (trust wind)" for stricter real time monitoring. Due to these efforts, we have achieved the "zero" corruption for KR employees in 2010.

#### Organization chart for ethical management system



#### Actions for corruption case



## Operation of KR ombudsman

KR has tried to find out and correct any wrong systems, practices or work procedures in order to protect people from them. We have also implemented the supervision and evaluation on the railway and construction industry by people. In addition, we have operated the ombudsman system to persuade people to have interest in the field and suggest any good recommendation for improvement. KR has operated 7 ombudsman systems applicable from start of the construction of railways to its finish, making efforts to get trust from people and become a world level company.

Process	Objects	Key contents	Period
Flash quiz	All employees	Online flash quiz	2 times every month
Self diagnosis for ethical management	All employees	Self diagnosis for ethical management system	Every month
Ethical education for multiple contactors	Multiple contacting departments (414 people)	Ethical education specific to each job	Any time
Cleanliness mentoring education	Anyone who wants	Cleanliness mentoring for each department	10 times a year

■ Contest for good BP cases



■ Distribution of book on good cases for system ■ Ethical management system





Sharing performances

members and feed back

## Risk Management

KR has set up and operated the company wide risk management system in which any risk can be found out in a fast way and the corrective actions are taken against it in a systematic way by grading any risk control for fast actions.

## Background on the setup of risk management system

In Jan. 2009, the concrete sleeper located in the Gyeongbu High Speed Rail Zone 2 (Daegu to Ulsan) was found to have some cracks. This incident became a turning point for KR to establish the risk management system. This incident was found to happen because a part connecting the concrete sleeper and connecting device was made with the absorptive material rather than water proofing material, thus rain penetrating into the sleeper to cause the cracks in the sleepers. Due to this incident, KR took a step to integrate the risk management systems and set up a companywide risk management system for preventive risk management.

#### Current issues for management of KR • Reporting by each headquarter: Reporting of 2010 main issues by each headquarter. Strategic task: Task for achieving the mission, and mid- and long-term strategic objectives Find out • Understanding VOC: Getting the customer's opinions through Occurrence of signs and questionnaires management recognize problems problems Change in management environment · Main tasks: low carbon and green growth, and fair society, etc • Departmental tasks: Investment in SOC focusing on railway and establishment of transparent and advanced construction environment, etc

## Establishment and operation of risk management system

KOR has enhanced the efficiency in risk management by integrating risk managements into four fields of management, disaster, PR and business. The field of management includes management, ethics, finance and investment while that of disaster includes natural disaster, terrorism, information system and information



Operation of multiple channels for collection of opinions from team members (CoP\* presentation and others)

Reflection of opinions from team members for problem solving, (Interviews and FGI\*\*, etc.)

Sharing the successful cases with others (Intranet, presentation, and publications, etc)

Diag	nosis an	d clas	sific	ation	ofri	sk le	vel
Degree of effect	Fatal	11pts	11	22	33	44	66
	Significant	7pts	7	14	21	28	42
	Average	5pts	5	10	15	20	30
	Light	3pts	3	6	9	12	18
	Negligible	1pts	1	2	3	4	6
			1pts	2pts	3pts	4pts	6pts
Risk		F	Probab	oility of	occur	rence	

depending or	depending on the risk score		
Category	Score	Person in charge	
Severe	22~66pts	President	
Significant	11~21pts	Vice president	
Less severe	5~10pts	Director	
Less significant	1~4pts	General manager	

- \*CoP (Community of practice): It is called as a community of practice and means the information, voluntary and small size research group composed of people having the same interest.
- \*\* FGI (Focus Group Interview): is a representative qualitative research method for group interview. It is an informal, non-systematic and non-organized conversation with groups on a specific top lead by interviewer.

security. In addition, the field of PR includes damage from press while that of business includes construction and facilities, safety related accidents and quality & environment. With the establishment of this system, KR has integrated its order line centering on the president and enhanced the work efficiency.

## Construction of management system focusing on preventive measures

KR has prepared the actions against risks by making the risk management conversion table and specifying 4-stage risk grade, focusing on the prevention of risks. The applicable general manager is responsible to take actions If the risk level is D (less significant) while the director is responsible for risk level C (less severe). In addition, an applicable director is responsible for B risk (significant) while president is responsible for A (severe) risk for composition of company-wide task force for actions.

## Operation of problem solving process

In Sept. 2009, KR has set up a companywide risk management policy to prepare the basic policy and standard for risk management. Each department is supposed to find out any potential risk factors voluntarily and control them in a systematic way. In addition, KR has started the 3Step-5R system in order to keep any significant problems from expanded into big ones with the company-wide actions. The risk levels of D to B belong to Step 1, which is prior to occurrence of risk. Once the risk is expanded to A, emergency, the Step 2 and Step 3 are conducted according to the specified procedure until the emergency disappears.

Once the risk level reaches A, president sets up an emergency headquarter and overseas the site and tried to get solution from discussion with related people. In addition, all kinds of risks are monitored through risk management system depending on grade, department and risk. The monitoring results are discussed at the risk management meeting held every month.

## Efforts to solve management issues and successful cases

The representative cases KR has made by using the 2010 risk management system are as follows. First, KR opened the Stage 2 Gyeongbu High Speed Railway earlier than planned and established the independent technology for high speed rail. Second, KR converted the airport railway which suffered deficits into black. Third, KR accomplished the timely finish of railway construction through proper settlement of conflicts. Fourth, KR overcame the financial difficulties by implementing the debt removal actions. Fifth, it made a collective agreement with labor through mutually beneficial labor management culture. Among them, the case of crack in sleepers in the Gyeongbu High Speed Railway Zone 2 mentioned above is related to the successful finish of projects and obtaining of independent technology. The case of cracks in sleepers sheds light on the issue of timely opening of the high speed railway and the independent technology in railway construction. So, all management including president has focused on the localization of railway parts and made PR to people on its accomplishment in localization of parts and technologies. Especially, president has emphasis on the principle of "100-1=0", which means that even though you succeed 100 times in a row but you fail one time, you are a loser. With this mindset, every member in KR has made efforts to localize the railway materials and parts.

• 3Step-5R system

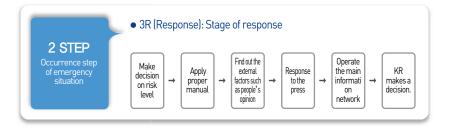


## • 1R (Reduction) : Stage of reduction

Minimize the risk through legal, engineering or educational actions. Reinforce the organization and education to prevent risk and evaluate the management index.

### • 2R (Readiness) : Being prepared.

Be ready against risk using education, and communication channel.





#### • 4R (Recover) : Stage of recovery

Proper follow-up depending on the progress of risk Following action by relevant authority and holding a meeting for internal reporting

#### • 5R (Result evaluation : Stage of evaluation

Risk seitlement and evaluation of risk, correction or supplementation of manual and systems

## Participation by interested parties

Recognizing that KR's sustainable management is closely connected with the management of interested parties, KR makes efforts to achieve the "Rail Network which makes the world safety and convenient" through communication with interested parties.



## **Definition of interested parties**

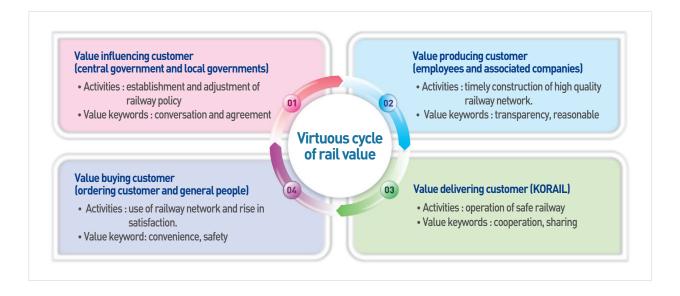
KR has grouped its interested parties into four groups for communications; value effecting customer (central government, professionals, local governments, local people), value producing customer (employees, associated companies), value transfer customer (KORAIL) and value purchasing customer (passenger, general people and ordering customer from here or overseas).

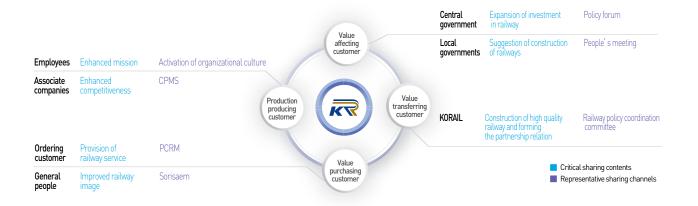
The railway value which is produced by the value producing customer (KR's employees and associated companies) is transferred through KORAIL, a value transferring customer to the value purchasing customer (rail passengers and ordering customers). This value transfer is greatly affected by the value affecting customer (policy of central government and support of local people) through all processes.

## Communication with interested parties

KR has enhanced the communications with interested parties to listen to the opinion of many interested parties and reflect it on the management activities.

KR has set up proper contents for interested parties for communication and set up proper communication channel to get their opinion to reflect their opinion on the management. KR will continue to improve the participation system through more communication with interested parties.





## Operation of conflict control committee

One of the main factors which make the timely const ction of railway difficult is the social and environmental dispute which may occur arising of the construction of railway. KR has established the conflict settlement plan in order to reduce the railway related disputes and conflicts. Through the education for expert in reducing conflicts and operation of conflict control committee, KR has settled the related conflicts.

Accordingly, KR has tried to educate 20 persons for head office and 20 person for sites and has activated the operation of conflict control committee participated by 10 experts in the field of law, transportation, railway and conflict settlement. Through these efforts, we have accomplish the settlement of 6 conflicts out of 7.

Enhanced cooperation with NGOs

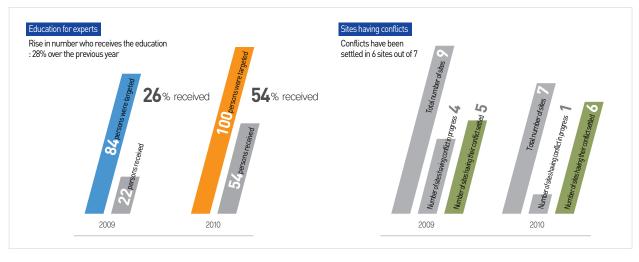
KR has monitored the air pollution over 90 points in Daejeon area in cooperation with Green Korea. In addition, it has participated in events sponsored by Korea Federations for Environmental

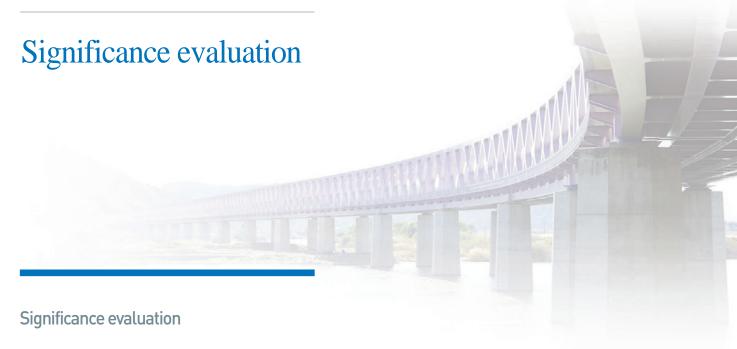
Movements and Green Korea. On top of that, KR has organized "Green Railway Advisory Committee" where many interested parties such as NGO, academic experts, religious circles and companies participate and is held four times a year. KR has conducted many social contributions such as repairing of children's playground along the railway (Yongun-dong, Daejeon) and replacing of sand in the playground and was awarded by Korea Federations for Environmental Movements for the acknowledge of its effort for contribution to community.

 Suggestion for conflict settlement methods and efforts to settle disputes by visiting sites



Educating the conflict control experts and implementing dispute settlement project.

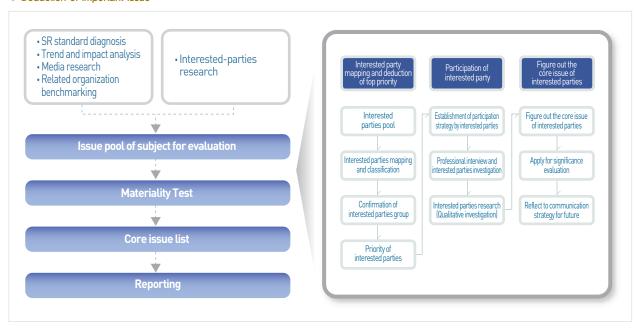




Based on the communication with varied interested parties, KR tires to figure out the issue and incorporate them to management strategy; thus, KR is implementing reliable sustainable management. KR drew important issue by using an evaluation process which ISO 26000\* social responsibility standard is reflected. To figure out the important issue of sustainable management, KR implemented media analysis, benchmarking for advanced enterprise, sustainability standard and guideline analysis, survey of interested parties and interview

for internal and external professionals. To select the priority of issues collected from varied pathways, KR implemented relevance\*\* and significant\*\*\* evaluations. Relevance evaluation is based on the influence of direct short-term treasury, relationship with management strategy, status of same busines's action, behavior and interests of interested parties, social norms and context of sustainability. Significance evaluation is based on the impacts by concerns of interested parties and KR's decision making; and selected list of core issueMajor issues of KR sustainable management.

### Deduction of important issue



<sup>\*</sup> ISO26000: Established international guideline for corporation's social responsibility activities in 7 different fields including environment, human right, labor, governance, fair duty practice, customer issue and participation in the community

<sup>\*\*</sup> AccountAbility : Relevance(5-part Materiality Test), ISO 26000 : Relevance

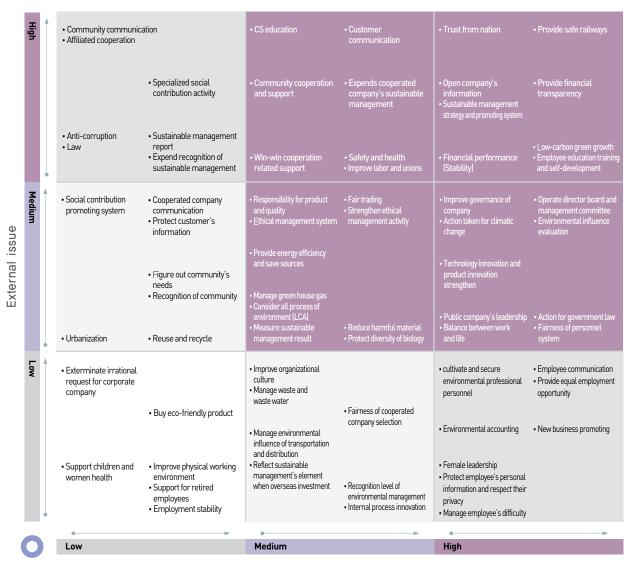
<sup>\*\*\*</sup> AccountAbility, ISO 26000 : Significance

## Major issues of KR sustainable management

Important issues for KR's sustainable management drew from significance evaluation is as following picture; and this sustainable management report includes the activities for important issues confirmed through significance evaluation

process. KR will continuously manage the deducted issues by combining with core management assignment; and clearly open the results through the report.

### Significance evaluation result



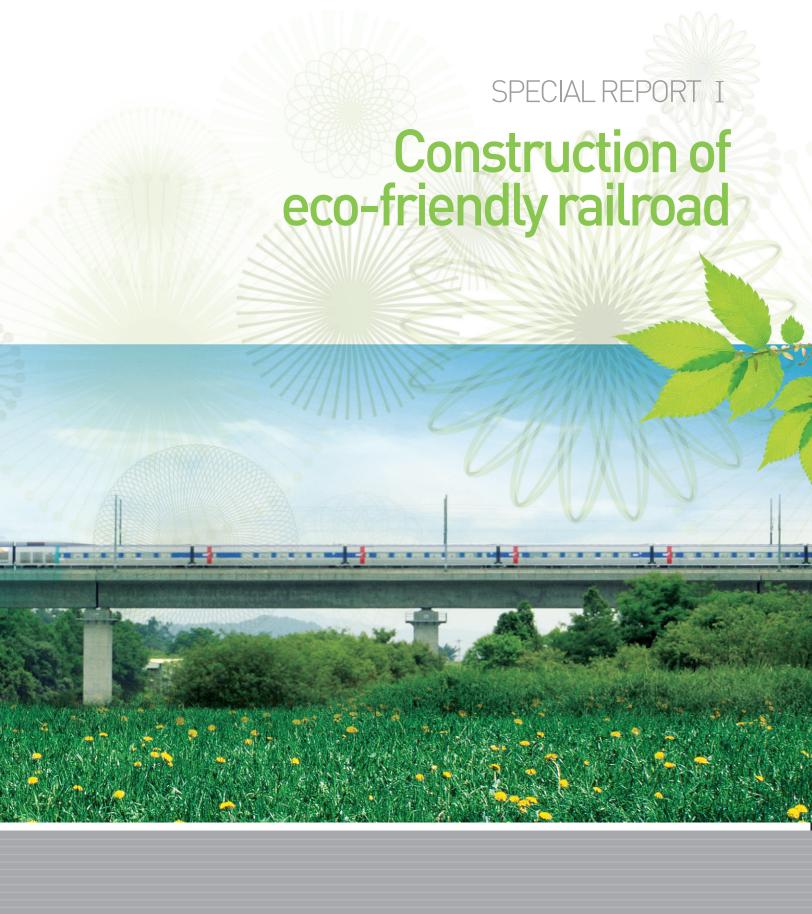
Internal issue



## Minimize damage to eco-system caused by railway construction

Future railway DB administrator, Han, Woo-jin

KR, as a public corporation constructs Korea's railway is positively promoting and performing the 'low-carbon green policy. KR considers the nature eco-system of rail construction site to minimize the environmental damage. Keeping the balance between environmental and economic aspects is one of the sustainability management cores.



KR built 'eco station' with effective environmental-friendly system and performing the low-carbon green management.

Also, KR will construct the eco-rail considering nature environment and its ecosystem and keep eco-system healthy.

## Efforts to construct eco-friendly railway

By designing the eco-friendly stations meeting "eco-friendly building certification standard", KR has tried to construct the low carbon green buildings and minimize the effect of the construction of railway on environment, thus protecting the ecosystem.

## Construction of eco-station

## • Efforts of constructing the eco-friendly railway

KR has obtained the competitiveness in green building with its eco friendly design, use of recycled energy in railway structured and high efficiency materials and equipment.

KR has made its eco friendly design meet the "building certification review standards", and has regrouped the design factors into 9 fields such as eco-friendly use of land, reduction of traffic load, energy saving, resource saving and recycling, construction of water circulation system and saving of water, prevention of global warming, efficient management of building, construction of eco system, and construction of eco-friendly indoor environment.



#### Construction of eco-station

KR plans to apply the renewable energy all stations across the nation in order to save energy and reduce the emission of carbon

Stations adopting renewable energy by year			
Category	2008	2009	2010
Solar energy	Head office, Yeosu	3 stations including Sorae Station	2 stations including Mukhyeon Station
Geothermal energy	5 stations including Osong Station	7 stations including Jinju Station	11 stations including Jeoeup Station and Beolnae Station
Total	7	10	13

dioxide volume. The analysis result of 8 stations including Suinseon and Weolgot showed that the geothermal energy in total cooling and heating load was 44%, saving 211 million Won. KR will continue to construct the renewable energy applied building adopting geothermal energy and solar energy in all its stations.

In addition, KR will expand its green ratio through planting more plants on roofs of its buildings and the green design by adopting the natural lighting and natural ventilation. It has introduced sustainable eco-friendly designs such as clothing change chamber, bicycle parking lot and shower facility at Mukhyeon Station along the Gyeongchun Railway Line so that local people can use them and revised its building standards in a way that the eco-friendly designs are recommended. It plans to adopt more energy saving devices such as high efficient, eco-friendly products (products having Environmental Grade 1) and LED lights. All its lighting system will be converted to LED type from 2013.

#### View of bicycle parking facilities and lots at Sindorim Station



#### Construction of eco-friendly rail stock base

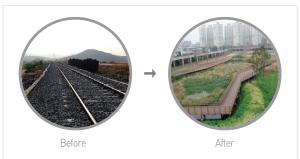
Even though the railway has been getting spotlight as one of the eco friendly transportation means, its rail stock repair center (base) has been recognized as a hated facility because of its noise, dust, and waste water, causing a lot of disputes with local residents and environmental groups when it is to be constructed. So, KR has established the "plan for advancement the rail stock repair center" to reflect the eco-friendly and energy efficiency design on future centers. Different from the bad image in the past, new rail stock repair centers will be built as eco-friendly facilities, containing the eco-friendly designed waste treatment facilities such as the cleaners, inspection devices as well as large green space in harmonization with surrounding environment.

## Construction of eco-rail

### Project of recovery of eco system

KR has processed the ecosystem recovery project using the ecosystem preservation subsidy system. The ecosystem preservation subsidy is a system in which the business which damages the environment contributes a certain amount of money for recovery of the ecosystem and the business can pay back 50% of its contribution when the recovery project is conducted. KR has recovered the ecosystem for the railway lines which were not in use as recommended by professionals and applied for return of the money. In 2009, KOR recovered the ecosystem of Daecheon River along some of Janghang Railway Line which was in no use any more and converted the area into places for fish and ecosystem observation path, increasing the biodiversity of the area through planting along the river. In 2010, it decided to recover some of the Gyeongjeon Line and recovered the area into low carbon forest and mini ecosystem for plants and animals. Specifically, KR planted 442 plants and made 108 places for animals as well as 15 natural resting places for people. Recognized of its efforts for recovery of ecosystem, KR has been awarded the grand prix in 10th "Natural Environment Contest" sponsored by Ministry of Environment with the award money contributed to poor people living along the railway, doing its contributions to communities.

### Accomplishment of recovery project for Gyeongjeon line



## Efforts to get the biodiversity

KR has conducted the environmental impact assessment prior to the start of construction of railway in order to reduce its bad effect on environment. In 2010, KR completed 3 environmental impact assessments and had 3 cases under progress. Due to the environmental impact assessments, KR found out several endangered species in the nature protection area and portal water protection area and installed the wildlife path so that wild animals can pass across the railway and the sound insulation wall. According to the environmental impact assessment

conducted in Feb. 2011, the project for railway entering to Gunjang National Industrial Zone had temporary structure to minimize the bad effect on plants and topography as the project was related to the open cut method in making tunnel passing through the "Ecosystem Grade 1" (Open Cut Tunnel in Okcheon). In addition, after recovery of the original soil, the plants were planted over it to minimize the environmental impact..

Endangered wild animal investigated in the environmental impacts assessment, 2010		
Area for railway construction	Wildlife	
Daegu Line (Geumgang to Yeongcheon) Dual lined railway	1st class: Otter 2nd class: Tumblebug, anas formosa, kestrel, charadrius placidus	
Jungang Line (Wonju to Jecheon) Dual lined railway	1st class: Otter 2nd class: Marten, flying squirrel, tumblebug, charadrius placidus	
Poseung to Pyeongtaek Construction of railway	2nd class: Whooper swan, bean goose, tumblebug, kestrel, goshawk, narrow-mouthed toad, Korean golden flog	
Restricted areas which we	ere assessed for environmental impact in 2010	

Restricted areas which were assessed for environmental impact in 2010				
Area for railway construction	Wildlife			
Daegu Line (Geumgang to Yeongcheon) Dual lined railway	In potable water protection area: 9 In wild life protection area: 10 In nature parts: 2			
Jungang Line (Wonju to Jecheon) Dual lined railway	In potable water protection area: 3 In wild life protection area: 5 In nature parts: 1			
Poseung to Pyeongtaek Construction of railway	In potable water protection area: 4 In wild life protection area: 1 In nature parts: 3			

#### Improvement in environmental control process

KR has improved the process for environmental management during construction in a systematical way. Through inspection and education, it has made effort to put the recommendation from environmental impact assessments into practice and listen to persons in sites and reflect their opinions on the process improvement, supporting the environmental control for associated companies.

Especially, the improved processes include the support for smooth waste management and enhanced recyclability of materials such as the rise of recyclability of 8.7% over previous year. Due to these efforts, KR had not committed any environmental violations. Recognized with its various efforts and accomplishments, it was awarded the presidential award at 2010 "Day of Environment" ceremony. KR will continue to enhance the efficiency in environment management through environmental process improvement and education and training.

# Coping with climate change and environmental management

With the international agreement on the reduction of green house gases expanding, Korea has established Basic Act for Low Carbon Green Growth. KR has constructed the green house gas inventory for reduction of green house gases and preparation of carbon emission right and planned the clean development mechanism (CDM) projects.

## Coping with climate change

### Long and mid-term actions against the climate change

KR has made "Long and Mid-Term Master Plan for Coping With Climate Change" in order to reduce the green house gases arising from construction of railways and get the carbon emission rights. In addition, with the construction of greenhouse gas inventory in the field of construction for the first time in Korea, KR has established the strategy to reduce the emission of carbon dioxide and preemptively coping with the regulation on the construction of railways.

### Construction of greenhouse gas inventory\*

KR has studied on the emission of greenhouse gases and started to reduce the green house gases since 2008. In 2010, it completed the construction of greenhouse gas inventory for

construction of railways to fully understand the status of green house gas emission by construction site and developed the method of reducing the gases taking into account the characteristics of railway construction. In addition, to understand the volume of greenhouse gases including the use of construction materials, KR has conducted the "Carbon

Third party verification certificate on greenhouse gas inventory

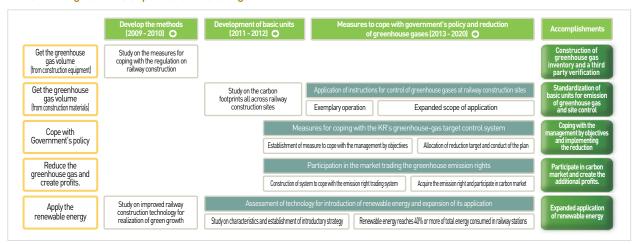


Footprint on Railway Construction Site" and accordingly will plan the instructions on control of carbon emission on the construction sites.

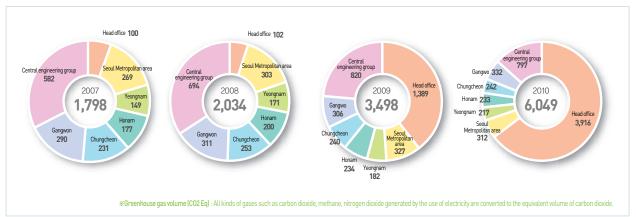
## Establishment of greenhouse reduction target

Following the construction of greenhouse gas inventory on the sites, KR will find out the greenhouse gases emitted from operation of companies in 2011. It sets the average volume for 3 years from 2007 (5,803 in carbon dioxide equivalent, taking into account the increased volume when the KR's head office is built) as the basic volume and plans to reduce the greenhouse gases by 5% each year over the basic volume from 2011 to 2015 with total reduction of 20%. To achieve this goal and improve the efficiency of energy use and remove any energy waste, KR has been cooperating with outside firm for the control and monitoring of greenhouse gases. In addition, it will introduce the

#### Mid and long-term master plan for climate change

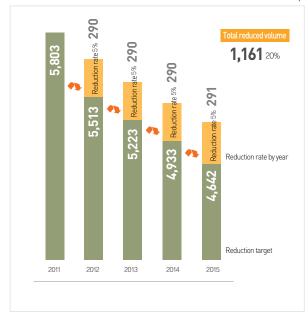


## ■ Emitted gas volume Unit : ton in carbon dioxide [CO₂]



## Reduction target by year





eco-driving movement by introducing more hybrid cars with low

## Conducting the clean development mechanism (CDM\*) projects for acquiring the carbon emission right

carbon emission and 5-day week driving system.

As the global warming is expanding and the regulation on the restriction of greenhouse gas is getting stricter, requiring the development of climate change coping technologies, KR has conducted CDM projects to implement the low carbon green growth.

In 2010, starting with the CDM project for Honam High Speed Railway for the first time for high speed railway, KR plans to adopt CDM system to new projects such as Seoul Metropolitan Area High Speed Railway in 2011. If the CDM project for Honam

is successfully completed, the reduced greenhouse gas volume is expected to be 130,000 ton, which is equivalent to carbon emission rights worth of 3 billion Won a year or 63 billion won for 21 years.

## Establishment of assessment system of environmental performance

KR has set the detailed and explicit environment control system away from the conventional and conceptual environmental targets and control system and has developed the environmental performance assessment system to measure the level.

In 2010, KR attained the environmental management index\*\* of 105.4 in 10 items. In 2011, it will add two more items such as reduction target of greenhouse gas and outside recognition of environmental performance to get more reliability. It will make efforts to get or exceed the environmental management index target of 110.

Environmental performance index		
Operating indexes	Volume of construction wastes (ton/100 million Won)	
	Recycling rate of construction waste [%]	
	Purchasing rate of eco-friendly goods [%]	
	Recycling rate of sleepers [%]	
	Rate of attained greenhouse gas target (added in 2011)	
Managem ent index	Hours of education on environment (hr/man)	
	Rate of installation of sound insulation	
	Amount of penalties (1,000 Won)	
	Rate of corrections as recommended by internal and outside audits	
	Number of advisory committee for green railway held	
	Number of non-compliances with the recommendations from environmental impact assessment	
	Outside recognition on environmental accomplishments	

<sup>\*</sup>CDM (clean development mechanism): It is a system in which the non-Annex 1 countries which have no obligations of reducing the carbon dioxide according to Kyoto Protocol can invest in the carbon reduction project and in compensation with reduction, get the certified emission right (CER).

<sup>\*\*</sup> Environmental management index : It is an index to measure the environmental accomplishments of KR-EMI and KR giving weight to environmental accomplishment indexes with giving 100 score to Year 2009.

# Promote systematic environmental management

KR systematically manages the total amount of input materials, including amount of energy, material, and water in use. The data of input material in 2008 is collected on the basis of 127 construction sites; 208 construction sites for 2009 and 267 construction sites for 2010. Especially, KR achieved to increase the recycling ratio of material in use among the total input materials as the environmental management system is advanced.

## **INPUT**

Railroad construction site (partners)

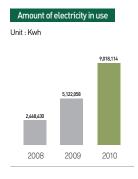
Amount of electricity in use	9		
(GJ)	2008	2009	2010
(Total)	2,982,253	2,932,945	3,893,900
Building	367,025	485,532	527,300
Vehicle	208,141	166,308	258,200
Construction machine	2,407,088	2,281,105	3,108,400

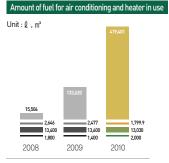
American Combine	feed in con-			
Amount of vehicle	tuel in use			
(ton)		2008	2009	2010
Amount of rail used	(total)	33,307	53,608	65,212
	New material	31,487	49,259	61,272
	Reused	1,820	4,348	3,940
Amount of sleeper used	(total)	132,384	156,455	118,597
PC sleeper	New material	124,453	142,469	111,178
	Reused	7,066	11,472	7,127
Wooden sleeper	New material	486	797	232
	Reused	380	1,717	60
Number of steel used		262,667	572,681	1,163,417
Number of aggregate used	(total)	1,972,166	1,861,086	2,419,469
	New material	1,951,063	1,789,679	2,228,104
	Number of recycled aggregate used	21,103	71,407	191,365

Amount of water in use			
(ton)	2008	2009	2010
(Total)	1,420,691	1,589,683	3,525,171
Amount of recycle	282,915	164,400	279,338

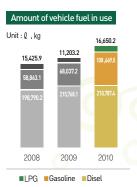


KR (head office and regional headquarters)





■Diesel ■Boiler kerosene ■LPG ■LNG





Amount of energy in use: Amount of energy used in building and electricity, gas, fuel in car





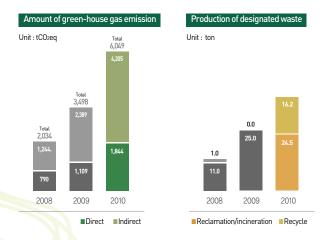






0	Action for climate change
Recycling	
	0)0
	CDM project

KR (head office and regional headquarters)



The emission of water pollutant and dust indicated in the 2010 report was produced during CWR fabrication work of KR jungang technology center; however, the emission will not be measured any more from 2010 since the amount is very insignificant.

#### NOx, SOx No emission

Improvement of noise environment			
Division	2008	2009	2010
High-speed railroad (m)	612	300	560
General railroad (m)	8,107	5,466	3,700
Total (m)	8,719	5,766	4,260

 $<sup>{\</sup>it \divideontimes} \, {\it Extension} \, \, {\it of sound proof walls installation} \, to \, improve \, quality \, of \, life \, in \, damaged \, area \, by \, noise$ 

# **OUTPUT**

Railroad construction site (partners)

Amount of green-house gas emission			
(tCO2eq)	2008	2009	2010
(Total)	196,593	190,611	262,898
Boiler	18,648	24,281	28,919
Vehicle	14,099	11,189	17,945
Construction machine	163,847	155,141	216,034

(Total)         715,794         1,037,164         861,4           Production rate of construction waste         678,705         980,643         798,5           Recycle         605,924         835,407         739,6	Amount of waste production			
Production rate of construction waste         678,705         980,643         798,5           Recycle         605,924         835,407         739,6	(ton)	2008	2009	2010
Recycle 605,924 835,407 739,6	(Total)	715,794	1,037,164	861,478
.,	Production rate of construction waste	678,705	980,643	798,501
Production rate of waste from business' splace 33,418 55,160 62,1	Recycle	605,924	835,407	739,644
	Production rate of waste from business's place	33,418	55,160	62,146
<b>Recycle</b> 16,666 30,660 44,66	Recycle	16,666	30,660	44,684
Production rate of designated waste 3,672 1,361 8	Production rate of designated waste	3,672	1,361	831
<b>Recycle</b> 210 323	Recycle	210	323	20

Amount of air pollutant emission	n		
(ton)	2008	2009	2010
Dust(kg)	2,297	1,305	14,742
Number of management in air pollutants emission	4	6	17

Amount of water pollutant emission			
	2008	2009	2010
Amount of produced waste water(ton)	4,977,145	3,207,309	4,821,362
BOD(mg/l)	3.7	4.1	3.9
COD(mg/l)	19.0	9.7	6.4
SS(mg/l)	13.8	11.2	9.7
Number of management in waste water emission facility	42	36	65

Waste water emission zone: Han-river, Jungyangcheon, Suhocheon, Tancheon, Suwoncheon, Jungdaecheon, Namhan-river, Gyeongancheon, Deassangcheon, Gonjiamcheon, Sindooncheon, Chatancheon, Yeonhocheon, Euncheon, Guemhocheon, Hwapocheon, Gumahcheon, Sooyoungriver, Hyeongsan-river, Gocheon, Chokokcheon, youngsan-river and etc.



# Safety is a non-compromised principle

Kang Yoon-sik, Seon-goo Engineering

The railway construction site of KR is multi-tiered structure with several cooperative companies, including major companies and SMEs. KR emphasizes the most on the railway construction sites is the safety. For preventing any possible accident, KR has thoroughly established safety management plan to make effort to prevent the accident and disaster. KR thinks its focus on safety would be the most fundamental starting point for win-win strategy that same stringent standard is applied to all other cooperative companies as well.



# Safety-first policy



KR strives for the promotion of transportation convenience and safety for its customer with the optimal engineering method from the design phase to its opening.

Safety first, this is the utmost and uncompromising value of KR.

# High level of safety management

KR places the efforts to prevent the accident of railway users and minimize the human casualties of construction workers with the systematic safety management at the railway construction sites.

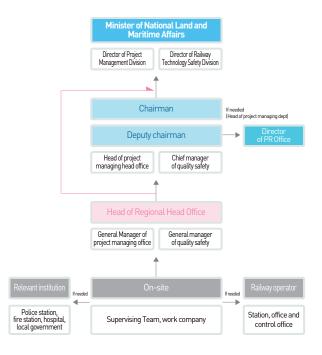
# Structuring the safety management system

In order to minimize the damages from natural disaster to reduce railway construction accidents, KR establishes and implements the safety management plan to remove the risk factors in advance in a way of reducing the disaster rates. In addition, it has analyzed the risk factors for each physical, human and other factors, and implements the safety measures for each factor, and structure and operates the system to feedback the result.

 Report system of railway construction accident and quality defect

When there is a sign of abnormality at the railway construction

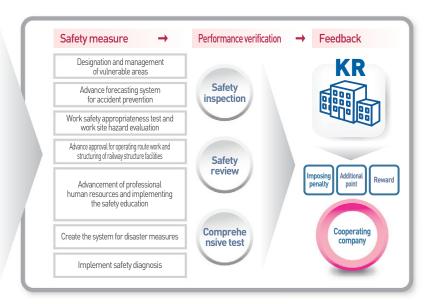
#### Accident and quality defect report system



site, a finder or head of work site shall use phone, SMS, fax or others to report immediately and make initial report in writing for the accident and quality defect within 3 hours. The status of recovery is reported from time to time and makes the final report after completing the recovery. In addition, when having the accident at the railway construction site, make the prompt initial report and accident status to prevent the same accident with its 'accident report system' from November 2010.

#### Safety management plan





#### • Case of safety management undertaking activities

#### Dimension of intersection

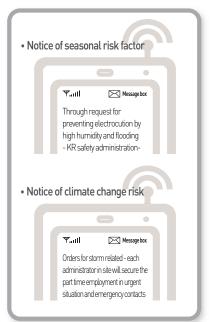
Change crosswalk with underpass (Cheongdang Intersection for Gyeongbu-seon)

#### **Emergency response test drill**

 Set the emergency situation expected from the disasters from climate changes in heavy rain, heavy snow, earthquake and others and implement the responding drill jointly with the relevant institutions



# Advance forecasting system for accident prevention



#### Safety management activities

In order to control the occurrence of 5 major accidents (falling, conduction, dropping, adhesion and electric shock) with high frequency of accident, KR undertakes the work only when it is determined as having no risk factor after inspecting the appropriateness for work safety by engineer or inspector. In 2010, 235 sites excluding the sites yet to undertake the works from 346 subject sites have had the inspection for work safety. Furthermore, it sends the seasonal risk factors at the railway construction sites to the on-site officials via mobile phone SMS to enhance the sense of awareness and structures the safety facilities in cross road dimension, elevator screen door and others to prevent accidents for local residents and railway users. In addition, when natural disaster occurs, prompt and efficient response is made to minimize the damages with the strengthening of operation for disaster situation room in winter

#### Annual accident rate



(Dec. ~ Mar.) and rainy season (May ~ Oct.) and has implemented 5 times of joint mock drill for emergency responses along with KORAIL. fire station and other relevant institutions.

As a result, the accident rate of KR has recorded for one-fifth range of the average in domestic construction business. For developing safety management specialized human resources, KR has developed 13 railway safety managers in 2010 to have 156 accumulated professionals and developed 9 safety inspectors to have 30 accumulated professionals.

# Designation and management of vulnerable areas

KR has the management system for signal lights to classify the vulnerable areas for each grade in accordance with the construction site risk evaluation. The risk evaluation on work product is implemented within 30 days after the commencement and the risk grade is designated through the deliberation.

Status of management for vulnerable areas (As of Dec. 2010)				
Grade Phase	Red	Yellow	Green	Total
Grade A	10	14	39	63
Grade B	6	40	59	105
Grade C	10	27	56	93
Total	26	81	154	261

Road map to undertake high level safety management

# ON-site inspection - Un-site inspection - Un-site visit - Accident report by facilitating fax, e-mail and others

# Improvement (2010) Installation of remote video management system (CCTV) for construction sites Structuring of accident report system by using the computer network Possible to make real-time report and entire site accident sharing Installation of remote video or remove video vi



# System improvement for high level safety management

KR has monitored the vulnerable sites at all times and simplified for report system in times of accident to structure the efficient safety management system to share with entire sites. In particular, this system has facilitated IT technology to enhance the efficiency of the safety management. KR has installed a total of 91 CCTVs in 45 vulnerable construction sites with importance of Grade A or higher. Through this effort, the on-site monitoring is implemented in real time to notify insufficiency to the site in time.

# Systematic verification of safety management

KR has verified safety management from the commencement time to completion time for each construction phase to prevent accident through safety management standard and provide convenience in national transportation with the safe railway construction. In particular, it has selected 83 places as the subjects of special management for intense management and it also undertakes substantive verification through joint inspection with outside expert institution.

The safety management high level system of KR was selected as an outstanding institution to prevent the construction accidents as the first one in public institutions and, on the day of industrial service and health in July 2011, it has won the Presidential Award in the group part for construction accident prevention field as managed by the Ministry of Labor. This is attributable to the fact that KR has introduced safety and health management system (OHSAS 18001) to structure the systematic safety system and developed and operated the independent system appropriate to the railway site in track operation work with advance approval system as well as having outstanding outcome in expansion of safety infra in IT technology in remote video management system and others. KR is committed to fully focus on the safe railway construction.

 Comprehensive safety review of railway (Managed by the Ministry of National Land and Maritime Affairs)



■ Precise inspection for facilities (Measuring the crevice depth)



 Safety diagnosis technology improvement education



# Collaboration in safety management

KR has undertaken collaboration with diverse institutions to overcome its internal limitations and acquire the know-how of external specialized institutions, and it attracts the independent safety management through structuring of win-win relationship structuring with cooperative companies.

# Undertaking collaboration for accompanied growth of railway construction bodies

KR undertakes the safety examination jointly with Korea Infrastructure Safety & Technology Corporation, and it implements publication of safety data, joint safety education and safety inspection with KOSHA and KORAIL. In addition, it holds the presentation of outstanding cases of safety management for construction sites to give additional points for winning companies when undertaking the evaluation for participating companies. KR facilitates the outstanding case collections and accident case collections each year to facilitate as the safety education data by distributing it to the cooperative companies.

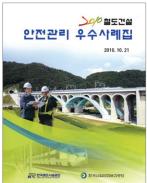
# Implementing regular safety education

KR, with the collaboration of the KOSHA, implements education on safety management and health management for 2,000 workers at the work sites and, with the support of service management education for adjacent works for trek operation from KORAIL, it implements safety education for 700 on-site employees.

# Operation of safety council with relevant institutions

KR regularly holds the railway safety practical council with KORAIL to adjust the interest relationship and strengthen the collaboration and it shares and exchanges technology on safety management information with the MNLM and its chartered agencies, Korea Express

Outstanding case collections for safety management



Major safety management examples of 25 sites including rail construction of Dongbaeksan-Dogye of Youngdong line which had received grand prize for the best railway site is recorded (500 books were published and distributed.

 Accident case collection on railway construction

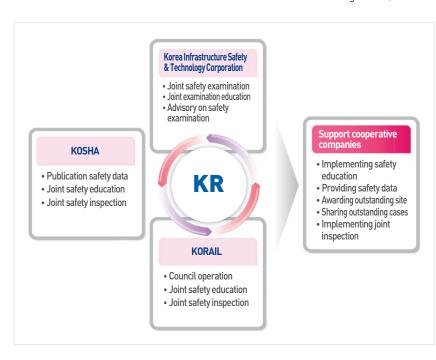


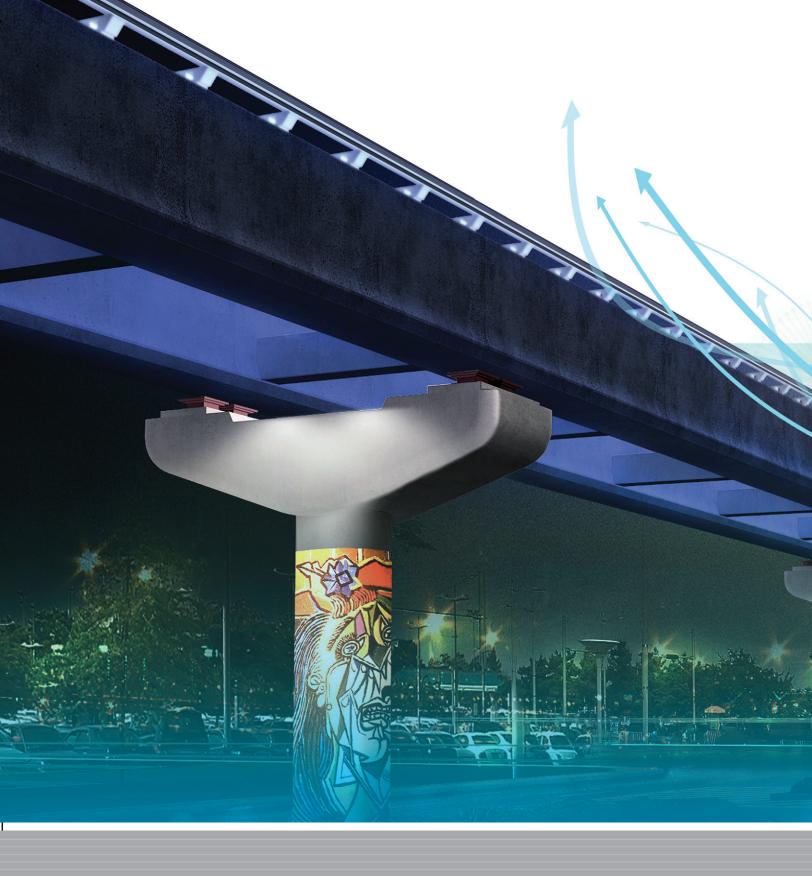
It suggests the work environment safety factor by accident case systemically; thus, it is able to be used as a safety guide for workers at site.

Corporation, Incheon Airport Authority, Korea Water Corporation, LH Corporation and others. In 2010, it held railway safety practical council for each quarter to process efficiently 14 current issues.

# Operation of railway council with KORAIL

KR has established the railway policy adjustment council with the participation of the deputy leaders of KR and KORAIL, major contributors of railway construction, and it has 9 fields, including safety, facilities, train adjustment and others, and it operates the railway practical council on regular basis. Therefore, it has prepared the foundation for safe railway construction and operation.





# Advance to global market with the global railway competitiveness

Professor Eo Sung-wook, Woosong University

KR is a public institution to build the railway in consideration of management technology and environmentfriendly features in railway. Now, it needs to advance to the global market as a global public institution beyond the domestic market. The railway is a field that requires professional technology that it would be able to build competitive railway globally with the human resource development and investment on the railway field. In addition, on the basis of the professional human resources, the new technology has to be developed on the technology in railway construction to develop sustainably.



# Global Management



KR opens up the railway renaissance to link the world with Asia, North America and South America, Africa, Middle East and others on the basis of the world best level of human resource and high-tech technology.

# Strategy to advance to overseas market

KR has undertaken diverse efforts for advancing to the overseas market and securing the highest level of technology competitiveness to be the global railway company.

# Coming of global railway renaissance era

The world is currently encountered with the renaissance era to remarkably extend the investment on railway industry. The reason for the world to pay attention to the railway industry is largely two-fold. First, with the movement toward the regulations on carbon discharge as the main culprit of the global warming, the railway that has the effect on the greenhouse reduction is emerged as low carbon green transportation means.

Current major advanced countries have extended investment on railway transportation and control the road demand that causes substantial carbon dioxide discharge in order to promote low carbon green growth and to respond to the climate change treaty.

Second, major countries around the world have expanded

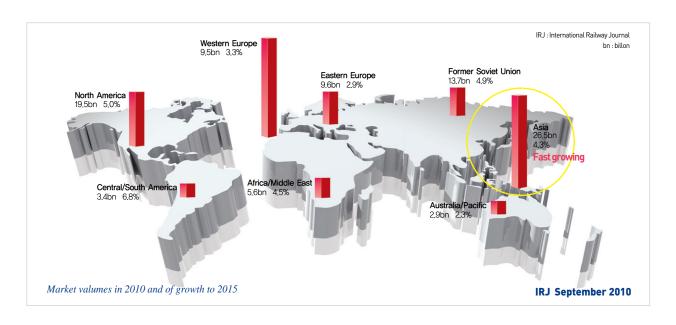
investment on industrial infra for overcoming the economic depression occurring from the global financial crisis.

Railway generates vast dispersion effect in boosting the economy since it has a great effect related to industries along with the employment stimulating effect in the matter of importance for facilitation among industrial infrastructures.

# Prospect of global railway market

According to the announcement of SCI/VERKBHT GmbH, a specialized institution in railway statistics, the scale of global railway market is 131 billion EUR as of 2010 and approximately 210 trillion won in Korean currency. For each region, Western Europe has 39.5 billion Eur (30.4%), Asia for 36.5 Eur (27.9%), and North America for 19.5 Eur (14.9%), CIS region for 9.6 Eur (7.3%).? The global railway market in 2015 is expected to be 160 billion EUR (approximately 250 trillion won). The expected growth rate in the next 5 years has been 4.5% per year to have the continuous growth in high oil price, environment protection, growth in private-capital market, high speed railway demand increase and others. Looking into each region, Asia and CIS are expected to make drastic growth by 2015 and the gap with the Western Europe will be gradually narrowed. Asia is visualized for having China to expand large-scale of railway and India for policy movement for developing the railway industry and the CIS region has facilitated the railway industry with the need of vehicle improvement and obsolete infra thereof.

The global railway market in the future is expected to have fierce competition to expand the market share rate and market taking, and accordingly, it requires the technology and sales



route for advancing to the overseas market of the Korea's railway industry.

# Establishment of global market advancement plan of KR

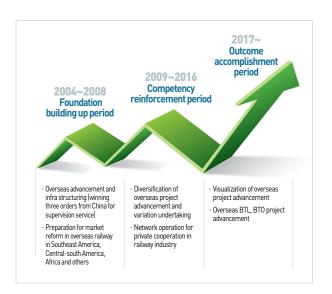
KR has undertaken for global overseas railway advancement on the basis of its visible outcome in the projects implemented in China. In the future, KR plans to strengthen the global competitiveness of domestic railway industry as the railway construction specialty public institution as well as generating new business profit through expanding overseas market advancement.



# Direction of global market advancement for KR

KR places effort for securing overseas markets and the performance thereof. Compared to 4 major stronghold countries that operate the high speed railway sooner than Korea, the technology strength is considered to be similar that the price competitiveness is possible at the present time. However, in the event that China advances to overseas high speed railway market, differentiation of price competitiveness is expected to be difficult.

KR plans to make active advancement into not only major markets but also markets with relatively smaller scale. Major companies have little interest in small markets that it is desirable to advance to small markets in aspect of experience and risk management. Furthermore, KR plans to advance to markets



with significant interest in technology transfer. For the market that has significant interest in technology transfer on railway vehicle, system and operation, it is planned to have more efficient and open technology transfer. In addition, for countries with insufficient finance, the package deal\* project advancement has been sought. Through the alternative resource development in oil, mineral, forestry, land development right and others of these countries, it is a way to secure business possibility.

# Securing the highest global level of technology competitiveness

KR makes effort to secure the world best level of railway technology for advancing into global railway market. The high-tech in ultra-fast, signal and others, undertake active domestication on railway goods and construction with early securing of technology through technology transfer or technology development. Through the core materials in orbit, electric field and others, it plans to make the domestication in orbit field design, such as, rail linkage device and others as well as pilot product manufacturing, high speed railway electronic linkage device, trek converter, 350km/h level track line and others.

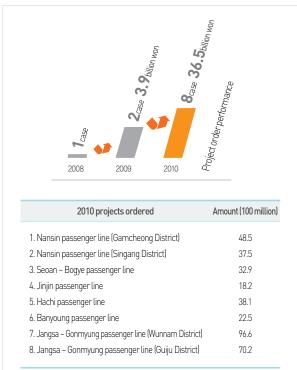
In addition, in order to make the verification of capability for railway goods as developed in domestication, the comprehensive testing trek is undertaken with the goal of completion by 2015 that it plans to undertake reliability test and certification of domestically manufactured vehicles and components here.

# Outcome from undertaking overseas railway project

KR has established its foundation to advance to the overseas markets through railway project diversification and facilitation of overseas market advancement regions.

Notwithstanding the short period of time since the establishment in 2004, KR began the supervisory service in passenger vessel of China in 2005 and has successfully won the orders for 3 railway supervision service in China and national railway master plan consulting service in Cameroon. In addition, it has won 8 projects for Jangsa ~ Gonmyung passenger line for Wunnam District in China and others in 2010.

# Status of orders for China railway projects in 2010





# Established overseas market advancement base

KR has established its foundation for advancing into overseas market by expanding its new growth project team into overseas project head office for facilitating the overseas projects. In the future, it intends to secure the bridges for overseas market by holding the accompanied growth council and win-win council for overseas projects.

Among them, 8 projects including ones in Brazil, Oman, Mongol, California and others as the private-public joint project with joint participation in bidding proves with private enterprise. In particular, for the order of high speed railway in Brazil, it held the session related to the high speed railway project in Brazil and fully focusing on dispatching the TF organization to locality. In the future, KR is actively reviewing the plan to include the human right provision when advancing to overseas market or entering into MOU for it.

# Structuring the railway industry collaboration network

KR has been able to take the competitive edge to win additional orders for supervisory service following the major high speed railway construction plan of China as a result of its systematic

California

Bolivia

Paraguay

Brazil

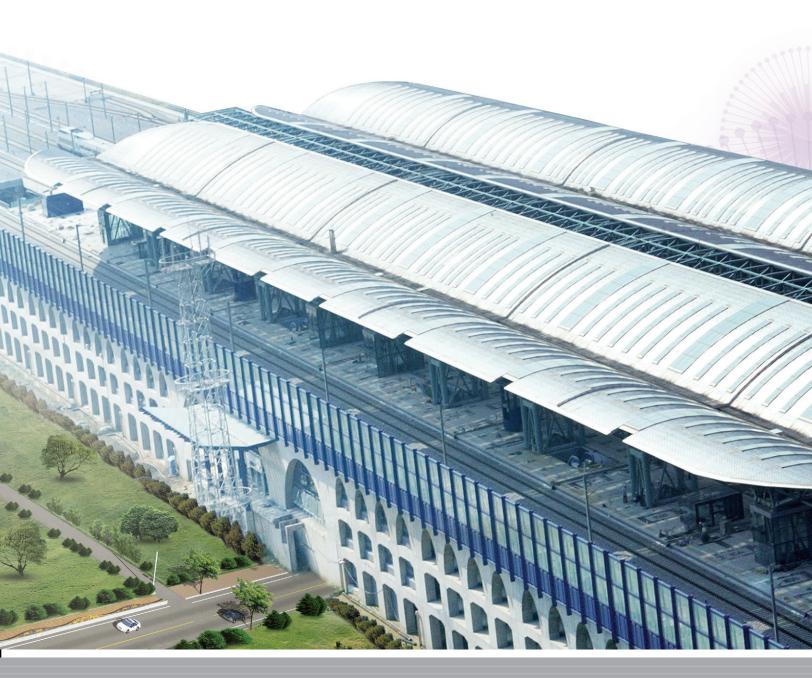


undertaking of 8 supervisory services implemented in China. KR was selected as the most outstanding institution in the evaluation of supervisory service in the competition against the advanced railway countries. And, it held the Korea-China railway technology exchange session with China as a way of strengthening friendly relationship with China with its effective publicity campaign on excellence of Korea railway.

In addition, it has structured cooperative network in railway industry for government, Korea Railway Association, KORAIL, cooperative companies, research institutions and financial institutions. Through the clear role-sharing with government, public institutions, private companies and others, the competitiveness of Korean railway industry will be even more strengthened.

Completed projects	Supervisory service for Zone 1 of Gugan and Mugwang passenter vessels in China
Projects under performance	Supervisory service for Hada Line passenger vessel in China and research on master plan for national railway in Cameroon Nansin (Singang) and 7 other projects in China
Project under activities to win a contract	Brazil high speed railway, China railway (4 major projects) Mongolia railway, India high speed railway, Bangladeshi railway, Oman railway, Iraq railway, US (California, Illinoise) high speed railway and others
Project currently discovered	Thai railway project, Ajerbaijan railway project, Bolivia railway project, and Paraguay railway project

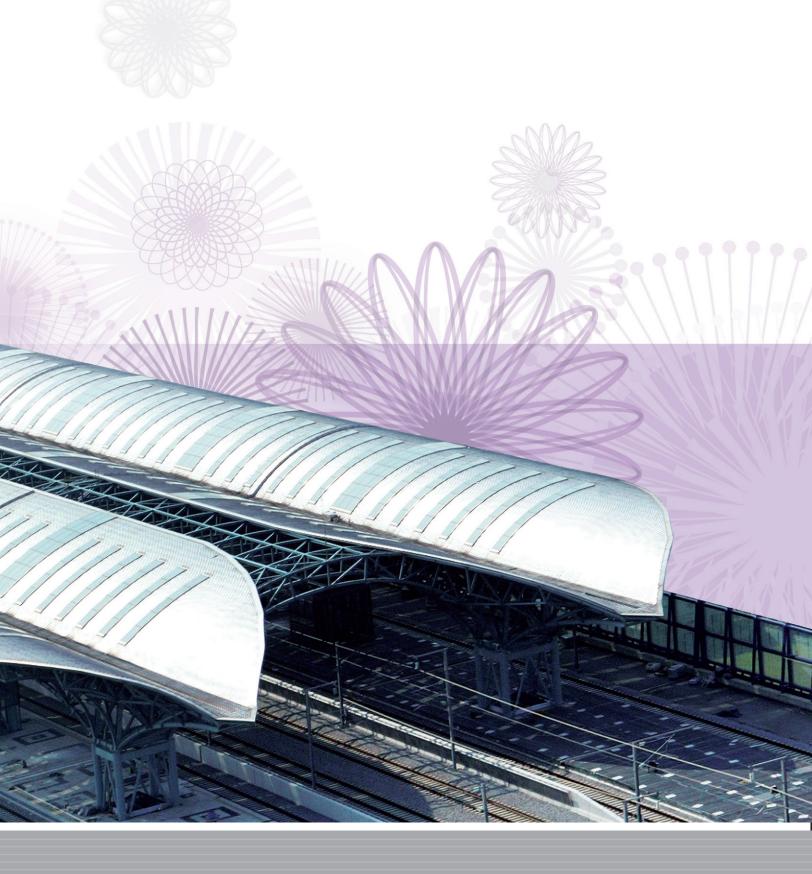
# **ECONOMY**



# Expectation of role to leap into the railway advanced country

Assistant Director Lee Chang-kyu of the Ministry of National Land and Maritime Affairs

The railway opening within the structuring plan for national railway network is the largest part of the KR management activities and is assessed flawlessly to the present time. The efforts for the domestication of components for railway construction are heightened of its economic added value of KR. The economic sustainability of KR is dependent on profit increase through providing the national transportation convenience and leaping into the railway advanced country.



KR is undertaken the sustainable management by accomplishing the economic outcome on the basis of efficient financial system and it is striving for the advanced railway strong house by securing the world class of technology through railway R&D.

# Economic outcome

KR has been improving its financial structure by efficient facilitation of assets and saving the business expenses for securing the financial soundness to realize the '2020 future management strategy'. In addition, it actively discovers the new growth engine business to expect the new project income



# Emergence of need to maintain soundness of financial structure

KR is a quasi-government institution for consignment undertaking to work on behalf of government. Following the investment decision of the railway industry by the government, 50% of the construction expense for high speed railway comes from the government chartered fund and 50% comes from issuing the bonds. (For the high speed railway in the capital region, it is 40:60). Since the route service charge imposed from

Unit : million won

Summarized Balance Sheet				
Clas	ssification	2008	2009	2010
	Current assets	267,492	280,064	457,505
Assets	Non-current assets	26,994,324	32,761,596	38,020,062
	Total assets	27,261,816	33,041,660	38,477,567
	Current liabilities	2,922,282	4,612,927	5,844,627
Liabilities	Non-current liabilities	8,948,942	9,659,081	10,930,262
	Total liabilities	11,871,225	14,272,008	16,774,889
(	Capital	15,390,591	18,769,652	21,702,678

Unit : million won

Summarized Statement of Income			
Classification	2008	2009	2010
Sales	606,624	636,821	589,599
Cost of sales	573,500	600,676	542,684
Selling and administrative expenses	0	0	0
Operating income	33,124	36,145	46,915
Income from non-operating income	93,657	52,602	31,999
Non-operating expenses	453,719	440,289	472.178
Income tax expenses	0	0	0
Gross income	700,281	689,423	621,598
Gross expenses	1,027,219	1,040,965	1,014,863
Current net income	-326,938	-351,542	-393,265

KORAIL as the main income source of KR is insufficient from the interest cost of bond issued by KR, the current net loss and liabilities are increasing.

Unit : million won

t and in-direct eco	nomic value ge	neration a	and distrib	ution
Interested party	Contents	2008	2009	2010
Government	Government contribution	2,714,885	3,793,584	3,300,332
KORAIL & general	Business profit 10	606,624	636,821	589,599
Officers and employees	Labor expenses <sup>2)</sup>	87,024	84,552	87,113
Cooperative companies	Business profits 30	4,621,080	6,203,486	5,621,587
Local residents	Social contribution fund <sup>4)</sup>	165	154	225
Central government and local government	Taxes	691	323	822
	Interested party Government KORAIL & general Officers and employees Cooperative companies Local residents	Interested party Contents  Government Government contribution  KORAIL & general Business profit *  Officers and employees Labor expenses*  Cooperative companies Business profits *  Local residents Social contribution fund*	Interested party         Contents         2008           Government         Government contribution         2,714,885           KORAIL & general         Business profit **         606,624           Officers and employees         Labor expenses**         87,024           Cooperative companies         Business profits **         4,621,080           Local residents         Social contribution fund**         165	Government         Government contribution         2,714,885         3,793,584           KORAIL & general         Business profit **         606,624         636,821           Officers and employees         Labor expenses**         87,024         84,552           Cooperative companies         Business profits **         4,621,080         6,203,486           Local residents         Social contribution fund**         165         154

Business income comes from railway facilities use income (KORAIL) and asset related income (lease payment and others).

# Setting mid- to long-term financial goals

KR has set the mid- to long-term financial goals to solve its accumulated liabilities. This is based on the mid- to long-term financial plan established in 2010. In order to maintain the financial soundness, KR has analyzed alternative for each



<sup>(2)</sup> Labor expenses include welfare expenses.

<sup>[3]</sup> Business expenses include railway construction expense, consignment work expense, facilities improvement expense, maintenance and repair, and other business expenses.
[4] Social contribution fund includes the contribution.

Basic conditions for	r financial analysis
Classification	Prerequisite
Existing liabilities	End of 2009 for 11 trillion 33.8 billion won
New borrowing	Bond of 5-year maturity, 5.70%
Ratio of government investment	Express: 50%, general: 100%/ Metro: 75%
Basic costs	Actual expense settlement concept/ maintenance and repair expenses
Trek use charge (base income)	High speed railway: 31% of business income, general railway: maintenance and repair expense level
Self-help improvement	2020 future management strategy / Reflecting profit generation
Cash in-flow / cash outflow	Contribution, self-help effort/ high speed railway investment expenses and others

scenario and selected optimal alternatives. As a result, it has undertaken self-help effort based on the KR 2020 future managem ent strategy, and when securing the additional responding investment from government, it has formulated the analysis result that the minimization of liability scale would be available in 2045 with peak reaching for 22.2 trillion won in 2025.

# Discovery of new growth engine business

KR has made effort to improve the financial soundness and relieve the accumulative deficit by accomplishing the future management strategy goal and it has actively discovered the new profit business model to increase the profit with diversified approach. It first discovers the profit model by facilitating the railway asset, including the station area development and others on a regular basis. In October 2010, comprehensive station area development that reflected the railway characteristics has become assessable in accordance with the enactment of the Station Area Development Act/ Enforcement Decree/ Enforcement Regulations. On the basis of its foundation to advance to overseas through accumulated information and knowledge in overseas projects, it has won 8 routes for China railway to generate 36.5 billion won for profit, and it has won 2 orders of national research projects to expect for new profits of 20.5 billion won.

# Profit generation with the enhancement of facilitating the assets in possession

Through the asset status survey for each year, KR has discovered 52.6 billion won of hidden assets last year and it has accomplished the profit of 73.8 billion won with the efficient national asset management to contribute to the financial structure improvement.

# Strengthening of exclusive organization for financial structure improvement

KR has organized a TFT for financial structure improvement in

May 2010 to make regular monitoring for income increase, cost savings, and system improvement performance. In addition, it strengthens the human resource for TFT in finance and expands the finance organization (4 persons in financial strategy dept to 9 persons in financial strategy division) as implementing highly intense improvement action plan in enterprise level.

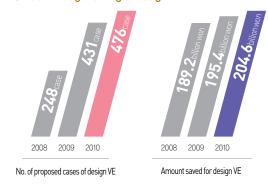
# Increase of investment efficiency by saving the business expenses

KR has improved its design value by strengthening its continuous capability of design VE\* and generated outcome in saving the business expenses and others. In 2010, it has implemented 48 times of design VE on 6 fields to save the budget of 204.6 billion won and published the case collection to share within the company and cooperative companies. In addition, it has undertaken to save the business expenses through high level work management with the improvement of working method to save the business expenses of 268.6 billion won, and it has secured technology by discovering outstanding cases in the railway field with concrete orbit structure model development and others. KR is committed to save the budget systematically through thorough inspection and analysis.

 Status of saving business expenses in work method improvement



Status of budget saving in design VE



Accumulated amount of savings in design ME from 2004 to 2010: 1877.6 billion won

# Research and Development (R&D)

KR expands national R&D participation and own reaserch to develop localized material and promote a rail test track to verify the system's performance with domestic/foreign rail materials.



# Mid-long R&D vision and promoting strategy

KR has established its Second Master Plan for technology R&D in a way of having the comprehensive pilot route area to build up as the railway testing and industry hub. It undertakes all railway certification, verification and testing to structure the railway goods certification system and secure its participation for national R&D projects and independent research expansion for securing pertinent technology.

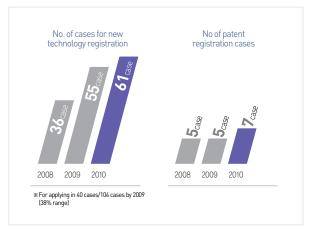
As a result, through securing continuous technology, it has registered 61 cases of new technology and 7 cases of intellectual property rights, and these efforts were shared when holding the technology grand exhibition for the Ministry of National Land and Maritime Affairs. In addition, when developing domestication of core materials, it supports the technology and operates the development supporting system for the growth of SMEs.

# New task undertaking and technology and R&D facilitation

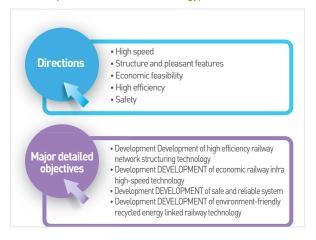
KR has won 2 cases out of five national R&D research projects to generate the profit of 20.5 billion won and makes effort in quality improvement with independent research projects. The orbit system is monitored and the research outcomes in U-Rail system, orbit noise & vibration criteria and others are used in practical ways.

National R&D Research projects	Research on the development of wireless communication- based railway control system
	DEVELOPMENT of technology to test apply of the 400km/h level high speed railway
Independent research projects	Research on establishing the optimization plan of power supply on electric railway in railway construction
	Establishment of criteria to calculate the electric transformer for railway power reception/load
	Building up the market-base for procurement of domestic components for trolley track in high speed railway

#### No. of new technology and patent registration



#### Master plan for the second technology, R&D



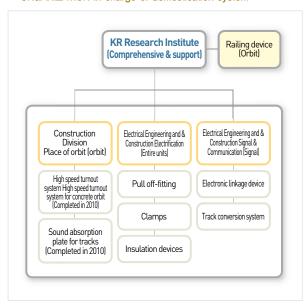
# Realization of model optimization for high speed railway concrete orbit structure

Most of concrete orbit structure technologies introduced to Korea are from overseas with insufficient technology transfer that it has been difficult to make the timely response when there was any problem in material supply or quality. Therefore, KR has developed concrete orbit structure model to apply in orbit design in the capital region and Honam region high speed railway projects. As a result, it has secured intellectual property rights and saved the project expenses of 930 million won as well as expecting to make the improvement in core technology in railway.

# Domestication of core supplies and materials for railway goods

KR has made efforts to secure the technology competitiveness through structuring the test basis and improvement in product capability for developing domestication and facilitation with the goal of 100% domestication rate of major materials in railway by 2013. The concrete orbit high speed turnout system has completed its domestication to have the designation as the new technology in transportation from the Ministry of National Land and Maritime Affairs in November 2010, and the railway device has been in domestication pilot project through the design competition.

#### ORGANIZATION in charge of domestication system



No. of items : As of Jan. 2011

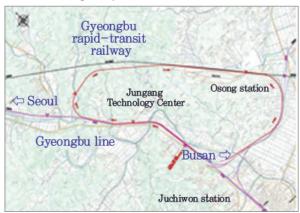
Status of domestication materials					
Classification	Main materials No. of items	Completion of domestication No. of cases	DOMESTICATION for this occasion No. of subject cases	DOMESTICATION rate (%)	
Total	108	102	6	94	
ORBIT	28	27	1	96	
Railway routes	32	29	3	91	
Signal	48	46	2	96	

<sup>\*</sup> Materials in 5 fields including civil works have been generalized use to be excluded from the subject.

# Construction of comprehensive test line for railway

Current rail supplies and system are too much dependent on overseas and there is no place to verify the rail supplies even though nation develops them. Especially, these problems were emphasized as a social issue when cracking the ties found in Gyeongbu rapid transit rail 2nd step was happened. Therefore, KR promotes a project to construct the rail for comprehensive test to verify the domestic and overseas rail supply system and divorce from overseas dependency of rail industrial technology. To construct comprehensive test road, KR created an exclusive team and developed construction logic to convince the authorities concerned. Upon investigation of major candidates to install a comprehensive test line for railway, KR drew an optimal place for test line, which was 14km long loop track in Osong base, Chungcheongbuk-do to demonstrate the intermediate speed (around 200km/h) in the Korea's reality. After KR's continuous efforts to build a comprehensive test line for railway, this project finally passed the preliminary feasibility study in August, 2010 and plans to complete the construction until 2015. Once this project is completed, advanced rail technology will be secured and we expect to have synergy effect of rail related technology through rail technology development and comprehensive functional assessment test.

#### ■ Route for integrated pilot tracks



# SOCIETY



#### Assess as an "Institution of Sharing'

# Park Mi-ae Children's Foundation

KR has been assessed as an institution of sharing' that has all officers and employees practicing the social contribution. KR volunteers support children in neglected homes and classes, such as teenage homemakers and others together with the Children's Foundation. This organization is committed to continue its PR activities through diverse channels externally and support for active service activities of employees internally to enable social contribution to take its place as one of the corporate brands.



KR strives for the satisfaction and happiness of all interested parties and has practiced the 'value of sharing' through the social contribution activities for local residents and neighborhood of KR's own.

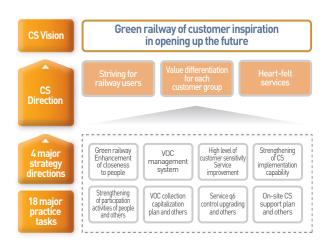
# Customer Satisfaction Management

KR operates the enterprise CS organization system to be the company with unyielding affection and trust of its customers. It operates Sorisaem to secure diverse customer channels and build up organic trust relationship with customers.

# Customer satisfaction management system

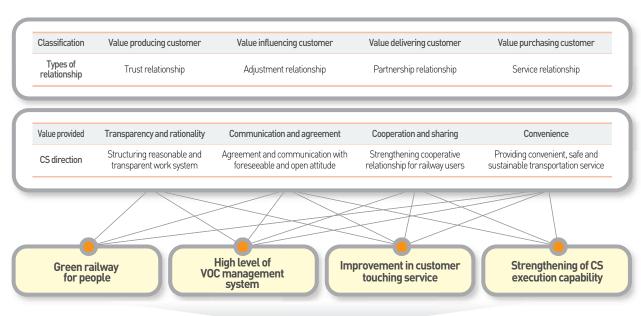
#### Re-establishment for CS vision

KR has established its CS vision for 'Green railway of customer inspiration to open up the future', and has established its 4 strategic directions in 'enhancement of accessibility with people for green railway', 'high level of VOC management system', 'improvement of customer-touching service', and 'strengthening of CS undertaking capability'. For this purpose, it has selected 18 practical tasks in strengthening of activities with people's participation, VOC collection capitalization plan and others to sustain the tailored CS activities for each interested party following the CS strategy.



#### Customer re-definition

As the expectation of customers heightened on railway and need to secure the conformity of 2020 KR future management strategy and customer satisfaction (CS) strategy, KR has established new CS strategy and re-defined the customer appropriate for the CS definition. It has classified government, specialist, press and others and the value influencing customer, officers and employees and cooperative company as the value producing customer, KORAIL as the value delivering customer, and general public that is the subject of benefit in 'promotion of public transportation' and project owners at home and abroad, as reflecting the overseas railway projects and light railway project management and others, as key customer as the value purchasing customer. KR has re-established the relation following the relative type with customers to provide optimal



CS vision and strategy operation on third management period with consistency in CS activity identification for each customer

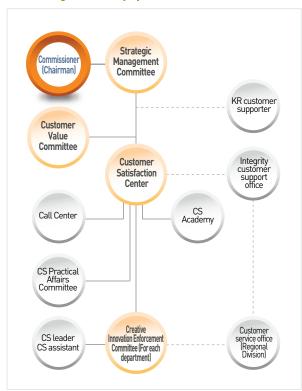
service for customers with consistent activity to identify each customer.

# Strengthening the competency in customer satisfaction management

## Operation of corporate CS organization

KR has organized and operated enterprise CS organization system for generating continuous CS outcome to immediately respond to the customer needs. The Strategic Management Committee has the participation of the CEO and executives resolves major matters on overall CS management and the customer satisfaction center establishes CS strategy and

#### CS management activity system



comprehensive scheme. The CS leaders and assistants assigned for each position are active in enterprise in accordance with the detailed plans of CS, and in particular, it has established the KR customer supporters to strengthen the participatory management of people.

#### Customer Value Committee

For generating the differentiated customer value and effective CS system operation, KR launched the Customer Value Committee, consisted with 7 specialists, in 2008. The Customer Value Committee, held in semi-annual basis, inspects the CS activities of KR in comprehensive ways, advises on establishing the CS plan for the following year, and reviews compliance of pertinent laws and regulations for CS activities.

In 2010, the Customer Value Committee undertook the supervising the responsible management strategy and carried our important role in advising the CS activity system for KR.

Members of the Customer Value Committee					
Classification	Name Employer Position				
Chairman	Lee Kyu-hyun	Hannam University Dept of Management	Professor		
	Kang Nan-sook	Consumers Union of Korea	Vice President		
	Lee Sang-min	Join Consulting Co., Ltd.	CEO		
Members	Kim Young-hwan	KR	Director		
Members	Lee Bong-cheol	KR	Division Manager		
	Park Yong-sung	Dankook University, Dept of Public Administration	Professor		
	Kim Jong-kook	KR	Director		

# Sorisaem operation

KR operates 'Sorisaem', the management system of voice of customers (VOC) that integrated 27 multiple channels as segregated for each interested party internally and externally. KR realizes the customer satisfaction management through Sorisaem and the real time survey on level of satisfaction for interested parties work as the leverage to heighten the customer satisfaction index of KR.

# ■ CS management activities



▲ Strategic Management Committee



▲ Customer Satisfaction Center



▲ Call Center (head office)

# Customer relationship

# 4 major VOC collection system

KR has defined VOC for demands of customers on specific action on product and service (simply inquiries, opinions, complains, demand for improvement, civil request and others) as the integrated body of all communication message between KR and customers and it has

operated 4 major VOC systems with easy access for customers.

# • Comprehensive management of multiple VOC collection channels • Management for primary [work] VOC and secondary [survey] VOC type Customer proposal • Expression of voice for improvement by inner and external customers CIVIL PETITION Multiple interested parties manifested from the special nature of railway construction System to gather the complaints of customer and demand for improvement Off-line VOC collection • Work through person to person encounter during the works of railway policy/ design/ work process Customer VOC reception channel

# Establishment of VOC classification system following types

KR separates the civil petition that requires prompt processing and the civil petition that has material impact to the railway construction project depending on the VOC characteristics to enhance the customer satisfaction and resolving the construction project risks. Under the characteristics of the railway construction industry, there are a number of expected conflicts of civil petitions and it influences material impact on the

overall business in work period and others that KR has prepared systematic and active response system for the current issues. In addition, with respect to the civil petitions at the site of railway construction, it is classified for each importance, patent, undertaking and type to shorten the civil petition processing period and other optimization actions, and in particular, KR has structured the multiple civil petition VOC analysis system to implement it systematically in a way of contributing to the timely completion of the railway construction patent.

#### CS Management outcome

The integrated customer management system that KR operates, 'Sorisaem', has acquired the VOC patent system as the first public institution and accomplished the highest grade of VOC certification system (AAA) to disperse it to some 20 public institutions, including KEPCO, Seoul Metro and others. In addition, KR was selected as the most outstanding institution as a result of evaluation for Ombudsman service by the Ministry of National Land and Maritime Affairs in November 2010, and it was awarded with the Presidential Award in Ombudsman field by the Anti-Corruption and Civil Rights Commission in January 2011. KR has implemented fair compensation and acknowledgement on those outcome  $\bot$  to grant the motivation of CS activities.

# Facilities, Open Site Property Work Summary of civil petition VOC analysis Solution VOC analysis

#### CS star awards in 2010 (Dec. 28)



# Procure the capable personnel

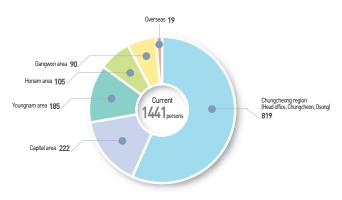
KR has 7 executives and a total of 1,440 officers and employees and it actively undertakes the socially equitable employment system to carry out the social responsibility granted in public institutions.

# Respect human rights and diversity

The number of female employees as of December 2010 working in our company is about 135 people and this ratio is increasing every year. The base pay for both female and male within the same position is about the same. Annual recruiting numbers for disabled and meritorious people are increasing; thus, we are keeping the higher number of legal recruiting number of employees. As a public institution, we have tried to meet government employment policy and have recruited new employees and interns to take all the social responsibilities as a role of sharing jobs. When recruiting new employees, we have hired 9 females out of total 36 employees which exceeding 20% of "aiming to hire female employees for gender equity". Wages for new coming employees are 235% compared to legal minimum wage. KR firstly hired young interns in vulnerable class and distributed the profit with related community by selecting resident students graduated from school located in the community; and also considered their convenience by working in the residence.

# Family-friendly management

KR operates the family participation program in celebration of its anniversary and the Day of Railway with the trial riding event and



	2008	2009	2010
Current	1,501 persons	1441 persons	1440 persons
Women	126 persons	127 persons	135 persons
The disabled	31 persons	34 persons	48 persons
People with national merit service	85 persons	89 persons	94 persons
Retired employees	42 persons	67 persons	38 persons
New employees	1 persons	6 persons	36 persons

<sup>\*</sup> Retired employees : Including the resignation of officers (Any person hired as an officer from employee in the applicable year is not included as retired employee.)

others. It pays the remote-distance workers with the transportation expenses, and when needed, it implements flexible working system to help out harmonized work and family affairs. In addition, for health management and treatment of officers and employees, KR has strengthened the group insurance and entered into an agreement with medical institution to enable the family members of employees to have the health examination just like any other employee with the same amount of payment. In addition, it has installed resting area and feeding room for female employees at the head office and regional division and it has established child care facilities in the new office site (32 persons) in 2009 and increased the full capacity (41 employees) in 2010 to lessen the burden of officers and employees for child care efforts. For female employees, the company provides maternity leave of 3 years or less to nurture child of 6 years or younger (1 year of less for male employees) and the rate of reinstatement after returning from the child care leave is 100%.

# Personnel reformation advancement program

KR has introduced and introduced innovative personnel system in 2009 with wage peak system, rank upper limit system, honorary promotion system, retirement conditional promotion system and others, and in 2010, the high ranking term system was newly established to strengthen the human resource circulation system even more. With the introduction of such a system, it has accomplished the effective of curtailing 141 regular positions, saving 3,168 million won.

# Abolition of rank system as the first one in public corporation

KR has turned seniority sequence rank system into the capability and outcome-oriented ranking system in anticipation of reasonable human resource operation, introduction of wage system for public company, and others. By simplifying the rank structure, the 9-phase ranking structure is reduced to the rank-oriented 6-stage system to newly establish the high ranking term system. The high ranking term system is to select the internal competition as a type to have 2-year term with one year of consecutive service, and in order to be an executive director, make sure to go through the high ranking position to solidify the settlement of responsible management system and human resource circulation.

<sup>\*</sup> New employees : Select the hiring of employees other than officers

# Personnel Development

KR supports the education and training system to enable all officers and employees to contribute to the corporate vision and work capability required in individual growth and development. In addition, by structuring diverse welfare systems, KR is doing its best to build up the working environment for officers and employees.

# Human resource image and human resource development strategy

KR strives for the world best railway technology through short-term to long-term capability development on the basis of 'KR-CDP', challenges to be the professional with global capability, and develops creative person with the creative capability and social constituent to strive for social contribution and service contribution.

# **Build Education Training System**

KR has established the KR human resource development to undertake the high speed railway development works as a part of accomplishing the future management strategy in 2020 to set the ideal high speed railway image as 'professional', 'creative person' and 'social constituent' to place the effort to develop the core human resource for exclusive employee through

experience development. The education operated by KR can be classified into fundamental capability, on-duty capability, other environment and others. The officers and employees of KR may freely select various education courses that can improve the work capability by taking the course.

# **Education Training Management System**

KR has established environment and training plan in accordance with the increase of demand for professionals in core technology to compete with advanced engineering firms with the willingness to strengthen the technology skills, expansion of advancing into overseas railway projects, and deepening of global competition. Therefore, KR has found out the needs or dept and individual and facilitated the e-HRD (Human Resource Development) system.

# Leadership capability education

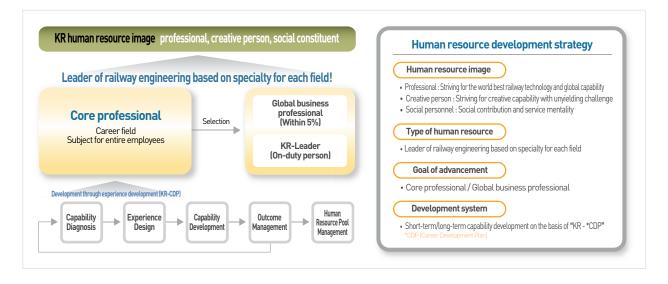
Next generation leader and managers are nurtured by linking with universities at home and abroad.

#### Global capability education

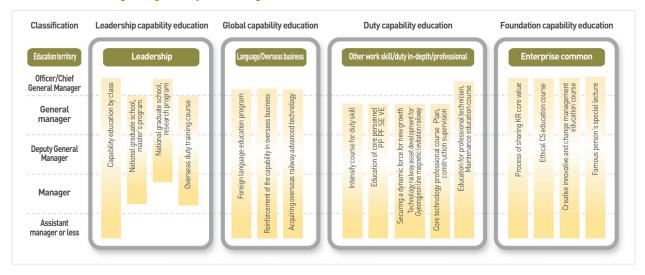
Through the cyber language course and lecturing, the officers and employees can improve the foreign language level and strengthen new technology and local adaptation by attending in global marketing professional course, international concrete technology seminar and others.

#### On-duty capability education

For the successful undertaking of the railway construction projects, KR has implemented professional development education. From 2009, the cyber PM education is independently developed to implement the project management specialist education as well as the highest technology specialist and



#### Education and training management system drawing



engineer qualification education for each field with 101 engineers educated from such programs.

# Base capability education

With the 6-Sigma education and base work education, KR implements the education for planning development and report preparation to help improving the current work adaptation capability. In addition, it develops in-company CS lecturers and operates various academies, and in particular, the Integrity Academy had the attendance of 414 persons. As a result of

Education record	of key technology professional	
Ec	Education performance	
	Total	2,340
	Sub-total	295
Project management Professional	Special lecture on advanced technology	57
(PMP)	Integrated processing	30
	Cyber PM	208
	Sub-total	169
Design/supervision	Design professional	95
Professional	Supervisory professional	50
	New employee OJT	24
	Sub-total	144
TECHNOLOGY	Engineer process	58
In-depth education	Specialized in-depth process	56
	Capability	30
	Sub-total	1,291
Problem solving Education	Discussion on modification case	100
	Workshop (33 process)	1,191
Accot management	Sub-total	441
Asset management Development	Asset information work	377
education	Asset development	64

implementing the preventive education on sexual harassment regularly, there has been no case of gender discrimination.

# Training outcome

Rate of securing the core human resource, the enterprise KPI of KR in 2010 has increased for 1.7% to record 416 employees. The core human resource means the employees holding doctoral and master's degrees working for KR. In addition, other major outcome index in innovative professional no., education hour per person and others have shown the record improved from the past.

Outcon	ne analysis	2009	2010	Outcome index
	secure the man resource	27.2% (392persons)	28.9% (416persons)	Compared to the previous time 1.7% Increase of (24persons)
Innovation	Master BB	47persons	54persons	(Increase) 7persons
Professional	Black Belt	123persons	131 persons	(increase) 8persons
	Green Belt	188persons	206persons	(increase) 18persons
Education hour person		128h	135h	(increase) 7h

# Retirement Annuity system and Retirement Support Program

KR has introduced the retirement annuity system since 2007. For the guarantee of income and living stability of employees, the education on the retirement pension is implemented for two times a year, and the total number of subscribers is 1,023 persons [70.9%]. From 29% of the employees not subscribed for the retirement pension, 25% is subscribed in the government employee pension that the actual rate for pension has reached to 95.9%. 4.1% that is yet to subscribe is consisted of new employees, employees about to retire and employees taking

leave. KR has newly established outside consignment lecture for housing manager, practical affairs of real estate transaction, real estate value analysis and others as the education demand for active response for job transfer and retirement in 2011.

# Survey of employee satisfaction

KR implements the employee satisfaction survey on overall working environment twice a year to find out the awareness level of constituents and improve the working environment for the plan. The employee satisfaction level on overall working environment in 2010 was evenly improved compared to previous level but the personnel system and compensation system are shown to require steady improvement.

Classification	2009	2010	increase range
Classification	2007	2010	increase range
Welfare benefit	69.7%	75.0%	5.3%
Personnel system	56%	62.8%	6.8%
Compensation/allowance	63.8%	68.7%	4.9%
Internal communication	68.0%	74.2%	6.2%
Capability development	69.9%	76.9%	7.0%

# Advanced outcome management system operation

KR operates the strategic enforcement strengthening system integrated with strategy, innovation, evaluation and compensation. In other words, the strategic task (enforcement) of the future management strategy is undertaken as the innovative task, and as a result, the KPI accomplishment level is reflected on internal result analysis and the result of the outcome evaluation is reflected with personnel and compensation. KR undertakes the performance contract system for all officers and employees to establish the responsible management system. In addition, by integrating various information systems, KR has structured the integrated outcome management system to monitor the KPI accomplishment status in real time in a way of contributing the future management strategy.

Classification	Officer/head of dept Performance contract	Head of dept (Chief General Manager) Performance contract	Dept member Performance contract
Contract	Chairman ↔ Officer/Head of dept	Chairman ↔ Head of dept	Head of dept ↔ Member of dept
Contract Contents	Management goal and evaluation category	Evaluation index and goal	Evaluation index and goal
Evaluation	Index Leadership, strategy KPI and others	Dept and enforcement task, KPI and others	Dept and index unique for individual
Result Facilitation	Salary and performance based payment	Salary and performance based payment Wage promotion, education and others Personnel management	Performance base payment and promotion, education and other personnel management

# Education of capability strengthening for the underachievers

As a result of outcome evaluation, employees with the low performance for two consecutive terms (Chief General Manager: lower 10%, General Manager: lower 5%) are selected to implement the capability strengthening education. The education period is 6 months by implementing duty base education, social contribution activities, research project and others to undertake the education evaluation with the S-A grade to return back to the present position, B-C grade is demoted and D grade is for withdrawal.

# Granting of motivation for outcome with personnel and compensation

The outcome evaluation result is facilitated in differentiated payment for performance. Those with General Manager or higher positions have the differentiated range of 120% between highest and lowest grades, and the Deputy General Manager or lower grades have the differentiated range of 60% to entice the leadership for executive employees.

In addition, the outstanding performer-oriented promotion is implemented to select the outstanding employees for each month to grant the opportunity of family trip for each month. For the performers with 16 cases of budget savings, a total of 58 million won for bonus was paid, and through the creative innovation and sharing conference, the outcome for facilities field, asset field, creative innovation, customer satisfaction, and social contribution have been rewarded.

Differentiated rate for outcome wage					
Grade	S	Α	В	С	D
Personnel ratio	10%	20%	40%	20%	10%
General Manager and higher	240%	210%	180%	150%	120%
Deputy General Manager or lower	210%	195%	180%	165%	150%

Unit: 1,000 won, persons

Average compensation of employees				
	2008	2009	2010	
Average compensation amount per person	59,971	59,248	60,760	
No. of full time employees	1,516	1478.4	1429.3	
No. of average service	15.7	15.7	16.3	

Budget savings performance allowance review committee



Outstanding innovation cases competition



# Labor management collaboration

KR has built up the advance labor management culture with the method of preparing the improvement plan by collecting the proposal and Ombudsman of employees through the labor management communication channel.

# Status of labor union

KR labor union was launched in May 2005 as integrated labor union and its fourth term of executive session was launched in 2010. All employees of Deputy General Manager and below may join labor union and number of labor union member is 1,218 persons with the subscription rate of 83%. KR complies with the labor union and labor relations adjustment laws to guaranty the freedom of assembly and collective bargain, and it provides the office for labor union and deducts the union fees at the time of wage payment as a way of supporting the labor union activities. In addition, KR has introduced Time-Off system to prepare the foundation to form the labor management relationship.

# Labor management communication channel

Under the drastically changing management environment, the labor management win-win council (labor management with 3 persons each) as the labor management joint council for settlement of advanced labor management culture and productivity improvement through system improvement as well as seeking for advancement plan for KR was newly launched in April 2010. It entered into the agreement in December 2008 to

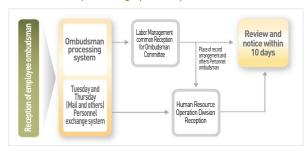
Classification	Major outcome
Labor management Practical Affairs Committee	· Entering into the advanced level of collective bargain
Labor Management win-win council	· Discussion on promotion direction for labor management win-win collaboration
Labor Management Joint Undertaking Committee	$\cdot$ Selection of the most outstanding institution for labor management partnership program operation (Award of the Minister of Labor Prize)
TF to transfer regional company building	· Enhancement of efficiency of project undertaking for Honam high speed railway with the opening of Gwangju Office
Retirement Pension Committee	· Operation of retirement reserve higher than the market interest
In-company Labor Welfare Fund Committee	Support of sports and culture activities of employees     Promotion of employee welfare (summer resting place and others)

have the separate safety and health category ranging from Article 120 to Article 137 under the valid collective bargain agreement effective up to December 2010 to make the effort in protecting the safety of officers and employees and improvement of health. In addition, in the event that there is any material matters of dissolution, division, merger and others of an organization, it is notified to the labor union up to 90 days and it completely breaks away from child labor and forced working.

# Operation of employee ombudsman processing system

KR operates diverse channels to prevent and relieve the troubles of employees. By operating the 'Ombudsman system' and 'personnel exchange system' to receive and process troubles on the Intranet, the representatives of labor management attended in the quarterly gathering and it operates the 'free legal service for customers' and individual and work related laws for officers and employees as well as the 'dialog with chairman' as the window for 1:1 dialog with the president of 'labor management council' to process the employee troubles in group.

#### Ombudsman processing operation process



# Agenda processing for labor management council

Agenda processed at the 2010 labor management council was a total of 49 cases with the completion of 44 cases with the high record of 90%. Looking at it in more details, the entire agenda had substantial difficulties in welfare and personnel part. Therefore, KR has implemented for reform action on these two parts and, as a result, the level of satisfaction has been improved in comparison with the previous record.

Classification	Total	Completed	Promoting
Total	49	44	5
Compensation	2	2	-
Personnel	15	15	-
Welfare	28	24	4
Education and training	3	3	-
Others	1	-	1

# Win-win Growth

KR has undertaken for accompanied growth activities along with major companies and SMEs by re-establishing the accompanied growth strategy for all companies and it has supported for strengthening and developing the competitiveness with cooperative companies through the fair selection and evaluation process.

# Accompanied growth promotion system

KR has re-established its accompanied growth with large companies and SME in Nov 2010 to be born again as the reliable public company. By preparing the foundation for continuous accompanied growth generation advancement of railway industry and the basis for fair social realization, KR has undertaken appropriate works to fit into the work.



# Organization system and operation

KR undertakes the accompanied growth works systematically by newly establishing the fair society promotion accomplishing the accompanied growth works under the directives of the chairman in Oct 2010. In addition, it operates the accompanied growth council for each field and region and it has newly established subcontract review committee to prevent the unfair action.

Classification	Main contents
Composition of the Council on accompanied growth of Major Companies and SMEs (Sep 2010)	Operation of Council for determining the policies on accompanied growth and listing to the cooperative companies and VOC     organization: KR officers: 6 persons, CEOs of cooperative companies: 25 persons [5 major companies and 20 SMEs]     Organize the practical committee for each region and field under the Council [a total of 10 companies]
Newly establish the Subcontract Review Committee (Jan 2011)	Establishment of sub-contract reviewing organization for preventing the low subcontracting of railway construction and management of unfair action of main supplier and contractor

# Major support project for SMEs

KR operates the point system for local companies and promotes SME to participate in bidding by reflecting the subcontract ratio on evaluation and supports domestication development with new technology. In addition, it has completed the financial terms in the first half for supporting the liquidity and jointly advanced to overseas projects with SMEs.

# Effort for Fairness in Selecting Cooperative Companies

KR facilitates the e-procurement system to fairly select the cooperative companies. When registering the bidding notice on the electronic procurement system, it is automatically linked to Nara Market Place and Allio to convey the contents to all companies. KR solidifies the condition of the contract through the revision and reduces the subject thereof; KR has placed efforts to minimize the private contract in entire fields of contract in work, service, purchase and others. Such a change is notified to all cooperative companies in electronic procurement system and the cooperative companies conversely present free opinion thereof. KR reflects the opinion of such cooperative company when presenting the opinion. In addition, when selecting the cooperative company, any company violating the special conditions for integrity has the restrictions in bidding participation with the sanction for unjust companies. In addition, upon the PQ review (pre-qualification review), it renders sanctions by way of imposing the point deduction against companies that violate the subcontract laws.

# Effort to share fair society with cooperative companies

KR implements the education on periodic basis for q6, environment, safety, customer satisfaction, ethics and others by

facilitating the in-company lecturer with the cooperative companies as subject and shares the effort for realizing the fair society.

# Diverse system improvements for win-win growth

KR has newly established the support window for SME in head office in Dec 2010 and the participation opportunity has been expanded as improving the proceeds payment system. In particular, the technology sharing with the SME has expanded to have no reflection on the accompanied growth on long-term point of view.

# Proceeds payment improvement for SMEs

KR has established full-time monitoring system for proceeds payment of a subcontract company. In other words, it has structured character service forwarding system for subcontract companies.

# Expansion of participation opportunity for SME

KR has implemented joint contract structure for main contractor in 4 projects including Wonju ~ Jecheon two-way railways, and upon the review, as the participation equity for local company gets higher, additional points are granted.

#### Introduction of e-review

KR implements the PQ review in e-review to prevent the record in advance and reduce the various documents to submit by SME.

# Expansion of technology sharing for SME cooperative companies

KR has the method to permit 44 cases of patent use, including the joint linkage of bridge construction, to expand the scope of use for its intellectual property rights. In addition, for promoting the new technology of SMEs, the procedure has been improved, including the technology support through technology agreement

with SME and it has established the accompanied growth academy for cooperative company education support in railway construction.

# Strengthening of SME support system

For the cooperative registration of accompanied growth with SMEs in the railway construction site, KR has opened and operated the SME

support center with the accompanied growth cyber center [http://www.kr.or.kr/branch/cowork/] to support online and off-line for operation. The cyber center provides the e-service of information on subcontract proceeds payment, record certificate issuance, new technology registration application as well as SME competitiveness strengthening in research development technology support and others.

Along with that the SME support center discovers and solves the troubles on management, including funding, human resource, technology and other management issues in a way of protecting the SME and undertakes policy establishment, system improvement and others. In addition, for the efficient operation, specialized counseling staff is designated to process in one-stop service with the implementation of the 'Happy-Call' system.

# Entering into the accompanied growth support agreement

KR actively participates in SME support system of the government, and for collaborating growth facilitation in the public sector; it has entered into the accompanied growth support work with accompanied growth committee in June 2011. Both institutions implement management advisory of SME and practice the technology protection of SME through the technology data system and development project for new products as well as discovering the system discovery and information exchange to undertake successful railway construction projects in realizing the fair society in the construction business field to lead the accompanied growth with SMEs.

KR plans to strengthen its capability in accompanied growth as a public company to improve the unfair subcontract and distribution of fair outcome and expand the participation opportunity for SME. Through the accompanied growth, practical plans are striven for the SMEs to win more benefits and be the model for many public companies that strive for accompanied growth.

■ SME Support Center



■ SME bull sessions



# Cooperation in local community and social contribution

KR has strengthened its social contribution program to duly carry out the role of public institution to people and local community.

# Participation in local community and strategy for advancement

When establishing the future management strategy, KR has included 'social responsibility-valued management' as one of the 10 major enterprise strategies and, as the common KPI undertaken in all departments, it has selected 'social contribution mileage for each person'. In particular, the social contribution activities of KR are undertaken as a part of important management strategy for sustainable management.

For the systematic and directional social contribution activities, KR has established 6 major implementation plans in 'together with local community', 'support for neglected class', 'environment protector' and others, and it is linked to important themes in 'locality attached-type activities', 'festival-type service activities', railway side centered activities' and others.

For the less fortunate youth, it has the 'KR Sodan hope project' to structure the representative brand of KR social contribution activities to heighten the understanding on railway for nationwide youths.

# Infra structuring for social contribution activities

#### KR volunteer service organization and operation

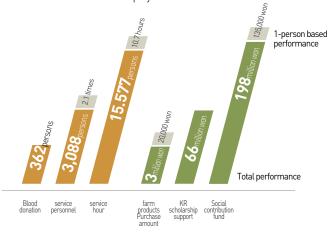
KR has launched 2005 KR volunteer service team for undertaking continuous social contribution activities, and the officers and employees have joined in the service to implement regular social contribution activities. The chairman is the director of the KR volunteer service organization to lead the effort and vice chairman is in charge of social contribution committee for social contribution activities for each year and fund operation plan.

Status of operation for each year of KR service						
Classification 2008 2009 2010						
Personnel (Employee participation rate)	665persons (43%)	634persons (42%)	664persons (46%)			

#### Building up the social contribution fund

KR facilitates the social contribution fund (Nanum Fund and wage earner investment) and matching grant system that were introduced in January 2008 to stably operate the social contribution fund.

\*\* Matching grant system: This is a system to support the social contribution fund by KR for the same amount with the fund amount of officers and employees.



# social contribution management system

KR operates the social contribution management system for dispersing the voluntary service activities of entire officers and employees. By registering the service activity schedule for each head office, and monitoring the activities result in real time, and inspecting the social contribution performance, the insufficient part has been supplemented.















#### Activities with the railway side as the core brand

- Coal sharing with love: The coal sharing with love event is undertaken for the neglected neighborhood near the railway.
- Cleaning and learning instruction in the Samgol Study Room:
   The Chungcheong head office provides learning instruction each month for children in Samgol Village and holds birthday parties for them.
- Delivery of lunch meal and free meal voluntary service for single elderly: By linking with social welfare center and NGO, the delivery of lunch meal and free meal voluntary service for single elderly has been provided.
- 'KR Sodan' hope project: 'KR Sodan' hope project was launched in Apr. 2010 for nationwide less fortunate youth and it supported scholarship for 100 youths. In addition, with the 1:1 mentoring linkage between youth and employees, Sodan continues for the support.

# Regional attached activities reflecting work specialization

- Beautiful playground making: KR has fully repaired or altered children's playgrounds around the railway area (15 areas including Yongdoo-dong, Daejeon City). It also worked on regional NGO, wall painting drawing, swing line changing, sand filling up, and facility replacement activities together.
- Housing repair of neglected class: By facilitating the KR's professional strengths (architecture, civil work, electricity and others), the old housings are repaired and replaced with electric facilities.
- 'KR Forestation with Blue Love': By facilitating the landscaping technology power of KR, it has the landscaping on railway area in Sintanjin, Daejeon (size of 26,136m²) and repaired its facilities.
- Railway Love Camp: By inviting elementary school students in remote distance, field trip to railway construction sites are provided and train experiment event are provided.











# NGO and interested party-oriented social contribution activities

- Blood donation of love sharing: Working with the Korea Red Cross, the blood donation of love sharing is undertaken in Feb. and Aug. when the blood is most insufficient.
- Undertaking of international relief activities: KR undertakes its social responsibility as a global railway company by undertaking Haiti earthquake contribution, less fortunate needy neighborhood, disaster and damage recovery fund, fruit of love for fund contribution and the like.
- 1-company 1-village farm service activities: KR participates in helping hand for farm villages during the farming season in 8 regions of Cheongyang Gapa Village, Igong Village and others along with the purchase for farm products all year long.

# Festival service activities with the participation of all officers and employees and family members

- International soccer service activities: KR Sodan, officers and employees and family members are shown for soccer games and undertake the service activities for the event.
- Love sharing gimjang event: Undertake the 1-company 1-village for all employees in Gapa Village to make the gimjang together and delivered the same to 36 neglected families.
- The disabled social adaptation program : Together with employees, the disabled employment campaign was undertaken with the visit to social adaptation tour.



# Appendix

- Awards history and association membership status
- Sustainability Management TFT
- 3rd party verification opinion
- KR's ISO 26000 implementation level standard report
- GRI G3.1/ ISO26000 Index
- Customer's opinion

# List of award and association subscription status

# **Evaluation for external institutions**

KR's utmost efforts for sustainability management have proved with varied results including eco-friendly institution award from president.

Foreign result	Institution	Significance of award
President' award for being eco-friendly institution(2010. 6)	Ministry of Environment	Contributed to green growth by eco-friendly railway construction and facility management
President's award for national quality competition(2010. 9)	Ministry of Knowledge and economy	Strengthened the quality competitiveness through quality management activities
Grand prize for Korea's management, Walk of Fame (2010.10)	Korea Efficiency Association Consulting	Created a management quality innovative result
Grand prize for nature environment(2010.10)	Ministry of Environment	Contributed in spreading projects of preserving the nature environment and restoring the ecosystem
Recognized as outstanding institution of information privacy(2010.12)	Ministry of Land	Appointed as outstanding institution for 6 consecutive years and improved nation trust
Recognized as the top institution in labor partnership program[2010.12]	Ministry of Labor	Lead an developmental and future-oriented labor culture
Awarded in green construction design part (2010.12)	Seoul newspaper	Spread green growth through eco-friendly design
Appointed as the most respectable institution in Korea(2011. 2)	Korea Efficiency Association Consulting	Actualized the social responsibility management with excellent performance
President's award in nation Sinmungo(2011. 2)	Citizen rights committee	Contributed to protect citizen rights

# **Subscribed Associations**

KR has joined diverse associations, including UN Global Company and others, for many activities to undertaken successful sustainable management.

Year of subscription	Name of association			
2002	International Railway Federation			
2004	Korea Project Management Association			
2005	Korea Civil Engineers' Society, Korea Transportation Society, Korea Railway Society, Council on Transparent Society, Korea Architecture Society, Korea Electricity Society, Daejeon Environment Movement United, Daejeon Chungnam Green United			
2006	Overseas Construction Association, Yunkyung Forum, Korea Proposal Activity Association			
2007	UN Global Compact, UNICEF Korea Commission, Korea Railway Construction Engineering Association			
2009	Korea Railway Association, Korea Facilities Safety Association			
2010	UN Global Compact, Korea Association			

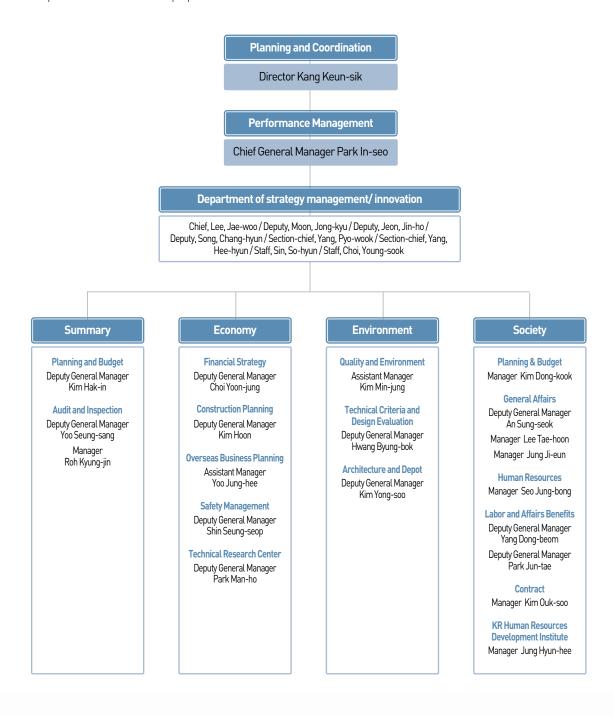
# 4 fields and 10 principles under UN Global Compact

KR has joined in  $^{\Gamma}$ UN Global Compact, an international treaty for UN operation for the corporate social responsibility to comply with 10 principles and 4 fields in human rights/labor/environment/ and anti-corruption.

Human Dights	Principle 1: A company has to support and respect the internationally declared human rights.
Human Rights	Principle 2 : A company shall make active effort not to interfere against human rights.
	Principle 3 : A company has to support practical recognition of freedom of assembly and collective bargain rights,
Labour Standards	Principle 4 : Exclude all types of coercive laboring,
Labour Startual us	Principle 5 : Abolish child labor efficiently and
	Principle 6: Abolish the discrimination on the employment and work undertaken.
	Principle 7: A company has to support preventive approach of Korea with respect to the environment issues,
Environment	Principle 8 : Undertake actions to promote environmental responsibilities, and
	Principle 9: Further the development and expansion of environment-friendly technology.
Anti-Corruption	Anti-Corruption Principle 10: A company has to oppose all types of corruptions including illegal acquisition, bribery and others.

# Sustainable management TFT

Sustainable management of KR is undertaken by the Office of Planning and Coordination, Performance Management, Strategic Management/Innovation, and for the flawless work undertaking, it has designated and operated with the person in charge of exclusive affairs and 16 relevant departments. The sustainability management report is also undertaken by the Performance Management with 16 relevant departments with the TFT for preparation.



# Third party verification opinion

# To KR officers and interested parties

#### **■** Introduction

Korea Standard Association (hereinafter referred to as 'verifier') has received a request for independent verification from KR for its 'KR 2011 sustainability report' (hereinafter referred to as 'report'). This verifier hereby presents the independent verification opinion by reviewing the evidence and reasonableness of data, result and relevant system included in the report that KR prepared.

Responsibility on collection, analysis, arrangement and all assertions on the report shall be on KR.

#### ■ Independence

This verifier has not entered into any interested relationship purported for the profit base throughout the business undertaking of KR other than the works of providing the third party verification on the report. In addition, it does not have any deviated opinion on any insiders of KR.

#### ■ Verification standard and level

The verifier has applied the AA 1000AS 2008 verification standard (AA 1000 AS) and GRI

G3.1 instruction to undertake verification. It has the report evaluation standard with the comprehensiveness, importance and responsiveness as the principle of AA 1000AS 2008 verification standard.

The reliability on the information within the sustainability report of KR has been verified as the guarantee of general level.

# **■** Types and scope of verification

Following the AA 1000 verification standard (AA 1000 AS), the verifier has undertaken the verification applicable for Type 2. Type 2 verification means the evaluation was undertaken for

accuracy and q6 of sustainability outcome information contained in the report and assertion of KR in accordance with the principle of report responsibility of KR executives and interested party with the AA 1000 verification standard (AS 1000 AS) 2008.

The verifier visited the head office from Jan. 1, 2010 to Dec. 31, 2010 for undertaking the verification with the focus on activities and system related to sustainable management under KR 2011 sustainability report.

#### **■** Verification method

The verifier uses the following method to gather the information, data and evidence required in the verification range and undertaken the verification.

- Survey on press and Internet data mentioned on KR and railway industry with the sustainability aspect during the report period
- Visiting the KR head office
- Review of management system and process used in preparing the report by improving the sustainable management result
- Review of internal document and base data
- Interview with the person in charge and issue sustainable management responsibilities

#### ■ Verification result and opinion

The verifier has reviewed the contents on the initial draft and presented opinion thereof, and if necessary, revision of report was made. The verifier did not discover any error or inappropriate point on the contents listed on this report through the verification activities.

The verifier hereby presents its opinion on the sustainable report of KR as follows.

#### **▶** Comprehensiveness

Is the participation of institution guaranteed in the process of participating and accomplishing the strategic response plan on the sustainability?

KR recognizes its responsibility to report to the interested party influencing or be influenced from it. Through diverse organizations, such as, conflict management review committee, customer value committee, accompanied growth council and others, to promote the communication with the interested party and attract the participation.

Thereafter, by finding out systematically for priority sequence and interested issues of interested parties and establishing the strategic response plan, it is recommended to integrate with enterprise management activities.

#### ▶ Importance

Does it include the important issues influencing on KR and its interested parties?

KR reports major sustainable issues in environment-friendly railway construction, safety first issues, global management and others. In particular, it has standard effort to realize its environmental responsibilities through its eco station and eco railway construction, ecology restoration project, CDM project and others.

In the future, it is expected to enhance the recognition of interested party for the safety management activities through the systematic report in the safety field.

#### **▶** Responsiveness



Does KR appropriately respond to the issues of interested party?

KR actively reflects the important sustainable management issues on the organizational policies and activities. In the future, it presents the sustainable management strategy and promotion plan of KR and we propose to establish the index for measuring the sustainable management result to report.

# Opinion and improvement recommendation for each field

- By connecting the risk management system of KR to the sustainable management to manage by including the sustainable issues.
- For the environment management advancement of KR, the environment management index in KR-EMI (Environmental Management Index) that is managed in 10 categories is recommended to expand and develop on continuous basis.
- It is recommenced to manage the performance record on the stipulation with the external institution and undertaken for strategic social contribution activities program by facilitating the characteristics in railway construction and facilities management.



July 25, 2011 President of the Korea Standard Association **Kim Chang-ryong** 



# Diagnosis report of implementation level of ISO 26000 for KR

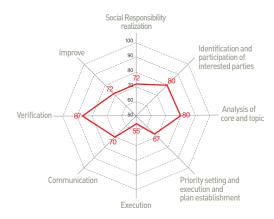
The Korea Standard Association presented checklist for social responsibility performance level based on ISO 26000 (international standard on social responsibility) as a part of the services for the Ministry of Knowledge Economy. This report is on the result of examining social responsibility management process and outcome for each of the 7 core themes of KR in accordance with the check list thereof.

Through the railway construction and facilities management, KR implements social responsibility management for strengthening the global competitiveness of KR and promoting transportation convenience of people.

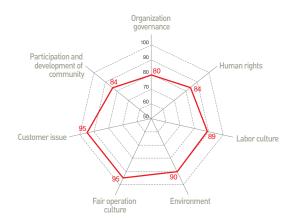
KR has established 3 key values of 'sustainable management' 'professionalism', and 'mutual trust' for realizing its vision and strategy in a way of sharing the recognition on the sustainable advancement of constituents. In addition, it has secured the foundation for sustainable advancement through environment-friendly railway construction, accompanied growth, and risk management.

KR needs to find out the social responsibility and sustainable management with its important territories that the organization is encountered with and integrate the strategic element of social responsibility and sustainable management in the decision making process. Furthermore, it is proposed to promote the trust with its interested party by disclosing the safety related information in recent days.

# ▼ Status of diagnosing the management system for social responsibility



# ▼ Status of outcome on social responsibility



July 25, 2011 President of the Korea Standard Association **Kim Chang-ryong** 

Chang Ryong Kim



KR & Sustainability Report 201

#### Process - 360 points

Examination is made on the basis of social responsibility system structuring process (recognition, participation, analysis, strategy, implementation, communication, verification and improvement) of organization as presented by ISO 26000. The social responsibility system structuring is enabled through integrating and continuous improvement within the existing management system of the organization.

#### Outcome - 640 points

Examination is made for the organization outcome level with the 7 core themes of ISO 26000 (organizational governance/ human rights/ labor customs/ environment/ fair operation customs/ consumer issue/ local community participation and advancement). It helps easy understanding for organization for concept and terminologies used in activities and expectations for each issue in 7 core themes and 37 issues and makes evaluation for the organization to practice.

# A total of 1000 **Points**

















#### Process diagnosis (8-phase)

**Recognition of social responsibility**Review the current status of organization on the basis of willingness of executives

**Identification and participation of interested parties**Review the interest and requirements of interested parties and establish participation strategy

Core themes and issue analysis
Preparation of issue list through the review and organizational internal capability analysis

#### Establishment of priority sequence and strategy

Establish and enforce the priority sequence, goal and plan of issues to improve and manage in consideration of organizational capability

Implement
Strategy, vision, goal and enforcement plan and periodic monitoring of social responsibility result

#### Communication

With interested party by preparing the communication report

#### Verification

Activities and report for enhancing the reliability for verification outcome

#### Improvement

Periodically review the improvement outcome to link it with continuous

# Outcome examination (7 major themes)

**Organizational governance**Activities respect of the principle for social responsibility and integrate it to the existing system, policy and customs

#### Human rights

Activities to respect human rights, protect and comply and realize within the impact zone of the organization

**Labor practice**Policy and customs influencing on the labor environment of workers subject of organization and cooperative companies

#### **Environment**

Activities to comprehensively approach in consideration of decision of organization and implication of activities to reduce the influence of organization influencing on environment

#### Fair operation customs

Activities with the interest on ethical behaviors of trading between the organization and other organizations, such as partner, supplier and others

#### Consumer issues

Consumer right protection activities with consumer education, fair and transparent marketing information as well as contract, sustainable consumption and others

# **Local community participation and advancement**Activities to make effort to maximize the resource and

opportunity as recognizing and respecting the rights of the local community  $% \left( 1\right) =\left( 1\right) \left( 1\right$ 

Contribution to the sustainable development

Combining social responsibility to all organization

# GRI G3.1 / ISO 26000 Index

● Report O Non-report — Not applicable

GRI Index Number		Detailed contents	ISO 26000	ISO 26000 Core social responsibility theme and agenda	Fulfillment	Applicable page
Participation of interested parties			6.8.2	participation in local community	•	26~27
Boundary protocol			6.6.5	Promotion of social responsibility within the value chain	•	Summary of report
Strategy and analysis	1,1	Highest decision maker (Ex: CEO, chairman or equal officer) declares the relativity of sustainability and report organization and strategy		Organization governance	•	4~5
,	1,2	Description on main influence, risk factor and opportunity	6.2	organization governance	•	14~15
Organization	2,1	Name of organization			•	12
Profile	2,2	Representative brand, product and service			•	12
	2,3	Organizational structures for report organization including main business dept, management company, subsidiary company, and joint venture company	6.2	Organization governance	•	12
	2.4	Head office/location of head office			•	12
	2,5	Name of country with the concrete relativity with the sustainable problem handled in the report or number of countries and main business premises that the report organization currently operate on			•	13,48
	2,6	Ownership structure characteristics and legal type			•	12
	2,7	Subject market (classification for each region, business field, customer/beneficiary type)			•	12
	2,8	Scale of report organization			•	12, 52~53
	2,9	Material change under the scale during the report period, structure or ownership structure			<del></del>	No material change during the report peri
	2,10	Contents of awards during the report period			•	72
Report media	3,1	Period subject for report (Ex: Accounting year/calendar year)			•	Summary of report
variable	3,2	Most recent report publication date (if existing)			•	Summary of report
	3.3	Report period (Every year, every other year)			•	Summary of report
	3.4	Place of inquiry on report and relevant contents			•	Summary of report
	3,5	Contents of report and definition process			•	Summary of report
	3,6	Report boundary (Ex: Government, business dept, subsidiary company, lease facilities, joint venture company, and supplier). Refer to the GRI boundary rules for additional instruction.			•	Summary of report
	3.7	Detailed restriction on report scope or report boundary			•	Summary of report
	3.8	Standard of report on object that may influence greatly for possible comparison between organizations or for each period in joint venture company subsidiary company, lease facilities, outsourcing work and others			•	
	3.9	Data measurement technique and calculation standard including assumption and technique to support the forecasting applied in outcome index and other information collection process			•	Summary of report
	3,10	Effect and re-technology cause from re-technology of information presented in the previous report			•	Summary of report
	3,11	Major change of scope, boundary or measurement method of report compared to the previous report period			•	Summary of report
	3,12	Chart showing the location of standard notices within the report			•	78~80
	3,13	Policy and present activities to seek for external verification, scope and relationship of standard of external verification, report organization and verification institution	7.5.3	Verification	•	74~75
Control	4.1	Control structure of organization — Including the committees under the board of directors that is responsible for strategy establishment, enterprise, supervision and others	6.2		•	19
structure,	4.2	Concurrent position of the chairman of the board of directors	6.2		•	18
responsibility and	4.3	In the event that the board of directors is unlateral organization, specify the number of constituents and gender, not independent or officer at the board of directors	6.2		•	18
participation	4.4	Mechanism to present for advice or direction by shareholders and employees to the board of directors	6.2		•	19, 65
	4.5	relationship between the compensation (including organization for each dept) on constituents of the board of directors, high ranking manager, officer and others and organizational outcome (including social/environmental outcome)	6.2		•	19
	4.6	Process to prevent the collision of interested relationship within the board of directors	6.2		•	19
	4.7	Process to determine the board of directors organization to assist economic/environmental/social strategy, qualification of constituents of the board of directors, and professional criteria thereof (including the gender and diversity indices)	6.2		•	19
	4,8	In relations to the economic/environmental/social outcome and activities, the internal mission/core value statement, code of conduct and principle	6.2		•	4~5, 14~15
	4.9	Procedure for the board of directors to oversee economic/environmental/social outcome and management — Including the relevant risky factor and opportunity, and standard, code of action, principle to comply as agreed internationally	6.2	Organization governance	•	14~15, 19
	4.10	Process to evaluate the outcome of the board of directors, particularly for economic/environmental/social outcome	6.2		•	19
	4,11	Adoptation of principle for advance prevention, approach method and description on adaptation method	6.2		•	24~25
	4.12	External initiative subscribed or supported in economic/environmental/social charter, principle and others	6.2		•	72
	4.13	Status of acquisition for each association (ex: industrial association) and national/international policy organization membership	6.2		•	72
	4.14	List of group of interested parties participated	6.2		•	26~27
	4.15	Criteria for identification and selection of interested parties to participate	6.2		•	26~27
	4.16	Status of participation method of interested party in participation frequency and others for each participation type and interested party group	6.2		•	26~27
	4.17	Core themes, interested issues and responsive method raised through the interested party participation	6.2		•	26~27, 29

GRI Index	Index Number	Detailed contents	ISO 26000	ISO 26000 Core social responsibility theme and agenda	Fulfillment	Applicable page
Economic	EC1	Generation and distribution of direct economic value - EX: Profit, sales costs, employee compensation, donation, investment on local community, profit surplus, capital cost, tax and others	6.8/6.8.3 /6.8.7/6.8.9	Participation of local community and advancement/local community participation/ generation of wealth and income/ social investment	•	52~53
Managemen	EC2	Risk and opportunity on financial impact and business activities of climate change	6.5.5	Climate change moderation and application	•	34~35, 46
t method Notification	EC3	Scope of pension support	6.4.4/6.8		•	63
	EC4	Government subsidy benefit performance			•	52
	EC5	Wage ratio for each gender of new employees compared to the minimal wage at the locality for major business premises	6.4.4/6.8	Labor condition and social protection/local community participation and advancement	•	64
	EC6	Local purchase policy, customs and ratio of key business premises	6.6.6/6.8 /6.8.5/6.8.7	Promotion of social responsibility within the value chain/local community participation and advancement/ job generation and functional development/generation of wealth and income	•	66~67
	EC7	Ratio of high ranking of locality and priority hiring procedure of locality	6.8/6.8.5/6.8.7	Local community job generation and functional development/ generation of wealth and income	•	48
	EC8	Activities and effect of infra investment and service support with the public interest as priority including the support classification)	6.3.9/6.8/6.8.3 /6.8.4/6.8.5/6.8.6 /6.8.7/6.8.9	Economic, social and cultural rights /local community participation and advancement/local community participation/ education and culture/ technology development and access/ wealth and income generation/social investment	•	16~17, 68~69
	EC9	Understanding and description on indirect economic dispersion effect (Including the scope of influence)	6.3.9/6.6.6/6.6.7 /6.7.8/6.8/6.8.5 /6.8.6/6.8.7/6.8.9	Economic, social and cultural rights/Promotion of social responsibility within the value chain/respect for property rights/ required service approach/local community participation and advancement/job generation and function deletopment/lechnology development and access/ wealth and income generation/social investment	•	16~17
Environment	EN1	Weight or volume based raw material use			•	36
part Managemen	EN2	Recycled material use ratio			•	36~37
t method	EN3	Direct energy consumption volume for each primary energy source			•	36
Notification	EN4	Indirect energy consumption volume for each primary energy source			•	36
	EN5	Energy volumes saved with the efficiency improvement			•	32
	EN6	Energy reduction volume through the energy efficiency or recyclable energy based product/service supply effort and applicable project	6.5/6.5.4	Environment/sustainable resource use	•	32, 34~35
	EN7	Indirect energy savings project and outcome			•	37
	EN8	Total water volume for each supply source			•	36
	EN9	Water supply source with significant influence for water			•	36
	EN10	Total volumes and ratio of re-used and recycled water				36
	EN11	Location and size of land owned, leased and managed in the protective zone, microbe diversity value or surrounding area			•	33
	EN12	Influence on microbe diversity from activities, product and service in the protective zone, microbe diversity value or surrounding area	6.5/6.5.6		•	33
	EN13	Protected and restored habitat		Environment/ environment protection, diversity and natural habitat restoration	•	33
	EN14	Microbe diversity management strategies, current action and future plan		nasiatresionalon	•	33
	EN15	Red list designated by IUO that reside within the influenced area and number of species under endangered specifies, main products for endangered risk, and material environmental influence of product and service			•	33
	EN16	Total discharge volume for indirect and direct greenhouse gas			•	36,37
	EN17	Other indirect greenhouse gas discharge volume	6.5/6.5.5	Moderation and application of environment/climate change	•	36, 37
	EN18	Greenhouse reduction project and outcome				34~35
	EN19	Ozone layer destruction substance discharge volume			•	36~37
	EN20	NOx, SOx and other major atmospheric pollutant discharge volume				36
	EN21	Total waste water discharge volume and water quality for each final discharge area				37
		Waste material discharge volume for each type and processing method	6.5/6.5.3	Environment/pollution prevention		37
	EN22		,			37
	EN23 EN24	Material harmful substance discharge cases and discharge volume  Ratio of waste material carried to overseas and transportation/carry in/carry out/ processing volume defined under I, II, III, and VIII of the Addendum to the Basel			•	36
	EN25	Convention  Name, size protection condition and biological diversity value of territory and habitat influenced from the waste water discharge of organization	6.5/6.5.4/6.5.6	Environment/ sustainable resource use /relationship protection, diversity and natural habitat restoration	•	33
	EN26	Activities and outcome to reduce the environmental influence of product and service	6.5/6.5.4/6.6.6/6.7.5	Environment / sustainable resource use / promotion of social responsibility within the value chain/ sustainable	•	33
				consumption		
	EN27	Ratio of recycling of product sold and related packing materials	6.5/6.5.4/6.7.5	Environment / sustainable resource use / sustainable consumption		36
	EN28 EN29	No. of sanctions in penalty and others imposed of violating environment law and regulation  Material environmental impact of officers and employees movement and transportation of product and raw materials	6.5 6.5/6.5.4/6.6.6	Environment  Sustainable consumption/promotion of social responsibility within the value chain	•	33 35
						45
	EN30	Expenses of environment protection and total investment amount	6.5	Environment	•	15

● Report O Non-report — Not applicable

GRI Index	Index Number	Detailed contents	ISO 26000	ISO 26000 Core social responsibility theme and agenda	Fulfillment	Applicable page
Labor part .	LA1	Type of hiring gender, labor contract and personnel status by region	6.4/6.4.3	labor custom/ relations with labor	•	61
nanagement LA2 nethod		Newly hired employees; number and ratio of employee's displacement (by age, sex and region)			•	61
notification	LA3	Benefit given to only full-time employees, not for temporary or part-time employee (by important area of site)	6.4/6.4.3/6.4.4	Custom and labor relation/employment relationships/labor condition and social protection	•	63
	LA4	Employee ratio which group negotiation is applicable	6.4/6.4.3/6.4.4/6.4.5 /6.3.10	Custom and labor relation/employment relationships/labor condition and social protection/social communication/basic rule and right at the work	•	65
	LA5	Minimum notification duration for important project changes (whether specified in the group agreement or not are included)	6.4/6.4.3/6.4.4/6.4.5	Custom and labor relation/employment relationships/labor condition and social protection	•	65
	LA6	Employee ratio which labor, public, heath and safety committee is representative	6.4/6.4.6	Custom and labor relation/safety and heath at the work	•	65
	LA7	Number of damage, occupational disease, loss day, absent and disaster related to work	0.4, 0.4.0	ousion and about reading surely and recurrence work	•	45
	LA8	Education, training, consultation, protection and risk management program to support employees having serious disease and their family; and community citizen	6.4/6.4.6/6.8/6.8.3/6 .8.4/6.8.8	Custom and labor relation/Safety and health at the work/ participation in community society and its development/ education and culture/ health	•	41
	LA9	Health and safety matters for any to be official agreement with unions	6.4/6.4.6	Custom and labor relation/Safety and health at the work	•	42
	LA10	Annual average education time per 1 person by employment type and sex $$	6.4/6.4.7	Custom and labor relation/human development training at the work	•	63
	LA11	Job training and lifetime learning program for continuous employment and supporting retired employees	6.4/6.4.7/6.8.5	Custom and labor relation / human development training at the work/ employment creation and function development	•	63
	LA12	Regular performance evaluation and ratio of employees who are targeted for career development evaluation by gender	6.4/6.4.7	Custom and labor relation/human development training at the work	•	64
	LA13	Status of board and employee category (status) (based on varied indicator such as sex, age, and minority)	6.3.7/6.3.10/6.4/6.4. 3	Differentiation and weak group/ Basic rule and right at the work/ Custom and labor relation/ employment relationship/ labor condition and social communication	•	18, 61
	LA14	Employee category according to the importance of project and proportion of endowment and compensation between female and male	6.3.7/6.3.10/6.4/6.4. 3/6.4.4	Prohibition of differentiation for poor group/secure economic, social and cultural rights of company and community individuals	•	61
	LA15	Maintaining and reinstatement of female employees after the maternity leave		Discrimination and poor group/basic rule and rights at the work/oustorn and labor relations/employment relationships	•	61
Human right	HR1	Number and ratio of major investment agreement and contract which passed through the human rights inspection and any clause related to human rights are included	6.3/6.33/6.3.5/6.6.6	Right/inspection/evade collusion/promote social responsibility within value chain	•	49
	HR2	Raito of rights inspection from major supply company, contract company and other partners	63/633/635/643/6.66	Right/inspection/ evade collusion/ promote social responsibility within value chain	•	63
	HR3	Hours for educating employees for rights policy and procedure related to the work (Ratio of employees completed the training course is included)	6.3/6.3.5	Human right/ evade collusion	•	63
	HR4	Total number of discrimination and related action to this	6.3/6.3.6/6.3.7/6.3.10/6.4.3	Rights/ Difficulty management/ discrimination and poor group/ basic rule and right at the work/ employment relationships	•	63
	HR5	Take action against business field has higher violation of freedom of association and corrective bargaining; and protect major supplier and relevant rights	6.3/6.3.3/6.3.4/6.3.5/6.3.8/6.3 .10/6.4.3/6.4.5	Human Right/ inspection/ risky situation of right/ evade collusion/ citizenship and political right/ basic rule and right at the work/ employment relationship / social communication	•	65
	HR6	Action for abolition of business having higher change of children labor occurrence, critical supplier and children unions in effective way	6.3/6.3.3/6.3.4/6.3.5	Human right/inspection/risky situation of right/evade collusion/differentiation and poor group/basic rule and right at the work/employment relationship/social communication	•	65
	HR7	Take action again any type forced, the business with higher risk of forced labor or any major supplier	/6.3.7/6.3.10	Human rights/ evade collusion/ employment relationship/ promote social responsibility within value chain	•	65
	HR8	Ratio of security administrator in completion of human rights policy and training related to work	6.3/6.3.5/6.4.3/6.6.6	Rights/Difficulty management/differentiation and poor group/basic rule and right at the work/employment relationships	0	
	HR9	Number of case violates native's right	6.3/6.3.6/6.3.7/6.3.8/6.6.7	Rights/Difficulty management/differentiation and poor group/respect otizenship and political right and property	•	27,60
	HR10	Rights psychology and inspection of number and ratio of sites receiving human rights effect evaluation		Risky situation for human rights	0	
	HR11	60 number of civil complaints submitted, raised and resolved through official civil complaints management method		Solve for difficulty	•	60
Social part	SO1	Ratio of business implements the participation in community social, influence evaluation and development program	6.3.9/6.8/6.8.5 /6.8.7/6.6.7	Economic, social and cultural rights/ participation and development of community society/ creation of employment and function development/ creation of wealth and profit/ respect for property right	•	68~69
	SO2	Number and ratio of business which the risk of decomposition is analyzed			•	22~23
	SO3	Ratio of employees received the education for anticorruption policy and procedure	6.6/6.6.3	Process management custom/anticorruption	•	23
	SO4	Action for corrupted case			•	23
	SO5	Position for public policy, participate in the establishment of public policy and lobby activity	6.6/6.6.4/6.8.3	Process management custom/ responsible and political participation/ participate in the community society	•	16
	S06	Total donated fund/kind by country for party and Politian related corporation	0.0/0.0.4/0.0.3	participate in the community society	-	
	S07	Number of case that the legal action was taken for unfair competition and exclusive action and its result	6.6/6.6.5/6.6.7	Process management custom/fair competition/respect for property	-	
	S08	Number of case imposed sanction against penalty and metal imposed due to law and regulation violation	6.6/6.6.7/6.8.7	Process management custom/fair competition/respect for property/creation of wealth and profit	-	
	SO9	Business effects community society with actual negative influences or serious subliminal influence		Community participation and development	•	27
	S10	Protect against and action to relieve actual negative effects or serious hidden effects to community society regarding the social work		Community participation and development	•	68~69
Product part	PR1	Consultation step of life cycle evaluates healthiness and safety of product and service for improvement purpose, rate	6.3.9/6.6.6/6.7	6.3.9/6.6.6/6.7    6.3.9/6.6.6/6.7    6.7.4/6.7.5    Economic, social and cultural authority/ promotion of social responsibility within the value chain/ consumer issue/ protect consumer's health and safety/ sustainable consumption		40
-	PR2	Number of case violates law and voluntary regulation related to customer's health and safety in the product and service life cycle (by result type)				
	PR3	Type of product required in procedure and service and ratio of major product and service correspond to these information requirement	6.7/6.7.3/6.7.4 /6.7.5	Consumer issue/process marketing/ Realistic and unbiased information and process contract custom/ consumer's health and safety protection/ sustainable consumption and service/ solve out the complaint and conflict/	•	17
	PR4	Number of violation of law, standard and voluntary regulation related to product(senice information and labeling (by result type)	/6.7.6/6.7.9	sustainable consumption and service/ solve out the complaint and conflict/ improve education and recognition	_	
	PR5	Customer satisfaction related activity such as survey result of customer satisfaction evaluation	6.7/6.7.4/6.7.5/6.7.6/6.7. 8/6.7.9	Consumer issue/consumer's health and safety protection/sustainable consumption/consumer service and support/solve out the complaint and conflict/accessibility towards the required service/improve the education and recognition	•	14
	PR6	Osseriance program relate to law, stantard and voluntary regulation related to marketing communication such as at berferement, sales promotion, and sporsor	6.7/6.7.3/6.7.6		_	
	PR7	Number of initiation of law, standard and voluntary regulation related to marketing communication such as advertisement, sales promotion, and sponsor	/6.7.9	Consumer issue/ process marketing/ Realistic and unbiased information and process contract custom/ consumer service and support/ solve out the complaint and conflict/ improve education and recognition	_	
	PR8	Number of raised complaints related to violation of customer's private information and loss of customer's data	6.7/6.7.7	Consumer issue/ consumer's data protection and privacy	_	
	PR9	Amount of fine imposed by violation of law and regulation related to product and service supply	6.7/6.7.6	Consumer issue/ Consumer service and support; solve out the conflict and complaint		

# Customer's opinion

KR is waiting for your opinion regarding the KR sustainable management report, 2011. If you have any concerns and suggestion to this report, please contact us with following number. Your opinion and suggestion sent to us will be valuable foundation for KR's sustainable management.

Q 1. Which catego	ry are you belo	nging to among the	e next persons o	oncerned?	
Stockholder	Employee	Community citize	en Civic o	rganization	Financial industrial circle
Academia	Government	Reporter	Othe (	)	
Q2. What route th	nrough did you k	know about KR's su	ıstainable mana	gement?	
☐ KR homepage	Seminar · Lect	ture · Exhibition	Newspaper · Ma	agazine 🔲 0	ther website
KR employee	Other (	)			
Q3. What part in t	this report was	you interested in m	nost?		
KR sustainable ma	nagement	Special Report	Special Report	:	
Special Report		Economy	Society		
$\mathbb{Q}$ 4. What part in t	this report shou	ıld be supplemente	ed?		
KR sustainable ma	inagement [	Special Report	Special Report	:	
Special Report		Economy	Society		
$\mathbb{Q}$ 5. Does this rep	ort help you to (	understand the KR	's sustainable m	nanagement?	
Very helpful	Little helpful	Okay No	ot helpful \[ \]	Not helpful at all	
Q 6. Please be fre	e to write your	opinion about this r	report and KR's	sustainable m	anagement activity.

Thank you for your valuable opinion











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