Hydra

P

ECO RAIL 2015

Puppis

Dream

Value

# Pyxis

**Railing three futures with another priority takes us to the brighter tomorrow.
Dream, Value, Harmony, and Eco…
KORAIL is the constellation of
Pyxis for navigating to the futures.**

Harmony

Eco

Antlia

# The Compass of Tomorrow's Dream, Value, Harmony, and Environment

**KORAIL SUSTAINABILITY REPORT 2008**

KTX

KORAIL

# FRAMEWORK

**Features of the Report**

The first sustainability report of Korea Railroad Corporation (KORAIL) aims to cover its economic, social, and environmental performances. Third party has verified the report contents for its reliability, and this verification can be found in the report. Korean and English version of the report can be downloaded from the KORAIL's website. KORAIL will publish a sustainability report every year.

**Scope and Period of the Report**

The report covers period between January 2005 and December 2007 in accordance with time series analysis. Significant performances in 2008 are covered as well. KORAIL separately specified the standard time of reporting when it is different from reporting period.

Careful explanations were provided for the cases with unavailable data or businesses after 2006. The report's monetary denomination is based on Korean currency, Won (KRW). All quantitative data is based on kilometer (km), ton (t), and the twenty-foot equivalent unit (TEU), otherwise it is written with numerical value. The performances of the report are based on headquarters and branches in Korea. Overseas branches are excluded because they are just workplaces.

**Guideline of the Report**

This report has been created based on the G3 standards of Global Reporting Initiative (GRI) and the BEST Sustainability Reporting Guideline, developed in Korea. The GRI's Logistics & Transportation Section guideline is also included in the report as a supplement.

**Additional Information**

For more information or any questions about this report, contact management innovation office at:

| | |
|---|---|
| website | www.KORAIL.com |
| E-mail | sustainability@KORAIL.com |
| Tel | +82. 42. 609. 3852 |
| Fax | +82. 42. 609. 4828 |

# CONTENTS

It is faster than bus without any traffic jam, but…

I wish there were faster transfortations such as an express train for rush hours.

Driving in traffic is time-consuming and exhausting…

I wish there were more convenient KTX available for tight business trips.

Isn't it possible to have a fun on the way of trip?

Is there a way to enjoy travel from beginning to end?

Since the introduction of train with
strange mechanical noise in 1899,
sound of the train ran with encounter, separation, and hope.

The endless improvement from steam train to KTX,
capable of running 300 km/h,
during the last 100 years is

## Can you hear it?

## the result from listening to
the changes of times and stakeholder's voice.

Can you see it?

**Enjoying a glass of wine in a train bar,
concerts in train stations,
or watching a movie while traveling...**

**And more convenient and efficient logistics system.
Your happiness while traveling with
KORAIL is**

## the result of our tireless concerns
**for comfortable, fast and efficient travel.**

Sustainability is
the goal and
the process to achieving that goal.

We make it happen.

Thinking not just of ourselves
but for others and knowing consequences of
our action,

KORAIL dreams of
transforming the society and the world with our expansive railroad.

We start now.

This report
marks the starting of KORAIL's voice,
your voice,

and vision of today's portrait
and tomorrow's promise.

Now, we are opening a door
to a new path that intersects your dream and KORAIL's dream.

# 1.1

## CEO MESSAGE

Past 109 years has been a remarkable journey for the Korean railroad. As a representative of the entire KORAIL family, I extend a heartfelt appreciation to our customers and stakeholders whose countless time and meeting took place over our expansive network of rails. As a national railroad industry, KORAIL has faithfully served the nation and the people as an artery for our national economy. KORAIL brought energy of change to every corner of the nation. Modernization and industrialization took shape on our rails. While roadway took a step back with increasing traffic and growing pains, railroad never missed a beat bring in change to its landscape even in the difficult years.

Since the opening of high-tech high-speed rail four years ago, KORAIL is running towards creating the 'Great KORAIL'. With Korea Train eXpress (KTX), KORAIL has revolutionized the meaning of speed and our life style. Furthermore, KORAIL is ready to operate an express train made entirely with Korean technology. KTX Cinema train, Wine train, Cafe train, and other specialty trains revolutionized the meaning of basic transportation with superior customer service of modern transportation to our customers. KORAIL also implemented the world's first SMS ticket system, wireless internet service, and other services to enhance the traveling experience of our customers. With these changes and development, KORAIL will contribute even greater to the nation and the people.

With pressing energy and environment issues of the modern society, corporations must now thread the fine line of balancing national competitiveness with sustainability. Even Korean government is planning on green growth with low carbon. Reading the flow of events, I believe that improving the convenience of railroad is directly tied to the national competitiveness, because public transportation offers tremendous cost effective solution in energy efficiency, as well as environmental costs, traffic congestion and social costs. In our part, wishes of KORAIL family for greener Korea were gathered into a single unifying vision of 'ECO-RAIL 2015'. A faster and convenient railroad and a railroad supporting low carbon growth of Korea is the same road that Great KORAIL is traveling.

To achieve 'Great KORAIL', KORAIL has identified, and set strategies for 'customer satisfaction', 'labor-management cooperation', 'self-supporting management' and 'future-oriented goals'. Great companies are not made with short flashy performance. Great companies are made with steady growth, careful planning, and seeking that invisible value. KORAIL wants to show you a railroad that is comfortable to stay a little longer, convenient transportation for the busy commuters, and a key industry supporting national development. KORAIL will open a future that offers fresh air, new jobs, greater social works, and energy efficiency for the entire people to enjoy. KORAIL promises its best to become the hope of Korea. KORAIL asks for your continued interest and affection for the Great KORAIL.

Thank you.

"
With Great KORAIL,
we will grow
green with you.
"

**Rail Network for Bright Tomorrow**

December, 2008
KORAIL Acting President
Vice President **Hyeog-Yun Shim**

1

KORAIL SUSTAINABILITY REPORT 2008

**1.1 CEO Message**  1.2 Stakeholder Group  1.3 KORAIL Overview  1.4 Management Vision and Strategy  1.5 Sustainability Management Commitment

# 1.2
## STAKEHOLDER GROUP

KORAIL identified five key stakeholder groups according to the nature of relationship into customers, employees, business partners, environment, and communities, NGO, and government. KORAIL is striving to reflect suggestions of the stakeholder on the mangement to deliver better life and valuable tomorrow for the society.

### Customers

Customer is defined as purchasing customer who wants accurate, timely, and diverse cultural customer service. To reflect the diverse needs of the customer, KORAIL identified wider base, and implemented customer representation for two-way communication.

With active customer engagement activities, KORAIL expanded customer value and firmly developed sustainability management.

**Stakeholder Group Communication Channel**



### Employees

KORAIL is able to promote mutual trust with internal stakeholder with various communication channels relating to the railroad topics.

In addition, KORAIL run various programs such as job training, self-development training, welfare system, and equal employment opportunity to improve employee satisfaction.

### Business Partners

Business partners are customers who raise value of the KORAIL in the areas of sale, service, and purchasing. To improve the reliability with its business partners, KORAIL setup ombudsman, and public bidding to increase transparency and strengthen enforcement of transparency. KORAIL expanded relationship with its partners for mutual growth by gathering partners' opinions from qualified regular meeting/briefing and Assistant Center for joint development of new products, technical support, personnel support, and marketing support.

### Community, NGO, and Government

KORAIL offers train operation for isolated areas, fare discounts for the disabled, and other transportation services. KORAIL is strengthening regional networks and social activities by volunteering in the community, operating Love Fund and matching grant system, and funding various practical social programs. KORAIL's exclusive 'Winter Senior Outreach', 'Finding hope train ride' were expanded to better reach out to the community.

## Environment

Due to Convention on Climate Change, strengthened environmental regulation, and the global environment issues, KORAIL recognizes the need and importance of the environment; thereby, classifying it as one of the key stakeholder group. To implement systematic environmental management, KORAIL strengthened the organization's capacity and efficient pollution prevention and management.

In addition, KORAIL will become an engine for the green growth by regularly monitoring environmental performance through internal/external environment communication.

**Stakeholder Communication for Key Issues**

( ●: Stakeholder group's concerns)

| Key Issues | | Employees | Customers | Partners | Community, NGO, and Government | Environment |
|---|---|---|---|---|---|---|
| Sustainability Management | Report Information | ● | ● | ● | ● | ● |
| | Organization Overview | ● | ● | ● | ● | ● |
| | Business Vision and Strategy | ● | ● | ● | ● | ● |
| | The Role of Korean Railroad Industry | ● | ● | ● | ● | ● |
| | Continued Efforts for the Sustainability Management | ● | ● | ● | ● | ● |
| Creation and Innovation | Creation-Innovation Management | ● | ● | ● | ● | ● |
| Economy | Economic Performance | ● | ● | ● | ● | ● |
| | Economic Vision and Plans | ● | ● | ● | ● | ● |
| | Financial Statements | ● | ● | ● | ● | ● |
| Customers | Customer Management | ● | ● | ● | ● | ● |
| Employees | Employee Management | ● | | | ● | ● |
| Ethics | Ethics Management System | ● | ● | ● | ● | ● |
| | Business Partner Management | ● | | ● | | |
| | Community Engagement Management | ● | ● | | ● | ● |
| Safety | Safety Management | ● | ● | ● | ● | ● |
| Environment | Environmental Management Status | ● | ● | ● | ● | ● |
| | Environmental Management Performance | ● | ● | ● | ● | ● |
| | Environmental Efforts | ● | ● | ● | ● | ● |

# 1.3

## KORAIL OVERVIEW

KORAIL is a public corporation, which was established on January 1st, 2005, with the objective of contributing to the railroad industry and the national economy by improving expertise and efficiency of the railroad. KORAIL offers train operation for isolated areas, fare discounts for disabled, public delivery services, and eco-friendly transportation service. KORAIL will fulfill its social responsibility as a public corporation by offering faster, more convenient, highly efficient, environmentally friendly, and safe railroad.

**KORAIL at a Glance** (As of Oct. 31, 2008)

| | | | |
|---|---|---|---|
| **Finance** (As of Dec. 31, 2007) | Total Assets | | KRW 14,213.7 billion |
| | Owner's Equity | | KRW 9,289.3 billion |
| | Sales | | KRW 3,570.3 billion |
| | Net Income | | KRW 133.3 billion |
| **Business and Facilities** | Operation Length | High-speed line | 240.4 km |
| | | General train line | 3,158.7 km |
| | | Total | 3,399.1 km (double-track 1,403.5 km, electric railway 1,817.8 km) |
| | Train Operations | | 3,051 times per day |
| | Station | | 640 Stations (23 express train stations, 12 Gyeongbu Lines, and 11 Honam Lines) |
| | Daily Train Operations | High-speed train (KTX) | 140 (181 on weekends) |
| | | General passenger train | 457 (465 on weekends) |
| | | Metropolitan transit | 2,086 |
| | | Freight train | 353 |
| | Daily Transportation Capacity | High-speed train (KTX) | 102,000 people |
| | | General passenger train | 201,000 people |
| | | Metropolitan transit | 2,350,000 people |
| | | Freight train | 130,000 tons |
| | Length of tracks | | 7,950 km |
| | Vehicles | High-speed trains (KTX) | 920 trains |
| | | General trains | 2,441 trains |
| **Organization** | Head Office | | 5 headquarters, 4 workshops, 7 offices, 65 teams |
| | Subsidiaries | | 17 branches, 3 rolling stock management workshops, KORAIL Research Institute (KoRI), human resources development center, information engineering workshop, special rolling stock operation workshop |
| | Employees | | 31,678 people |
| | Head Office Address | | 2-1201, Deajeon Government Complex, 139 Seonsa-Ro, Seo-Gu, Daejeon, Republic of Korea |

## The Characteristics of Railroad Industry

Railroad industry is a combination of various vehicles, electricity, facilities, signals, information, and other high-tech industries that is involved at the heart of people's life. As the network and social infrastructure industry, railroad company must have large initial facility investment and the necessary operational flexibility for the transition to knowledge-based industry, including automation, to increase corporate value.

With the adoption of the Kyoto Protocol, global greenhouse gas reduction throughtout all the industries has become an issue, and energy efficiency has come to be more significant due to rising oil prices. As a result, railroad industry with various strengths including eco-friendlines, safety, and an investment efficiency is hailed as the sustainable and eco-friendly transportation of the future.

### The Strengths of Railroad Industry

**Energy Consumption per Unit of Passenger** (Unit: kcal/person km)

| | |
|---|---|
| Railroad | 1.0 times (63.5) |
| Van | 3.3 times (209.3) |
| Passenger cars | 8.4 times (532.1) |

(scale: 0 120 240 360 480 600)
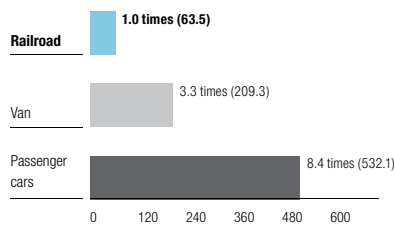
• Energy consumption per unit = energy consumption (kcal)/ total transportation capacity (person km or ton km)

**Energy Consumption per Unit of Cargo** (Unit: kcal/ton km)

| | |
|---|---|
| Railroad | 1.0 times (109.4) |
| Shipping (Korea) | 2.0 times (272.6) |
| Freight cars | 14.2 times (1,554.1) |

(scale: 0 400 800 1200 1600 2000)
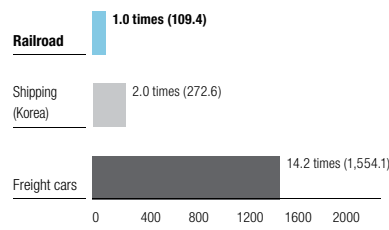
• Energy consumption based on railroad cargo compared to roadway energy consumption.

**Energy Consumption Reduction** (in 100 millions of KRW/%)



Legend: Passenger, Cargo, Total
(y-axis: 0, 5,000, 10,000, 15,000, 20,000, 25,000; x-axis: 11.3, 12, 13, 14, 15; value marked 5,595)
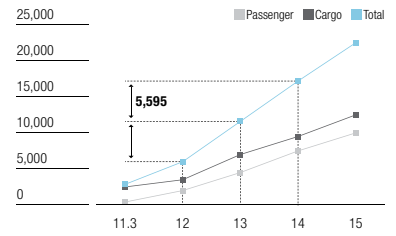
• Energy consumption reduction as railroad transportation increased (When 1% increases, KRW 559.5 billion is saved per year.)

**CO₂ Emissions per Unit of Passenger** (Unit: g · CO₂/person km)

| | |
|---|---|
| Railroad | 1.0 times (26.1) |
| Van | 2.4 times (62.2) |
| Passenger cars | 5.8 times (150.7) |

(scale: 0 40 80 120 160 200)

• CO₂ emissions per unit = carbon dioxide emissions (g)/ total transportation capacity (person km)

**CO₂ Emissions per Unit of Cargo** (Unit: kcal/ton km)

| | |
|---|---|
| Railroad | 1.0 times (35.6) |
| Shipping (Korea) | 2.4 times (85.9) |
| Freight cars | 13.4 times (474.9) |

(scale: 0 120 240 360 480 600)

• Comparison of CO₂ emissions based on railroad cargo and CO₂ emissions of each transportation

**CO₂ Emissions Reduction** (in 100 millions of KRW/%)



Legend: Passenger, Cargo, Total
(y-axis: 0, 300, 600, 900, 1,200, 1,500; x-axis: 11.3, 12, 13, 14, 15; value marked 309)
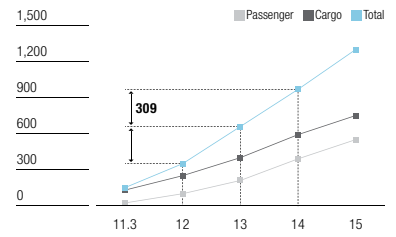
• CO₂ emissions reduction as railroad transportation rate increased (When 1% increases, KRW 30.9 billion is saved each year)

### Social Costs of Road and Railroad

(Unit: g/person-emission per km)

| | Air Pollution | | Greenhouse Gas | | Noise | | Land Use | | Traffic Accidents | | Congestion Costs | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Road | Railroad | Road | Railroad | Road | Railroad | Road | Railroad | Road | Railroad | Road | Road | Railroad |
| 2000 | 113,310 | 2,865 | 57,518 | 1,249 | 18,766 | 677 | 89,939 | 6,947 | 91,788 | 11 | 112,525 | 483,856 | 11,749 |
| 2010 | 96,404 | 1,791 | 54,569 | 1,148 | 34,499 | 897 | 145,584 | 8,044 | 54,340 | 3 | 173,784 | 559,180 | 11,883 |

• Korea Environment Institute (The Comparative Analysis of Environmental Impacts of Land Transportations, 2002)

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## Principal Business

### Passenger Railroad Business

The main line passenger business of the passenger business headquarters is the core business of KORAIL which forms a crisscross network throughout the nation with the KTX, the key brand, and general trains (Saemaeul, Mugungwha, and Commuting Trains). The total railroad network is 3,391.1 km, which consists of 240.4 km of new high-speed lines in the Gyeongbu·Honam corridors, and 3,158.1 km of conventional lines. Regular trains run over 457 times a day and play the role of short-to-medium-range transportation. High-speed railroad opened on April 1st, 2004 after twelve years' effort since 1992 and started operating its 1st section, 238.6 km of new high-speed line between Gwangmyeong-Daegu and 169.9 km of existing Gyeongbu Line. At the same time, KORAIL completed Honam Line electrification project to operate direct KTX line running the Honam axis. With KTX operations, the competitive power of the railroad industry was secured and chronic traffic congestion was mitigated. In other words, a role of each transportation was improved and balanced efficiently by KTX.

### Metropolitan Railway Business

Along with KTX, metropolitan transit makes up the two main passenger transportation business of KORAIL.

Metropolitan transit offers convenient transportation between Seoul and

**Classification of Major Railraod Business**

Major Business
- Passenger Railroad Business
  - KTX
  - General Trains
    - Saemaeul
    - Mugunghwa
    - Commuter
- Metropolitan Railroad Business
  - Metropolitan Electric Train
- Logistics Business
- Business Development

metropolitan area. Metropolitan transit consists of 8 main line totaling 293.3 km that runs 2,086 a day, transporting 2.35 million customers.

Metropolitan Transit Network is composed of 8 lines: Gyeongbu Line (Seoul-Cheonan, 96.6 km), Gyeongin Line (Guro-Incheon, 27.0 km), Gyeongwon Line (Cheongnyangni-Soyosan, 42.9 km), Central Line (Yongsan-Paldang, 34.8km), Gwacheon Line (Namtaeryeong-Geumjeong, 14.4 km), Ansan Line (Gumjeong-Oido, 26.0 km), Bundang Line (Suseo-Bojeong, 27.7 km), Ilsan Line (Jichuk-Daehwa, 19.2 km), and the shuttle electric rail train (Siheung-Gwangmyeong 4.7 km) to connect to the KTX. The interval between trains ranges from 2

minutes at commuting hours to 15 minutes at normal hours and is operated flexibly depending on the transportation demand for each line. The most frequent Gyeongin Line (Guro-Incheon) maintains operation of general electric train and express train separately on double tracks.

### Logistics Business

KORAIL's logistics business established a vision as a global logistics enterprise by raising the ratio of rail transportation to 10% by 2012. As of June 2008, KORAIL is the central artery of national logistics system with transportation of 130,000 tons a day and 46 million tons a year, with 212 freight handling stations and 3,059 km of service line. In particular, the marketing strategy has transferred from traditional heavy weight freight to general container transportation, which beame a key player in vitalizing the national export-import logistics through over 100 million TEU of container freight for two consecutive years. KORAIL promotes diversification of business positively to renovate logistics services including rental business for logistics equipment or freight terminal business rather than simple transportation business such as stevedoring and warehouse business.

### Business Development

With only the profits of transportation business, there is a limit to improving railroad management. So KORAIL is looking to diversify the corporate profit structure and promoting various business developments to meet the demands of customer service. Business developments that are currently being promoted are railroad advertisement, sales within the station and trains, logistics, parking lots, tourism, railroad vehicle maintenance, railroad facility maintenance and asset development business. The focus is given to the development business that utilizes railroad assets such as the station areas, complex stations, and sites along railroad. KORAIL is also promoting to restore our ecosystem and marine environment by recycling waste vehicle with small and medium business partners for artificial fising banks.

### Human Resources Development Center

Since 1905, the human resources development center has executed innovation, leadership, and service training including professional job training in railroad in order to secure core talents for rapidly changing corporate environment. KORAIL has supported its affiliates with cooperation system and information sharing. In addition, KORAIL has contributed to advancement in railroad technology through training sessions for public as well as railroad workers. On March 2007, KORAIL proudly opened international railroad training center with the unanimous approval from the Asian Conference. KORAIL is creating an outline of railroad technology by reducing the technology gap in Asia through hosting the first Asian railroad training center network workshop for 200 trainees from 15 countries on May 2008.

## Route Map of Korean Railroad



Sintanri
Dorasan
Munsan
Chuncheon
Gamho
Uljeongbu
Gangneung
Seoul Seongbuk
Cheongnyangni
Gujeolri
Yeongdeungpo
Donghae
Incheon
Ori
Gwangmyeong
Suwon
Wonju
Jeungsan
Cheolam
Jecheon
Cheonan-Asan Cheonan
Mungyeong
Yeongju
Jochiwon
Daejon
Janghang
Gunsan
Gimcheon
Yeongcheon
Pohang
Iksan
Okgu
Jeonju
Daegu Dongdaegu
Gyeongju
Ulsan
Changwon
Gwangju
Jinju
Jinhae
Busan
Suncheon
Mokpo
Boseong
Yeosu

| General Train | High-speed Railroad (KTX) |
|---|---|
| | Gyeongbu Line |
| | Honam Line |

• Korean high-speed railroad, KTX total customers reached 100 million in 2004, 3 years after the inauguration, and its daily average customers surpassed 100,000.



• Metropolitan transit, which is one of the core passenger transport businesses with KTX, offers convenient transit media to the citizens in Seoul and metropolitan areas.



• KORAIL logistics business is a key player in vitalizing national export-import logistics through the solidification of door-to-door transportation system and reinforcement in container transportation.



• Bird's-eye view of yongsan station area under promotion as a part of business development



• KORAIL's artificial fish banks project restores ocean environment and ecosystem. This is being co-promoted with medium-small companies by utilizing waste railroad train.



• Human resource development center for railroad talents



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## Organizational Structure

KORAIL's organization consists of 5 headquarters, 4 workshops, 7 offices, and 17 branches. Subsidiaries consist of 3 roling stock management workshops, KoRI, human resources development center, information engineering workshop, and special rolling stock operation workshop. These subsidiaries are a composition of business units in accordance with customer and performance-based market. Branches are operated by a workplace formation based on a local area unit.

**Organization Chart**

Customers

KoRI
Information Engineering Workshop
Human Resources Development Center
Train Traffic Operation Center
Special Rolling Stock Operation Workshop
Rolling Stock Management Workshop (3)
Civil Electrical Station (4)

Head Office

Branches (17)

Passenger Business Headquaters

Metropolitan Business Headquaters

Logistics Business Headquaters

Business Development & Investment Headquaters

Station Area Development Workshop

Rolling Stock Workshop Civil Engineering Workshop Electrical Engineering Workshop

Engineering Headquarters

Planning & Coordination Office
Finance Management Office
Personnel & Labor Office
Transport & Safety Office
Management Innovation Office
Public Relations Office
Customer Satisfaction Center

Vice President

Audit Office

President

Auditor

Board of Directors

## Affiliates

KORAIL has nine affiliates that operate commissioned ticket sales and maintenance of train and facilities. These affiliates work in low cost, high efficiency synergy to create a winning edge in railroad operation margin and competitiveness. KORAIL is planning on an initial public offering of affiliates to generate a new growth engine focused on core businesses in wholesales, advertising, logistics, and IT tour with the vision of becoming a global transportation company.

**Affiliates Status** (As of Dec. 31, 2007)

| Company Name | Key Business | Capital/Investment (in millions of KRW) | Ownership | Established |
|---|---|---|---|---|
| KORAIL ADCOM INC. | Advertising agency | 200/196 | 98% | Feb. 8, 1994 |
| KORAIL DEVELOPMENT CO., LTD. | Station surrounding area development, parking lot, commissioned station management | 1,079/600 | 56% | Nov. 27, 1996 |
| KORAIL LOGIS CO., LTD. | Logistics | 3,000/2,390 | 80% | Dec. 31, 2003 |
| KORAIL TOUR SERVICE | Tourism, leisure, in-train services | 2,000/1,020 | 51% | Aug. 11, 2004 |
| KORAIL NETWORKS CO., LTD. | Commissioned ticket sales, KORAIL member management, contact center operations | 6,223/5,692 | 91% | Sep. 21, 2004 |
| KORAIL RETAIL CO., LTD. | In-station sales | 910/910 | 100% | Dec. 2, 2004 |
| KORAIL ENGINEERING CO., LTD. | Train maintenance | 500/300 | 60% | Dec. 2, 2004 |
| KORAIL TRACK CO., LTD. | Facilites maintenance, crossing management | 905/905 | 100% | Dec. 9, 2004 |
| KORAIL ELECSYS CO., LTD. | Rail electric facility management | 500/500 | 100% | Dec. 9, 2004 |

## Overseas Workplace

KORAIL has overseas workplaces in France, Japan, and China to establish a network with related associates, and conduct information research, collection and analysis on management strategies. Especially, Japan, and China workplaces support and conduct research on complex uniform transportation service.

**France**
—
TEL. 33-1-4562-0144
FAX. 33-11-4562-0146

**China**
—
TEL. 86-10-6466-7497
FAX. 86-10-6477-7498

**Japan**
—
TEL. 81-50-7535-0228
FAX. 81-3-5350-0039
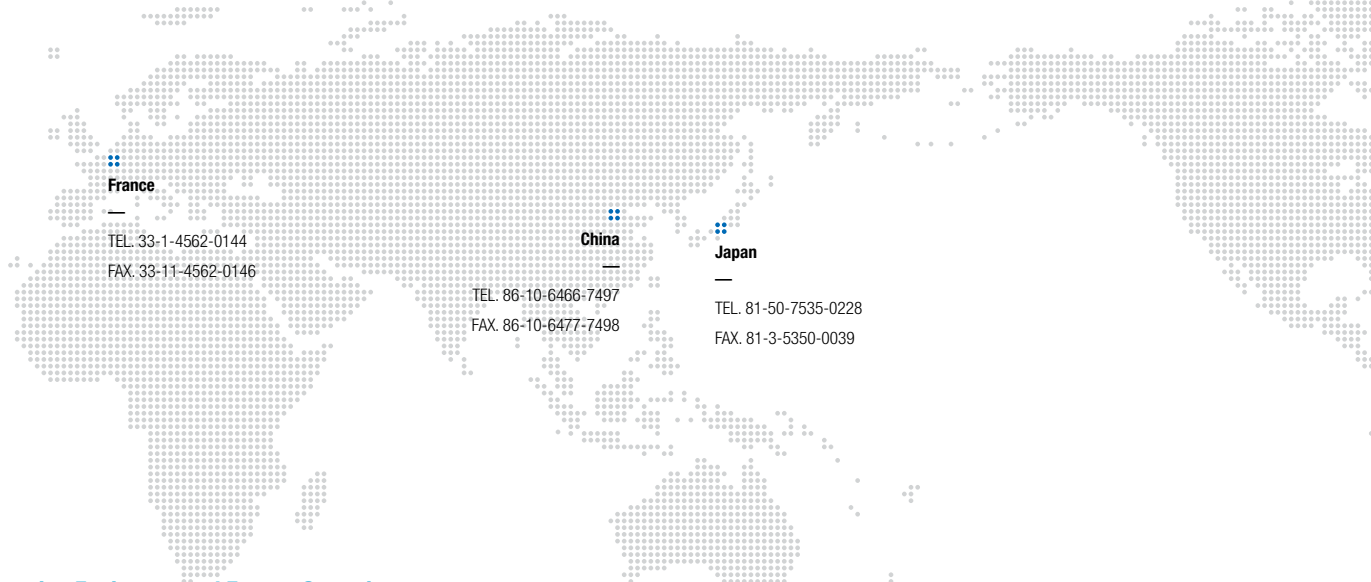
## Leasing Equipment and Entrust Operation

Railroad facilities for train operation including roadbed, rail, and trolley line are KORAIL's leasing properties that KORAIL pays leasing fees to railroad facilities management. In addition, KORAIL conducts entrust operation such as train maintenance, train traffic operation control, railroad facility improvement, rail crossing management. With these activities, KORAIL is generating revenue while fulfilling a social responsibility as a government's role agent.

**Railroad Facility Usage Payment** (in 100 millions of KRW)

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| General Train | 3,341 | 3,273 | 4,351 |
| KTX | 1,847 | 1,529 | 1,823 |

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## Corporate Governance

### Board of Directors Organization

KORAIL is striving to secure management trust with responsibility management system centered on board of directors to increase corporate value and external directors' management participation. KORAIL has a soild foundation with new executives nomination committee and appointed external director system for improving governance structure of board of directors' operating system. The executives are on performance-based incentive payment system. The incentive payment is based on the management performance weighed by evaluation on its goals for finance, customer, innovation, and training.

Board of directors consists of CEO, 7 executive directors, and 8 external directors from professions of each field. KORAIL checks its management with external directors that makes up ratio over 50%, and external directors' expertise and risk management ability allows for a smooth operation of board of directors. In addition, The board consists of more than 30% women as external directors for equal employment opportunity.

### Board of Directors Meeting

The board meets every month, and temporary board meeting is held by request of one third of the directors. In order to increase transparency, any director related to a case or proposal of council is excluded from the meeting, and the case or proposal will be approved by a majority vote. Increased agenda items, directors' attendance rate, meeting frequency displays the board's concerns and active efforts to improve corporate management.
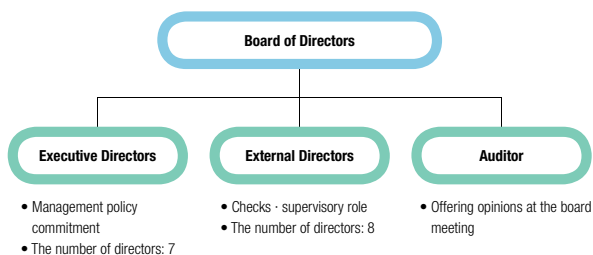
**Board of Directors Organization**

```
                    Board of Directors
          ┌──────────────┼──────────────┐
   Executive Directors  External Directors   Auditor
```

- Management policy commitment
- The number of directors: 7

- Checks · supervisory role
- The number of directors: 8

- Offering opinions at the board meeting

### External Directors

Professional subcommittees consist of each sectors including management, business, and engineering subcommittee for evaluating agenda items of the board and promoting smooth operation of the board.

The subcommittees have been held 5 times for critical business performances. The directors are assigned to headquarters, branches, and subsidiaries, and invited to major events for sharing opinions regarding KORAIL's performances and policy.

**Board of Directors** (As of Nov. 2008)

|  | Terms | Name | Background Information |
|---|---|---|---|
| Executive Directors | 2008. 11 ~ 2010. 11 | Hyeog-Yun Sim | KORAIL vice president, former director general for railroad at Ministry of Land, Transport and Maritime Affairs |
|  | 2008. 11 ~ 2010. 11 | Cheon-Se Lee | KORAIL senior executive director passenger business headquarters, former director of Dae-Jeon branch |
|  | 2008. 11 ~ 2010. 11 | Choon-Seon Park | KORAIL senior executive director metropolitan business headquarters, former director of Kang-Won branch |
|  | 2007. 08 ~ 2009. 08 | Han-Joo Choi | KORAIL senior executive director logistic business headquarters, former senior executive director planning & coordination headquarters |
|  | 2008. 08 ~ 2010. 08 | Jong-Seop Kim | KORAIL senior executive director business development & investment headquarters, former director of KORAIL northern capital branch |
|  | 2007. 08 ~ 2009. 08 | Jae-Keun Park | KORAIL senior executive director engineering headquarters, former director of rolling stock workshop |
| External Directors | 2005. 01 ~ 2008. 12 | Dong-Kun Kim | Professor at the graduate school of public administration at Seoul National University, policy evaluation, former chairman of Railroad Structural Reform Committee |
|  | 2005. 01 ~ 2008. 12 | Young-Jin Yoon | Professor at the department of public administration at Keimyung University, policy evaluation, Former president of Korean Association for Public Administration |
|  | 2005. 09 ~ 2008. 09 | Keun-Kwan Ryu | Professor of economics at Seoul National University, corporate finance, former International Monetary Fund (IMF) visiting professor |
|  | 2007. 02 ~ 2010. 02 | Soon-Jik Kwon | Chairman of MPC21, promotion & innovation, former director of The Dong-A Ilbo |
|  | 2008. 01 ~ 2009. 12 | Chee-Joong Kim | Partner attorney at Barun Law, law, former senior judge at Seoul High Court |
|  | 2008. 01 ~ 2009. 12 | Sung-Eun Kim | Professor at the department of global MBA at Kyung Hee University, accounting, former member of commissioner of Policy Evaluation Committee |
|  | 2008. 01 ~ 2009. 12 | Young-Hee Lim | Executive director of Minjugongje, culture, former Dreammiz executive |
|  | 2008. 08 ~ 2010. 08 | Soon-Uk Kwon | Attorney at LOGOS, former senior public prosecutor at Seoul District Office |

|  | Terms | Name | Background Information |
|---|---|---|---|
| Auditor | 2008. 07 ~ 2010. 07 | Hae-Jin Kim | KORAIL auditor, former planning business director at the Daily Kyunghyang |

**Board of Directors Meeting**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| Frequency of Meetings (per year) | 11 | 16 | 20 |
| Rate of Attendance (%) | 86 | 91 | 94 |
| Number of Meeting Agenda | 49 | 88 | 119 |
| Number of Decision | 31 | 48 | 89 |
| Number of Report | 18 | 40 | 30 |

**Decision Making Process**



Board of Directors
Subcommittee
Audit
CEO
Audit Office (Ordinary audit)
Management & Strategy Committee
Policymaking (Department)
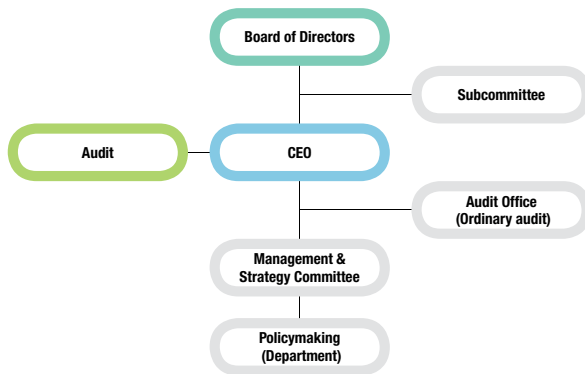
**Executives Nomination Committee**

According to 'The Law on Management of Public Bodies', the executives nomination committee consists of a maximum of five external directors and three external members selected by board of directors to ensure a transparent procedure of nomination.

In case of an appointment of new executives, public recruiting is an principle, and the recruiting criteria and procedures are disclosed for a fair and transparent recruiting. In addition, an external committee is selected by seven members of employee representatives, classified by job level, to ensure better communication with employees and reflect the opinion of employees.

**Sustainability Management Performance Management**

Board of directors makes the major policy decision and control sustainability management activities and performance management. In addition, KORAIL has various committees to promote its feasible operation. Ethical management committee review major policies related to stakeholders, conduct preview, and make decision on key issues regarding KORAIL's management through management & strategy committee and investment deliberation committee. KORAIL is planning to secure systematically economic, social, and environmental performances by creating subcommittees, which can supervise and evaluate sustainability management.

**External Director's Expertise System**



Training Course on the Site, Site Visit and Guide
Managing Directors System by Department
External Directors
Management Advisory System
Expertise Subcommittees
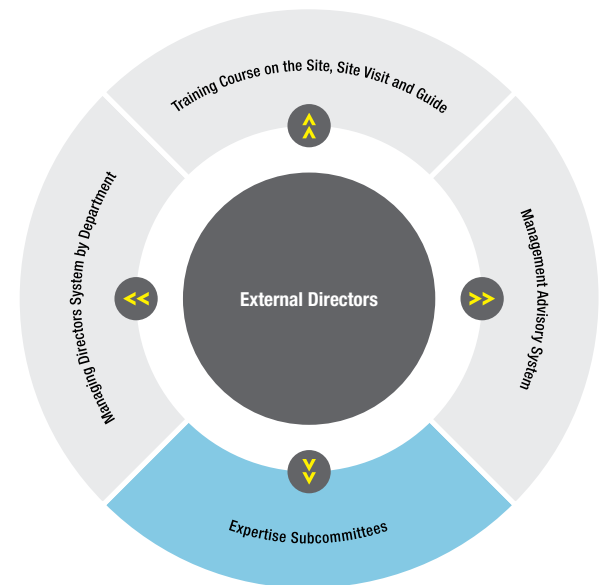
| Management Subcommittee | Business Subcommittee | Technology Subcommittee |
|---|---|---|
| Focusing on management legal expertise | Focusing on economy, media, and law | Focusing on railroad industry and cultural expert |
| • Administration (Young-Jin Yoon) | • Economy (Keun-Kwan Ryu) | • Railroad and academia (Dong-Kun Kim) |
| • Law (Soon-Uk Kwon) | • Media (Soon-Jik Kwon) | • Culture (Young-Hee Lim) |
| • Corporate management (Sung-Eun Kim) | • Law (Chee-Joong Kim) | |

1

KORAIL SUSTAINABILITY REPORT 2008

1.1 CEO Message   1.2 Stakeholder Group   **1.3 KORAIL Overview**   1.4 Management Vision and Strategy   1.5 Sustainability Management Commitment

## Risk Management

### Preview System

The management & strategy committee, consisting of executive directors, and officials, held 23 meeting with 125 proposals in 2007. The management & strategy committee conducts internal preview 10 days before submitting issues to board of directors. For important issues, it goes through subcommittee's preview seven days before submitting to board of directors. By doing so, it strengthens the preview system for rational policy decision including risk prevention.

### Enterprise Risk Management (ERM) System

KORAIL recognized the necessity of integral management for rapid and precise response in an emergency, and established ERM by prioritizing risk management through diagnosis and evaluation of risk management activities. ERM will be one of the key factors to maintaining national economy, people's quality of life, and government function by solidifying the base of sustainability management.

**Enterprise Risk Management (ERM)**

| Priority of Risk Management | Area | Types of Risk | Department |
|---|---|---|---|
| 1 | Disaster Risk | Natural disaster | Infrastructure management team, Civil engineering department |
| | | Personnel Disaster | Safety management team, Transport & safety office |
| | | Railroad terror | Emergency planning team, Planning & coordination office |
| | | Enterprise system disruption | Information engineering department |
| 2 | Communication Risk | Media risk | Public relations team, Public relations office |
| 3 | Risk of Conflict | Customer conflict due to change of business Environment | Passenger business planning team, Passenger business headquarters |
| | | Stakeholder's conflict due to business development | Business planning team, Business development & investment headquaters |
| 4 | Management Risk | Investment risk (new & overseas investment) | Strategy planning team, Planning & coordination headquarters |
| | | Financial risk (exchange & interest rate, liquidity aggravation, and credit rating) | Fund team, Finance management office |

**Financial Risk Management**

| | Contents |
|---|---|
| Risk in Exchange Rate | • Establish system of periodic reporting for foreign exchange exposure and Value at Risk (VaR) in exchange rate market<br>• Establish preparation plan and implement expertise cooperation system by holding quarterly finance risk management committee<br>• Acceptable interest rate risk of early 'rewinding' for foreign swap in an emergency |
| Interest Rate Risk | • Establish reporting system for debt duration and VaR<br>• Extend the amount for fixed interest rate from 75.7% to 83.8% by establishing strategy for changing portfolio of fixed interest rate debt and floating interest rate debt<br>• Risk distribution, when domestic bond market is not safe, by acquiring foreign currency denominated bond directly from foreign countries by earning international credit rate |
| Liquidity Risk | • Reach KRW 70 billion of management limit by analyzing liquidation for liquidity management<br>• Operate early warning system for liquidity risk<br>• Agreement with 3 banks for KRW 600 billion in short-term loan with low interest rate is in effect to secure liquidity |
| Credit Rating Risk | • Upgrade international credit rate, according to Moody's, from A3 to A2 by holding regular IR to cover bond issued, lower spread, and promote corporate credit standing |

# 1.4
## MANAGEMENT VISION AND STRATEGY

KORAIL makes every effort to help customer succeed and boost national competitiveness with the vision of 'Great KORAIL increasing the value of time and space'. KORAIL will also carry out its corporate mission of creating economic value added through faster and more convenient transportation, minimizing environmental impact for the sustainable earth, and being considerate towards all stakeholders in its process.

### Corporate Mission

The mission of KORAIL is 'Green Network creating an affluent life' to fulfill stakeholders' dream of clean environment and comfortable, joyous life. To realize the vision of 'Great KORAIL increasing the value of time and space', KORAIL is committed to customer satisfaction management, labor-management cooperation, implementation of self-supporting management, and future-oriented management. These goals will lead KORAIL to a sustainability management that will contribute to an economic and social development, and human happiness.

### Great KORAIL System

**Mission**
- Green Network Creating an Affluent Life

**Vision**
- Great KORAIL Increasing the Value of Time and Space

**Management Policy**
- Great Service — Customer satisfaction
- Great Workplace — Labor-management cooperation
- Great Process — Self-supporting management
- Great Frontier — Future-oriented management

**Direction for Strategy**
- Value maximization of transportation business
- Obtaining basis for future development
- Strengthen brand management
- Future-oriented operating system
- Strengthen human resources management

**Strategy Task**
- Strengthen competitiveness of transportation business
- Business structures diversification / Global business base establishment
- Customer impressing management / Social responsibility management / Eco-Rail management
- Operation optimization / Operation technique innovation
- Human resources development value innovation / Advanced administration management capabilities

# 1.5

## SUSTAINABILITY MANAGEMENT COMMITMENT

To understand main sustainability management issues, materiality test have been adopted. Six tests determine the main issues recorded on the report. Six parts of materiality test are 'corporate policy in public corporation', 'direct & indirect financial impact', 'survey/interview from internal stakeholders', 'international and domestic norms and regulation of sustainability management', 'benchmarking on similar foreign corporation leading the field' and 'search on KORAIL articles for the past year'.

**Materiality Test**

Creative product development
Innovation activities support
IT infrastructures

Value creation by business
Investment on sustainability management

Environment audit
Air pollution management
Water pollution management
Eco-friendly purchase

Development of new market and new business
Innovation management system
Innovation method

Financial structure improvement

Innovation & Creation

Global warming mitigation activities
Soil environment management
Noise management
Environment management system

Environment

Economy

Key Issues

Customer satisfaction management policy
Service responsibility

Safety management system,
Safety system management

Safety

Customers

Communication with customer
Creation of service value

Emergency response
Safety capability

Ethical Management

Employees

Social engagement
Trust management activities
Ethical management system

Welfare improvement
Open communication channel
Self development and capability development

Society contribution operating system
Communication with business partner firms
Win-win support system
Ethical management training

Labor-management relationship
Respect for human right of employee
Handling employee's difficulties

**Very High**

**High**

∗ Description _ Issues in 'Very High' area, the most important issues to internal/external stakeholders, are specifically explained on the report. Issues in 'High' area, indicating important issues to internal/external stakeholders, are also presented on the report.

**Sustainability Management Performance**

| | | Indication | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|
| **Economy** | Growth | Sales per person (in 100 millions of KRW) | 1.02 | 1.04 | 1.08 |
| | Stability | Debt-to-equity ratio (%) | 70.3 | 68.9 | 72.0 |
| | Profitability | ROE (%) | △ 7.01 | △ 6.45 | 1.43 |
| | Efficiency | Yearly expense reduction performance (in 100 millions of KRW) | 686 | 719 | 1,425 |
| | Corporate Value | KORAIL company brand (ranking) | 70 | 57 | 52 |
| | | Brand royalty (in 100 millions of KRW) | - | 13.0 | 26.4 |
| | Innovation Management | Knowledge registration for innovation management (number of cases) | 7,174 | 21,286 | 28,801 |
| | Creation Management | Sales of international transportation for creation management (in 100 millions of KRW) | - | 5 | 20 |
| | | Profit from niche on tourism (in 100 millions of KRW) | 18.1 | 27.3 | 123.0 |
| **Society** | Customers | National Customer Satisfaction Index (NCSI) (score) | 64 | 67 | 75 |
| | | Customer satisfaction for public corporation (score) | 74 | 78 | 86 |
| | | On-time operation rate (%) | 95.9 | 95.6 | 96.9 |
| | | VOC processing satisfaction level (score) | - | 80.7 | 82 |
| | Employees | Index for employee's organization culture (score) | - | 59 | 66.4 |
| | | Trainees (number of people) | 33,157 | 93,687 | 135,082 |
| | Ethical Management | Integrity index for ethical management (full score is 10) | 6.82 | 7.72 | 9.01 |
| | | Rate of people trained in cyber ethic class (number of trainee, %) | - / - | 12,122/38 | 10,306/70 |
| | | Rate of people trained in other ethic class (number of trainee, %) | 300/1 | 4,284/14 | 12,621/54 |
| | Business Partners | Suggestion from business partners (number of suggestion) | 36 | 50 | 23 |
| | | Small-and medium-sized companies products purchase (in 100 millions KRW) | - | 7,849 | 5,784 |
| | | Technology development product purchase (in millions of KRW) | - | 13,988 | 15,336 |
| | | Conditional purchase development products purchase (in millions of KRW) | 1,606 | 9,097 | 6,198 |
| | Local Communities | Community contribution activities (hours per person) | 8.27 | 10 | 12.9 |
| | | Purchase of product made by the disabled (in millions of KRW) | - | 474 | 1,898 |
| | | Purchase of product made by minority company (in millions of KRW) | - | 117 | 312 |
| | | Number of disabled employee/employee rate (number of employee, %) | 706/5.2 | 692/4.1 | 706/3.1 |
| | | Number of female employee/employee rate (number of employee, %) | 2,693/7.9 | 2,814/8.4 | 2,625/8.0 |
| | Safety | Operation accidents (number of case/million km) | 0.35 | 0.28 | 0.26 |
| | | Personal accidents (number of people/million km) | 1.30 | 1.12 | 1.10 |
| | | Facility trouble (number of case/million km) | 6.42 | 3.78 | 2.92 |
| | | Vehicle trouble (number of case/million km) | 0.12 | 0.11 | 0.11 |
| **Environment** | Prevention of global warming | Electrification rate of railroad (%) | 49.2 | 53.6 | 53.6 |
| | | Amount of electricity reduction (in thousands of Kwh) | Increased by 244,010 | Increased by 48,669 | Increased by 66,860 |
| | | Air environment investment expense (in 100 millions of KRW) | 840 | 341 | 546 |
| | Soil | Soil remediation business (in millions of KRW) | 4,500 | 5,786 | 2,663 |
| | | Soil environment investment expense (in millions of KRW) | 613 | 654 | 864 |
| | Noise | Maximum noise estimated level day/night average (dB) | 59/58 | 60/57 | 58/56 |
| | Water | Waste generation amount (general/designated) (ton/year) | 1,570/238 | 1,214/113 | 1,156/99.5 |
| | | Environment investment expense for water quality (in millions of KRW) | 749 | 649 | 528 |
| | Wastes | Amount of waste (general/designated, ton/year) | 17,289/3,358 | 30,895/2,604 | 19,808/1,846 |
| | | Waste environment investment expense (in millions of KRW) | 246 | 341 | 546 |
| | Campaign | Eco-friendly product purchase rate (%) | 70.5 | 70.6 | 71.9 |
| | | Eco-friendly product purchase amount (in 100 millions of KRW) | - | 34 | 77 |
| | | Personal cup use (number of people) | - | 11,037 | 17,561 |
| | | Traffic accident prevention campaign (number of campaign area/people) | 735/8,820 | 920/10,623 | 952/11,430 |

**1**    KORAIL SUSTAINABILITY REPORT 2008

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# innovation & creation

## chapter 2

Imagination: thinking outside the box
KORAIL's today brings brighter tomorrow.
KORAIL taking another big leap forward with a ground breaking idea.

Road, sea, and air transportation are the cooperative partners of KORAIL for creating the best network.

The partnership with shipping and land transportation aid in implementation of

logistic systems for cost reduction and convenience.

And, integrated transfer system was built to offer direct transfer from a car or a bus to a railroad.

KORAIL opens door to a brighter future through continuous creation and innovation.

**KORAIL, Beyond the 100-Year History**

# dream

# network

# Disclosure on Management Approach
## Innovation and Creation Performance Management System

### Vision and Strategy >>

KORAIL set innovation goals, 'Share infrastructures for happy life with people through establishing company worthy of the name', based on four vision-driven innovation strategies related to management strategy, 'Great KORAIL increasing the value of time and space'. In addition, KORAIL promotes culture of innovation to create and embody innovation.

### Driving Tasks >>

KORAIL practices innovation and responsibility management by upgrading the level of innovative capability and talents. Also, KORAIL creates and spreads participation for performance-based organization culture. To accomplish all of these, KORAIL produced 15 agenda along with 72 detailed tasks to focus on core business, growing business, and a customer-value based management.

### Organization >>

- Management innovation office is responsible for the company wide innovation strategy, planning-management-diagnosis of project, and performance management. Operation management team is responsible for the innovation in the branch level.
- At headquarters, strategy planning team, human resources team, customer support team, customer satisfaction center, strategy promotion team, public relations team, and KoRI are in charge of assigned functions by department.
- Open management innovation committee has been identifying management innovation tasks, which meet social requirements while offering advice.

**Materiality Test** _ The results of materiality test through [IPS Materiality Test Model™] shows that development of new market, and new business, innovation management system, and innovation method are the most important (very high) issues. And, support for innovation activities and IT infrastructures are identified as one of the important (high) issues. Detailed information is included in the report.

### Medium >>

### High >>
Creative product development, Support for innovation activities, IT infrastructure

### Very High >>
Development of new market, and business, Innovation management system, Innovation method

### Materiality
>>

## Key Achievements and Future Plans

| | Item | Key Performance | | | Plan | Note |
|---|---|---|---|---|---|---|
| | | **2005** | **2006** | **2007** | **2008** | |
| **Innovation Management** | Integrity index (score) | 6.82 | 7.72 | **9.01** | 9.35 | highest rate of growth among 333 institutions |
| | Customer satisfaction index in government corporation (score) | 74 | 78 | **86** | 87 | |
| | Organization culture index (score) | - | 59 | **66.4** | 67 | |
| | Knowledge registration (score) | 7,174 | 21,286 | **28,801** | 30,000 | |
| | Nurturing specialist for improvement (number of people) | 365 | 79 | **241** | 300 | Received 'Korea Management Quality Awards', five years in a row |
| **Creation Management** | Sales of international transportation (in 100 millions of KRW) | - | 5 | **20** | 30 | |
| | Profit from niche on tourism (in 100 millions of KRW) | 18.1 | 27.3 | **123.0** | 302 | |

# 2.1

## ENDLESS EVOLUTION OF KOREAN RAILROAD

Railroad, interconnected with Korean recent and contemporary history, laid the foundation for development of Korean society since 1899. Also, KORAIL connected the entire nation in a half day trip, helped to construct a convenient traffic system with KTX, Korea high speed train, and contributed to balanced regional development. The railroad will take another step in the evolution with the operation of self-produced KTX-II.

### Year 1899: First Railroad in Korea

Along with the newspaper, mail, and telephone, the first railroad in Korea opened in September 18th 1899, which accelerated the modernization. At that time, trains ran at 20 km per hour, and it took one and half hour from Noryangjin to Jemulpo. Until 1945, the year of independence, Japan opened the Gyeong-Bu line (1905), Gyeong-Ui line (1906), Honam and Gyeong-Won line (1914), Janghang line (1931), Jungang line (1942) to transport supplies to Japanese colonies.

### After Independence (1945)~Year 1950: Korean Railroad

Immediately after 1945, South Korean railroad ran a length of total 3,378 km with a total operation length of 2,642 km, 448 locomotives, 1,280 passenger carriages, 8,424 freight wagons, 300 stations, and 55,960 employees. However, all of infrastructures were destroyed, and a number of lives were lost during the Korean War.

Since the railroad was used for transportation of war supplies and refugees in the Korean War, it was seriously damaged. After the cease of the Korean War, railroad recovery and reconstruction, such as rebuilding destroyed railroad and introduction of train, started, and the railroad industry was revitalized. In August 1595, the first Korean passenger carriages were produced.

### 1960~1970: A Whole Nation in One-Day Life Zone

In 1960, according to the economic development plan, huge investment on construction of industry railroad and development for community started with growing demand for economic development capital. Railroad had taken a leading role in this high economic growth period for transportation of materials. 53% of passengers' transportation and 88.2% of freight transportation were by train in 1961. It took 4 hours and 45 minutes from Seoul to Busan by introducing high-performance locomotives in 1969, which made a whole nation in one-day life zone. Until the 1970's, development advanced at a remarkable pace, expanding the market to oversea and developing its own trains; however, the opening of highway and development of automobile decreased the role of railroad and lost its market dominance.

### 1980~1990: Recognition of Railroad Importance

In the 1980's, KORAIL focused on localizing the train production so that a number of train were produced by KORAIL's own technology. In 1989, the railroad station was reborn as a complex space that offer cultural entertainment and shopping center.

KORAIL continues its innovation to ensure safety and deliver high service compared to automobile centered transportation system. In the meanwhile, quality management was promoted through customer satisfaction and R-TPM (Railroad-Total Productive Maintenance) since the 1990's.

The opening ceremony of Gyeong-In Line in 1899

KORAIL SUSTAINABILITY REPORT 2008

2.0 Innovation and Creation Performance Management System **2.1 Endless Evolution of Korean Railroad** 2.2 Innovation Management 2.3 Creation Management

## Year 2000: The High-Speed Train Era

### Long-Distance Transportation

In April 2004, opening of KTX made the possible for anyone to travel anywhere in the nation in half day's time. The number of passenger per day has greatly increased in Busan as a result when its economy undergoing recession. It helped Busan to have an opportunity to bounce back as a logistics hub in Northeast Asia. During the early stage of KTX in 2004, the average number of passenger per day was 7,200, and after 3 years it, increased by 44.1% to 102,000 passengers. With the increase of number of passengers, seat use rate also rose higher from 63% in the early stage to 76.5% in weekdays and 78.1% on weekends. Recent trend revealed that the long and middle distance transportation pivoted around the railroad.

### Balanced Regional Development

KTX was a key point in changing existing concept for the travel. And since then, local tour was revitalized by one day tour with KTX. Also, continuous expansion to other transportation method and development of the tourism product from local government contributed to the revitalization of regional economy.

### New Life Style Creation

The biggest change to commuters' life due to KTX is beginning of one day business trip. It slashed the time and cost for the commuters, and unfair hosting culture of Korea between company to company or company to government. Culture of one day business trip has been revitalized by active marketing such as discounts on season pass.

### Korean Technology Improvement

KTX-II, made with Korean technology, surpassed the commercial operating speed of 300 km/h, the maximum speed 330km/h mark, and the maximum speed of 402km/h on a test run. KTX-II is made with 95% of Korean technology, including core motor, propulsion control system, train body, bogies, and train control system. KTX-II will make Korea the fourth country in the world to have self-produced high-speed trains.

**Milestones**



**2009**

KTX-II operation schedule



**2007. 12**

Operation of South and North Korean trains



**2005. 01**

Establishment of Korea Railroad Corporation



**2004. 04**

The opening of high-speed train



**1963. 09**

Launching the Korean National Railroad



**1899. 09**

Introduction and opening of Korean train

# 2.2
## INNOVATION MANAGEMENT

KORAIL leads the way with innovation management to overcome internal and external limits of railroad management and improve management efficiency. Under the slogan of customer centered management, the customer service charter is established, and the quality management is strengthened by R-TPM and 6 sigma activities. The implementation of IT infrastructures to improve customer service and business process raise customer convenience and increase employee's efficiency.

### Internal limitation of Railroad Management

With transportation investment policy focusing on the road, highway was expanded by 9.3 times from 300 km in 1960 to 2,923 km. However, for 40 years the railroad has increased 4% from 3,032 km in the 1960's to 3,149 km in 2003. The automobile-centered transportation policy rather than environment friendly train infrastructure causes various problems including environmental pollution, increase of logistic cost from traffic congestion, green house gas emission, and energy over-consumption. In Europe, leading the way on environment, the railroad is a top priority in the investment of transportation infrastructure sector. During the period from the day Gyeongbu high-speed line construction started, in June 1992, to the opening day, budget input was total KRW 10 trillion. KRW 5.5 trillion of this was injected into the implementation for high-speed train infrastructures, and KRW 4.5 trillion was used to purchase trains and test drive. In order to reform the train structure to meet the consistent request, facility was separated from the management. As a result, KORAIL, which is responsible for operation, and the Korea Rail Network Authority which is in charge of facilities were established. And, KORAIL pays line usage fee of more than KRW 600 billion every year for 10 years and spends KRW 700-800 billion annually including interest of construction debt. Since KORAIL became solely responsible for the total cost for high-speed train construction and operation, almost all annual profit from KTX, approximately KRW 1 trillion, are spent on high-speed train construction. KORAIL made every effort to improve management structures in terms of management efficiency by asking for government support and promoting innovation activities. KORAIL's innovation management activities with CEO's commitment resulted in GREAT KORAIL from the solid foundation management.

### Innovation Management Process to Overcome Limitation

KORAIL has been putting great effort into innovation management to improve management structure. Based on this, in 1994, KORAIL introduced customer-centered management, which considers customer satisfaction as a priority, established 'KORAIL customer service charter' and implemented total quality management activities according to the charter. Since 1997, KORAIL practiced

R-TPM activities as a part of quality management, and knowledge management system was introduced for the first time in government institution and has been operating efficiently since 1999. In 2000, total quality management was started through process innovation by introducing 6 sigma management, In 2004, KORAIL won 'the Korean Presidentail Award for the Evaluation of Operating Status for Administrative Agency Knowledge Management System' with continuous efforts. In addition, KORAIL integrated scattered knowledge-related system and unified various policies. The result was reduction in inefficiency generated by scattered systems. In May 2008, KORAIL was selected as a public institution for active knowledge management from 'the Knowledge Management Society of Korea', and earned 'Korean Knowledge Management' award. It is going to be introduced internationally as Korea's best business practice.

### Innovation Management System and Performance
#### CEO's Management Policy

In order to become a Great KORAIL from the 'root management,' KORAIL must seek for even the invisible value and declare the future direction with the vision of customer satisfaction management, labor-management cooperation, implementation of self-supporting management, and future oriented management.

Innovation Driven Organization • Management Innovation Office is responsible for the companywide implementation of innovation. Also, CEO and management innovation coordinator propose an innovative vision with direction and perform overall supervision of management innovation activities. KORAIL junior board and open management innovation committee is operated internally and externally as informal organizations. These organizations provide suggestion for main issues from regular meeting and support innovation activities.

2

KORAIL SUSTAINABILITY REPORT 2008

2.0 Innovation and Creation Performance Management System  **2.1 Endless Evolution of Korean Railroad**  **2.2 Innovation Management**  2.3 Creation Management

## Management Policy

- Providing the best service through improving current infrastructure and system
- Labor and management in mutual trust and understanding with cooperative vision

**Customer Satisfaction**

**Labor-Management Cooperation**

**Great KORAIL**

**Self-Supporting Management**

**Future-Oriented Management**

- Providing better service based on steady financial structure
- One step forwarding lead, and productive innovation looking at the next 100 years
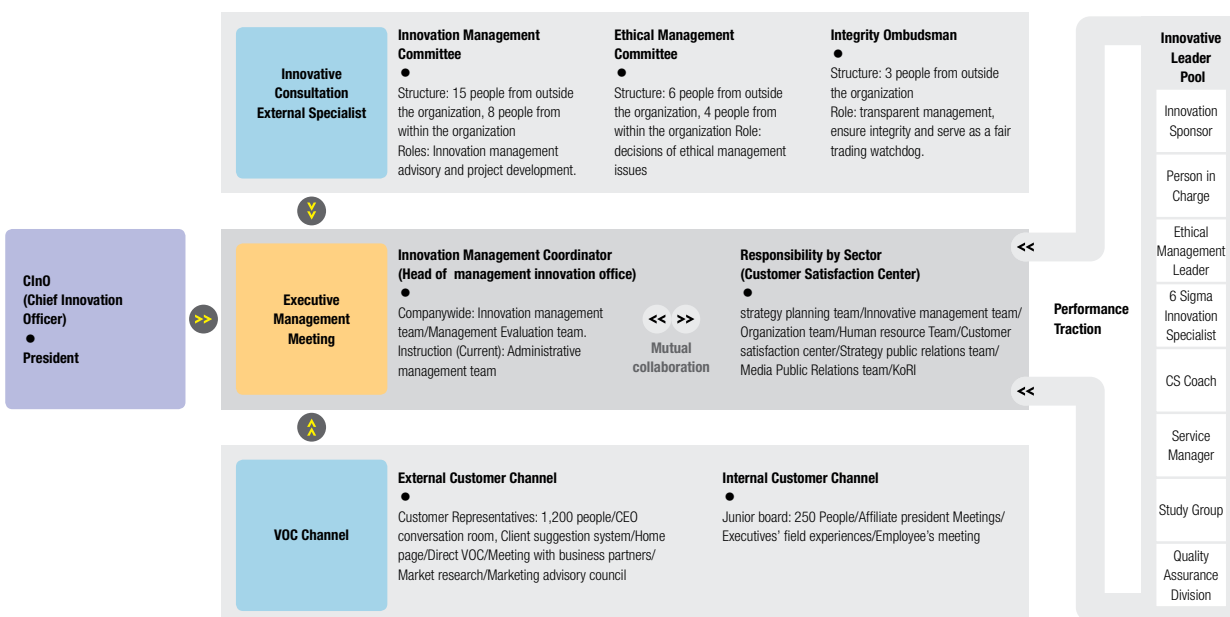
### Innovation Techniques

Systematic development, execution, and application are the main tasks of Management Innovation Office. Usage of a task management system makes it possible for Management Innovation Office to distribute the innovated tasks by projects to each department. Each department gets feedback and evaluation from the given task and execution of the plans. Based on the above system, KORAIL introduced and applies the following innovated techniques.

**Customer Satisfaction in Customer Interface Area** • Through customer satisfaction activities beginning in 1994, the customer service charter is implemented by integrating standard for all services that customer experience directly and indirectly. The level of implementation of around 50 major core management issues presented in service charter is disclosed quarterly for continuous improvement and maintenance.

**Quality Management in Non-Interface Area** • Since 1997, KORAIL introduced R-TPM system, 'zero defects', 'zero problems', and 'zero accidents.' Quality management activities are performed towards technology and safety that are not in the customer interface area. From 2001, on-time performance and safety of train to increase efficiency of transportation system has been achieved by quality control circle. These activities are selected as best practice from several external institutions and benchmarked and shared continuously.

**Total Quality Management System, 6 Sigma** • From year 2000, KORAIL introduce and apply 6 sigma as KORAIL targeted for completion of total quality management system. Every year, KORAIL trains 200 improvement specialists by establishing quality management education system in the human resources department. KORAIL also establish education system for online improvement specialists in order to lead voluntary participation of employees. In particular, KORAIL runs evaluation committee and execution committee for evaluating and executing of improving tasks. KORAIL completed about 80 improvement tasks

## Innovation Driving Organization

**Innovative Consultation External Specialist**

**Innovation Management Committee**
●
Structure: 15 people from outside the organization, 8 people from within the organization
Roles: Innovation management advisory and project development.

**Ethical Management Committee**
●
Structure: 6 people from outside the organization, 4 people from within the organization Role: decisions of ethical management issues

**Integrity Ombudsman**
●
Structure: 3 people from outside the organization
Role: transparent management, ensure integrity and serve as a fair trading watchdog.

**Innovative Leader Pool**

Innovation Sponsor

Person in Charge

Ethical Management Leader

6 Sigma Innovation Specialist

CS Coach

Service Manager

Study Group

Quality Assurance Division

**CInO (Chief Innovation Officer)**
●
**President**

**Executive Management Meeting**

**Innovation Management Coordinator (Head of management innovation office)**
●
Companywide: Innovation management team/Management Evaluation team.
Instruction (Current): Administrative management team

**Mutual collaboration**

**Responsibility by Sector (Customer Satisfaction Center)**
●
strategy planning team/Innovative management team/ Organization team/Human resource Team/Customer satisfaction center/Strategy public relations team/ Media Public Relations team/KoRI

**Performance Traction**

**VOC Channel**

**External Customer Channel**
●
Customer Representatives: 1,200 people/CEO conversation room, Client suggestion system/Home page/Direct VOC/Meeting with business partners/ Market research/Marketing advisory council

**Internal Customer Channel**
●
Junior board: 250 People/Affiliate president Meetings/ Executives' field experiences/Employee's meeting

annually and had around KRW 30 billion cost reductions by implementing PMS, a 6 sigma project management system, and managing it systematically. Also KORAIL systemize quality management by coupling 6 sigma quality management activities and ERP. Activities, such as 6 sigma, quality management improvement activities, and knowledge suggestion activities lead cost reduction to KRW 160 billion annually and create profit. Based on these activities, KORAIL become bench marking model not only in public institutions but in competent private companies.

**IT Infrastructure**

Business Renovation and Process Improvement • KORAIL unified information resources from management field KORAIL's ERP system showing its Vision and Innovation System efforts (KOVIS), service field (Integrated Railroad Information System, IRIS), and clerical field (Business Management System, Rail I) by constructing Enterprise Resource Planning system. Through this, KORAIL constructed digital management systems for whole cycle from plot, operation, and up to ex-post facto management. By maintaining transparency of management and constructing responsible management system efficiently by respective business parts through ERP, KORAIL confronts the rapid changing business environment. By introducing business management system, the stepwise willingness decision is clearly publicized. Second stage business of Information Technology Architecture/Enterprise Architecture (ITA/EA) is under promotion to construct integrated information environment.
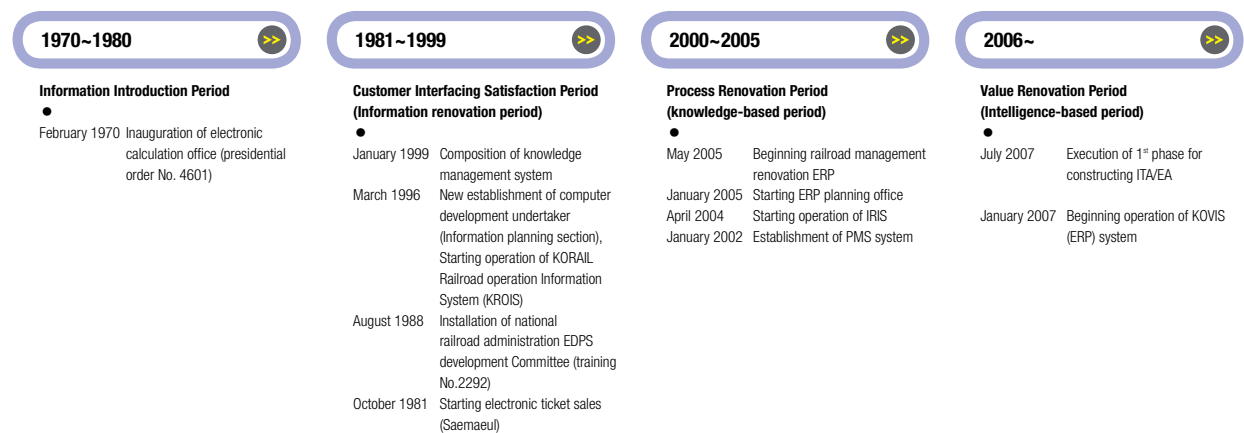
Sharing Information and Communication • KORAIL constructed Internal-Business Portal in all the affiliates, improved convenience of approach, and provided mutual systematic assistance and a system of sharing information.

KORAIL operates in-corporation broadcasting system as a horizontal communication channel, and utilizes customer management policy system to reflect various customers' opinion to the policy. KORAIL is promoting continuous heightening of knowledge management and proposal management system so that it can activate production and sharing of proposal and knowledge. KORAIL is also improving competitive power to the knowledge information oriented society by securing various information sharing channels through on or off lines, service competition meeting, presentation of knowledge proposal, and management renovation festival.

Customer Interface Service • KORAIL has modified most interfacial web pages focusing on users to offer information service for the demand of customers. KORAIL is making an effort to promptly solve the dissatisfaction and subject of demand from customers by linking between the Call Center (Railroad Customer Center) and the Customer's Voice System (VOC). In addition, KORAIL is heightening customers' convenience by establishing various rail ticket purchase service system, which utilizes the most up to date IT technology based on ubiquitous such as Home-Ticket, SMS Ticket, and Postal Ticket Delivery Service.

Information Safety • KORAIL is endeavoring to solve uneasiness of customers through the continuous investment on safeguard of information by installing systems such as web fire wall, interception or detection of intrusion to safeguard customer's private information and to construct more safe business environment. KORAIL is also running back-up system to protect information resources. As such, no case of dissatisfaction pertaining to the violation of private information protection and lost customer's data was reported.

---

**Footprints of Information**

| 1970~1980 >> |
| --- |
| **Information Introduction Period** |
| ● |

| | |
| --- | --- |
| February 1970 | Inauguration of electronic calculation office (presidential order No. 4601) |

| 1981~1999 >> |
| --- |
| **Customer Interfacing Satisfaction Period (Information renovation period)** |
| ● |

| | |
| --- | --- |
| January 1999 | Composition of knowledge management system |
| March 1996 | New establishment of computer development undertaker (Information planning section), Starting operation of KORAIL Railroad operation Information System (KROIS) |
| August 1988 | Installation of national railroad administration EDPS development Committee (training No.2292) |
| October 1981 | Starting electronic ticket sales (Saemaeul) |

| 2000~2005 >> |
| --- |
| **Process Renovation Period (knowledge-based period)** |
| ● |

| | |
| --- | --- |
| May 2005 | Beginning railroad management renovation ERP |
| January 2005 | Starting ERP planning office |
| April 2004 | Starting operation of IRIS |
| January 2002 | Establishment of PMS system |

| 2006~ >> |
| --- |
| **Value Renovation Period (Intelligence-based period)** |
| ● |

| | |
| --- | --- |
| July 2007 | Execution of 1st phase for constructing ITA/EA |
| January 2007 | Beginning operation of KOVIS (ERP) system |

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# 2.3

## CREATION MANAGEMENT

Railroad is widely equipped with merits such as balanced development of national land, energy efficiency, safety, transportation efficiency, and eco-friendliness. It also maintains 10 times higher land efficiency and 8 times higher energy efficiency than road. KORAIL, through the conclusion of MOU for a railroad operation with Russia and the execution of freight train operation between South and North Korea, laid the foundation of linking the railroad to the continent beyond the regional limit of peninsula.

### Northeastern Asia Logistics

Restoration of Trans-Korea Railroad and Trans-Continental Railroads linking businesses are implicative meaningful projects, such as constructing traffic infrastructure for a full scale exchange of human and material between South and North Korea, speeding up of inner Northeastern Asian market, constructing foundations for Korea to advance to Eurasian continent, important role of turning point to the mutual prosperity and peaceful settling down between South and North Korea easing tension as a basis of unification. Also Korean Railroad could provide an opportunity to secure business network without geographical restriction through the giant network of crossing continent, which has not been possible because it could not make the use of advantage of long distance mass transportation, the merit of railroad.

#### Railroad Connecting South and North Korea

Railroad operation connecting South and North Korea means not only the linking of railroad between South and North but also has an important meaning of advancing to the base of Northeastern Asian logistics escaping from the current island railroad by linking with Trans-Siberian Railway (TSR), Trans-China Railway (TCR), and Trans-Korea Railway (TKR). On May 13, 2006 South and North Korea agreed to operate trains between South and North Korea, and began the historic test run of the South and North railroad train on May 17, 2007. This

was managed by the South for a distance of 27.3 km between Munsan and Gaeseong of Gyeongui Line and by the North for a distance of 25.5 km between Jejin and Geumgangsan of Donghae Line. Heads of South and North Korea agreed to operate train on October 4, 2007. As a result, South-North railroad traffic opened on December 11, 2007 and freight trains are making daily runs once in a day between Munsan and Panmun (Bongdong). Economic effects of the railroad operation between South and North Korea will be great reduction in logistics expenses approximately USD 550-USD 600. This includes transportation by sea between Incheon and Nampo freight charge of USD 720 level per one TEU (20 feet container) and Metropolitan Area of the South and Pyeongyang costs of USD 200-USD 250 level when transported through Kyeongeui Railroad Line. Logistics expenses reduction effects through the railroad transportation is expected to be increased significantly considering an approximate three times growing tendency of trading amount that is 1.35 billion dollars in 2006 while it was 0.43 billion dollars in 2000. Hereafter, KORAIL accelerates to transfer to a railroad transportation of about 750,000 tons of materials to support North from the total South-North trading amount of 22 million tons (2006). On the other hand, KORAIL plans to activate South-North train operation by transporting commuters of laborer expected to reach 80,000-100,000 at the end of 2010 in Gaeseong Industrial Zone.

**Operation of Freight Train for Munsan-Panmun (Bongdong)**

| Seoul | Susaek | Munsan | Imjingang | Dorasan | MDL | Panmun | Sonha | Gaeseong | Pyeongsan |
|---|---|---|---|---|---|---|---|---|---|

SLL · NLL

9.7km · 7.3km · 10.3km

• **SLL** (Southern Limit Line) / **NLL** (Northern Limit Line) / **MDL** (Military Demarcation Line)
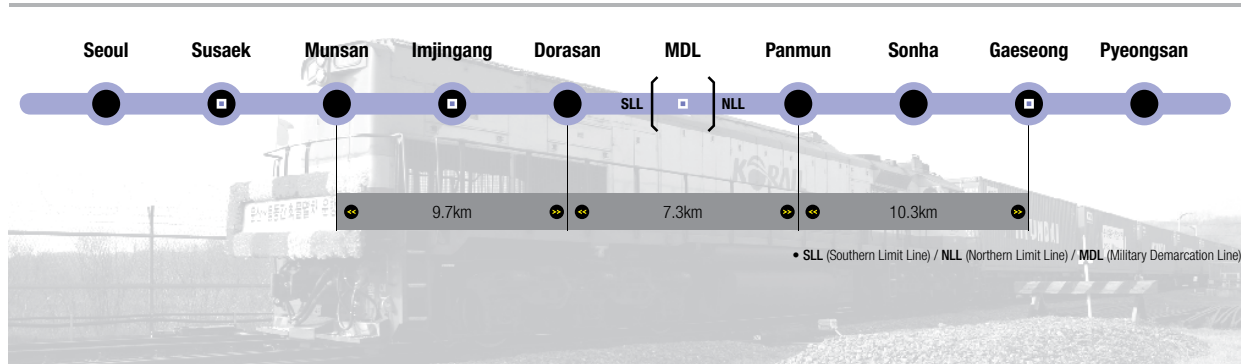
**Trans-Siberian Railway (TSR)**

CEOs of 3 countries, President of Korea Railroad Corporation, Railroad Minister of North Korea, and President of Russia Railroad Corporation, met at Vladivostok in March 2006. They discussed pending issues of railroad problem such as connecting and testing operation of TKR-TSR, grasping the current situation and a symbolic operation of TKR, and studying on transportation fares system and exchange of technologies between three countries. The preparation process for the connection of South-North railroads and continental railroads was billed. They concluded MOU for railroad operation with Russia and promised to share systematically know-how for KTX operation, new technologies, and information and policies regarding railroad operation. They studied on the operation of shuttle train starting from Korea running through to European cities by way of TSR, and made a chairman's announcement pertaining the railroad operation of 3 countries (South Korea, North Korea, and Russia). Such an announcement is an amicable response of 3 countries meeting held just before and also a step forwarded by re-connection of meetings interrupted since 2001 about TKR & TSR. KORAIL made a MOU with Russia Railroad Corporation in Moscow in June 2007 to realize logistics business Korea and Russia jointly by connecting Busan-Najin-Hasan section to the TSR, and to have model transportations from the second half of 2008. However, as the mutual agreement was not made between South and North, a method was adopted to transport containers from Busan port to Najin port by sea then cross North Korea-Russia boundary by way of railroad since it was unable to take advantage of TKR connection from Busan to Najin. KORAIL, together with Russia, plans to make an effort to accomplish the connection of Najin port and Trans-Siberia Railroad, participating in the projects such as reconstruction of Dumangang-Najin railroad, construction of container terminal at Najin, and construction of infrastructure. Currently, it takes about 35 days from Korea to Moscow if transported by sea, but if KORAIL takes advantage of Busan port-Najin port-Hasan-TSR, it takes 21 days that gives an effect of reducing transportation time significantly. By this way, it will be of help to activate Korean logistics industry by contributing in reduction of logistics expenses and expanding economic exchanges between Korea and Russia. Also it was agreed in November 2007 to promote international logistics business by way of renting cargo trains to the North Korea and establish railroad transportation between China and North Korea, by establishing Korea-China joint logistics company. Hereafter, KORAIL is intending to expand international logistics business connecting South-North-China by strengthening railroad cooperation with North Korea.

**Korea-Japan RSR (Rail Sea Rail) Service**

Actual result of yearly railroad transport of export-import container exceeded 1 million TEU as of December 2006. Although this figure is barely 9.9% of the number of containers that are in use for export and import, it recorded distinct continuous growth of a yearly average of 8.5% for recent five years. If allotment rate of railroad is increased by 1%, there would be an effect of reduction of national logistics expenses, by over KRW 800 billion. This results in heightening national competitiveness in a long term point of view. Korea and Japan engaged a protocol with Japan Cargo Railroad Co., Ltd. (JR Cargo) in September 2006 to fully promote "International Complex Uniform Transportation Business" that is for connecting export-import container cargo to the railroad system and had a practical discussion. At this point, KORAIL precisely scrutinized possibilities of transporting Multi-Con (loaded with 3 x 12 feet containers in a 40 feet container), which can transport 12 feet container that is mainly circulated in Japan by domestic railroad and by sea transport. KORAIL, through the tactical cooperation with RailLogis Co., LTD. and Nippon Express who will act as a Forwarder and ship companies who are undertaking sea transportation, since March 2007 when this service was practiced, made it possible to send freight to Japan faster than by the existing container ship at a lower cost than air transport. Korea-Japan RSR Service is a Door to Door service delivered within 60 hours from Seoul to Tokyo and at the same time, suitable to small quantity, multi items and frequent freight transportation method. Owing to the introduction of Korea-Japan RSR Service, KORAIL made a foundation to face international rail logistics business era by showing an effect of international delivery sales growth of KRW 2 billion in 2007 while it was barely KRW 500 million in 2006.



South-North Railroad by restoration of Trans-Korea Railroad, as a Bridgehead connecting continental railroad towards Europe across Siberia, reopened in 2007

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# economic value

## chapter 3

Where there is a connection of rail,
a new value comes into being existence.
KORAIL enhances the value of time and space.

By 56.4% of the allotted rate of long distance section transportation of KTX, whole nation is connected by a half-a-day life zone.

By KRW 58 trillion of the effect of expectation for Yongsan station surrounding area development,

the regional economy activates. Logistics expenses – 50% of car, increase customer's competitiveness.

Beginning of a responsibility to the society by the enterprises is a contribution through the creation of economic value.

The greater value created by KORAIL, the broader range of value towards society.

**KORAIL, Dreaming of an Accompanied Growth with Society**
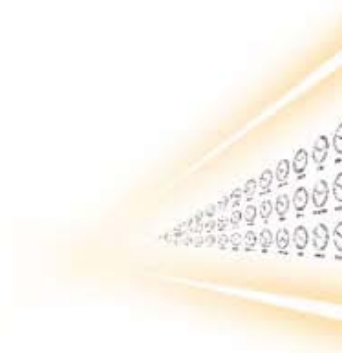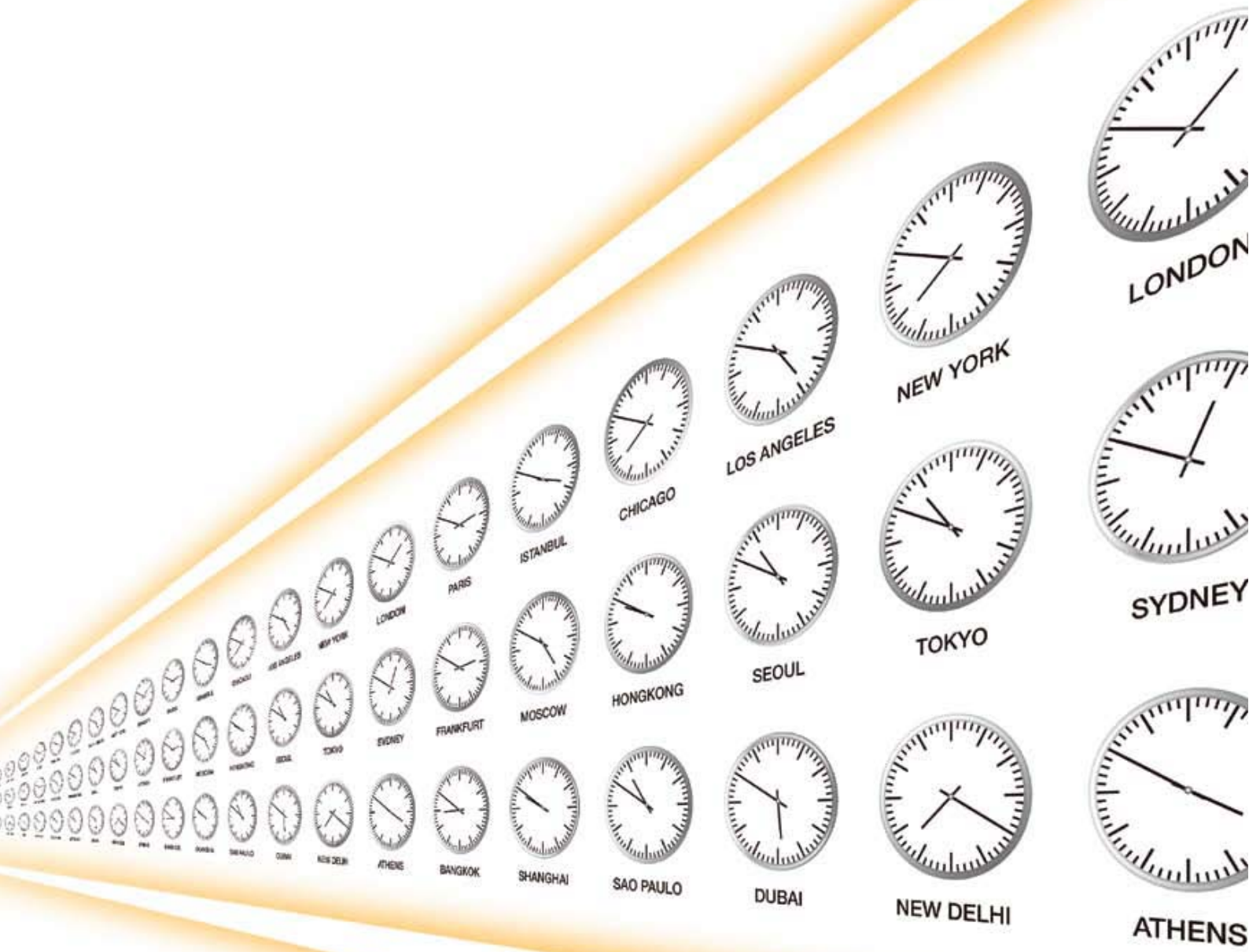
# value

network

# Disclosure on Management Approach
## Economic Performance Management System

### Vision and Strategy >>

Based on the corporate vision, KORAIL derived a motto "An enterprise value improvement for the future growth" as a management strategy of financial part.
KORAIL established and executed promoting strategy for the maximization of enterprise value through the healthy financial structure and the construction of value management system in accordance with financial management strategy.

### Driving Tasks >>

KORAIL is completing the system for sustainable management by executing the promoting strategy of financial management target by correcting and supplementing the existing mid-long term financial strategies, with strengthening ability, settling crisis management culture and wide spreading Economic Value Added (EVA) system.

### Organization >>

- Strategy planning team is in charge of establishing mid-long term financial strategy based on mid-long term business strategies.
- Finance management office is in charge of the settlement and execution of system for the whole financial situation.
- Working-level investment committee is in charge of budget deliberation as to coincidence with business strategies, and legal and technical appropriateness.
- Investment committee is in charge of main deliberation such as decision of investment, scale, and time and appropriateness of details of project to manage risk of investment.

**Materiality Test** _ As a result of importance evaluation through the [IPS Materiality Test Model ™], improvement of financial structure was derived as the most important (very high) issues, while the creation of value by each project, and sustainable management investment etc. were derived as important (high) issues. These are included in the report.

| Medium >> | High >> | Very High >> | Materiality |
| --- | --- | --- | --- |
| | Creation of Economic Value by each project, sustainable management investment | Improvement of financial structure | >> |

### Key Achievements and Future Plans

| | Item | Key Performance | | | Plan |
| --- | --- | --- | --- | --- | --- |
| | | **2005** | **2006** | **2007** | **2008** |
| **Growth** | Sales per person (in 100 millions of KRW) | 1.02 | 1.04 | **1.08** | 1.17 |
| **Profitability** | ROA (%) | △4.3 | △3.8 | **0.9** | 5.8 |
| | ROE (%) | △7.0 | △6.5 | **1.6** | 9.8 |
| | Net income (in 100 millions of KRW) | △6,062 | △5,260 | **1,333** | 1,403 |
| **Stability** | Debt-to-equity ratio (%) | 70.3 | 68.9 | **72.0** | 79.8 |
| | Liquidity ratio (%) | 81.3 | 54.1 | **96.4** | 111.7 |
| **Corporate Value** | EVA (in 100 millions of KRW) | △13,129 | △11,857 | **△7,780** | △1,023 |
| | Brand Royalty (in 100 millions of KRW) | 0 | 13.0 | **26.4** | 20 |

# 3.1

## ECONOMIC VISION AND PLAN

KTX's total passengers exceeded 100 million for three years after the opening of KTX, and its daily average passengers exceeded 100,000. Currently, KTX shows over 50% of transportation allotted ratio in the long distance section. KORAIL is strengthening the competitiveness in the field of transportation. Meanwhile KORAIL is endeavoring to improve the financial structure and to solidify the foundation of economic value producing base through the multiplying businesses such as developing station influence areas and fostering logistics business, and cut-off of corporation wise expenses.

### Mid-Long Term Financial Plan

To attain enterprise vision, "Great KORAIL increasing the value of time and space" systematically and effectively, a mid-long term road map is set up to proceed sustainability management by providing a foundation for business normalization through the improvement of financial structure.

As a first stage (2007) of road map, to attain the target of 'financial structure improvement', a unified financial plan was established, and Contingency Plan using station influence area development plan and management plan were set-up. Also risk management was expanded by constructing business renovation and financial risk management system, and EVA system was expanded to a company-wide level. A base of EVA system was provided by always monitoring

the analysis of Key Value Driver (KVD) for the EVA index. During the second stage (2008-2010), in order to provide a foundation of management security, KORAIL is planning to establish sustainable management plan, and focus on strengthening and expansion of business management system such as the competitiveness of goods, the strengthening promoting ability of new projects, and the expansion of risk management culture.

In the third stage (2011-), KORAIL aims at establishment of sustainable management system to leap to a global complex transportation enterprise.

**Mid-Long Term Financail Policy Roadmap**



**Value Innovation**

**2007**

#### Financial Structure Improvement

- Mid-long term financial plan business innovation
- Reorganizing transportation business focusing on KTX
- Fostering new business such as station areas development business
- Company-wide expenses and costs reduction
- Construction of financial risk management system
- Provision of foundation for expansion of EVA system

**Innovation for Growth**

**2008 ~ 2010**

#### Foundation of Management Security

- Establishment of sustainable management
- Differentiating competitiveness of KTX goods
- Strengthening promoting ability of new plans
- Composition of management improvement system at all times
- Spreading company-wide risk management
- Spreading EVA system

**Sustainable Innovation**

**2011~**

#### Sustainability Management

- Completion of sustainable management system
- Establishment of transportation system focusing on KTX
- Leap to the global complex transportation enterprise
- Establishment of occasional management improvement system
- Composition of advanced risk management system
- Establishment of EVA accomplishment and compensation culture

## Growth _ Operation Performances by Business

### Passenger Business (KTX)

KORAIL analyzed in detail the prevention of global warming, environment of the prevention of warming, the reestablishment of Government's transportation system focusing on railroad, social change of giving values on time, and improvement of customers' expectation level. Based on these environmental analyses, KORAIL endeavored to realize the efficiency and profit of transportation business and the improvement of services through the train operation system focusing on KTX, concentration of ability on the main prosperous goods, and service quality improvement focusing on customers. To reach an efficient transportation system, a stable operation system of KTX was required first of all. Accordingly, all of the lines were designed to fit to domestic weather conditions and made possible to supply electricity under any bad weather. For the monitoring of all the electric facilities for 24 hours, remotely controlled equipments were set up in the control center of central power. The gap of transportation demand was supplemented by establishing KTX operation plan that considers transportation demand and supply.

### Metropolitan Railway Business

Operation of express electric train was expanded by reflecting time value desire of the metropolitan area commuters of 3 lines such as Gyeongbu Line, Gyeongin Line, and Gyeongwon Line among the 8 Metropolitan Transit Lines. In particular, the number of daily express electric train services on the Gyeongin Line is 211. It runs every 2.7 minutes during commuting hours, which is operated elastically upon the demand of transportation. An integrated fare system is enforced to enable together with Seoul City Bus (since July 1, 2004), and Gyeonggido Bus (since July 1, 2007), which makes 75% of customers use Transportation Card. Stations are issuing term cards. These improve the efficiencies of station operation by expanding the usage rate of station business automation due to the usage of cards.

KORAIL also promotes improvement of station functions and efficiencies of operations by running 25 integrated stations that connects ticketing wickets and booths of selling goods among 148 general stations.
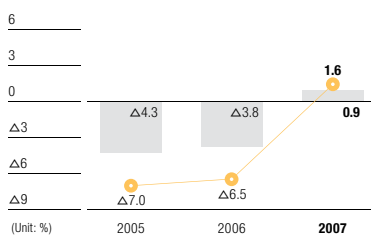
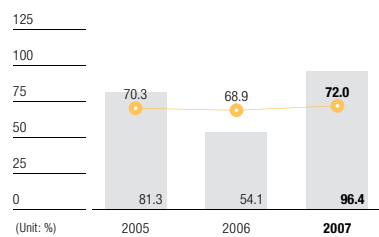### Economic Output Trends

| Growth | | ● Sales increasing ratio |
|---|---|---|
| 20 | | |
| 16 | 16.7 | |
| 12 | | |
| 8 | | |
| 4 | 3.7 | |
| 0 | | **1.1** |
| (Unit: %) | 2005 2006 | **2007** |

| Profitability | | ● ROA ● ROE |
|---|---|---|
| 6 | | |
| 3 | | |
| 0 | | **1.6** |
| △3 | △4.3 △3.8 | **0.9** |
| △6 | | |
| △9 | △7.0 △6.5 | |
| (Unit: %) | 2005 2006 | **2007** |

| Stability | | ● Liquidity ratio ● Debt-to-equity ratio |
|---|---|---|
| 125 | | |
| 100 | | |
| 75 | 70.3 68.9 | **72.0** |
| 50 | | |
| 25 | | |
| 0 | 81.3 54.1 | **96.4** |
| (Unit: %) | 2005 2006 | **2007** |
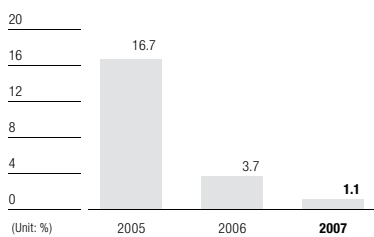
●
Korean Type High Speed Railroad KTX

●
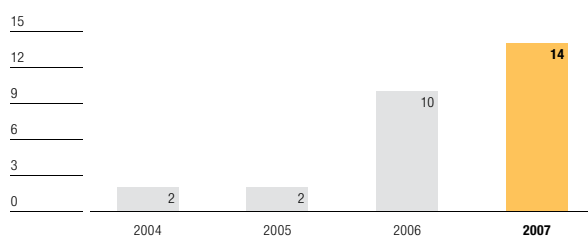Metropolitan Transit expanding the operation of express train for the convenient commuting of citizens

**Logistics Business**

Complex Uniform Transportation System • In order to improve the weakness of door-to-door delivery of railroad industry, KORAIL is utilizing a affiliates (KORAIL Logis Co., Ltd.) to continuously expand shuttle vehicles and operating/constructing 24 hours stevedoring systems. KORAIL is also endeavoring to construct railroad based logistics transportation system by expanding from 4 to 11 commissioned operation stations of affiliate's railroad container yard. KORAIL has reflected a plan, in the national nucleus transportation network plan, of constructing railroad service line to the harbors and industrial complexes of whole country, where large amount of material is available. KORAIL has also endeavored to obtain freight handling lot. As a result of such efforts, affiliates' sales of complex uniform transportation were increased by 26.4% from KRW 34.4 billion in 2006 to KRW 43.5 billion in 2007.

Sales of Customized Block Train • In response to changing logistics market environment, sales business of customized Block Train was introduced in 2004. The Block Train business is operated under straight forwarding systems from the departure station to the arrival station, without shunting the train into the siding at intermediate stations, which has the advantage of reducing time and expenses in logistics. Also, it shows high level of customer satisfaction by achieving transportation during the time of customers' desire. After the introduction in 2006 with 10 cars, it has been increased to 14 cars in 2007, and currently annual sales are KRW 16.4 billion, which occupies around 16.7% of the total container sales. Because Korea has a shorter distance of direct transportation section comparing to the other countries, KORAIL is not able to take an advantage of mid-long term transportation means, which results in decreasing the portion of transportation every year.

Under this situation, the operation of Korean Type B/T made an opportunity to provide an effective logistics system.

**Block Train Sales** (Unit: number of trains)

| Year | Value |
|------|-------|
| 2004 | 2 |
| 2005 | 2 |
| 2006 | 10 |
| **2007** | **14** |

**Sales of Logistics by Business** (in 100 millions of KRW)

| | 2005 | 2006 | 2007 |
|---|------|------|------|
| Complex Uniform Transportation Affiliates 3 PL Sales Amount | 198 | 344 | **435** |
| Block Train Sales Amount (Relative importance in container sales) | 23.4 (2.8%) | 56.6 (6.2%) | **164 (16.7%)** |

●
Construction of efficient and stable logistics system

●
Operation of Block Train business effective for the reduction of logistics time and expense

## Business Development

As a common view was formed on the promotion of an business development to improve railroad business in the sphere of pan-government, KORAIL is expanding growth power by deciding the complex assets development business as a new profitable model. This is able to be done by showing maximum internal power that is capable of utilizing asset development sites and national network of KORAIL. Merging and abolishing the railroad facilities that are scattered around the station, modernization and creation of complex sites are being executed. At present, station areas development business is under way in 7 areas including Yongsan, Susaek, Daejon, etc. In particular, Yongsan station area development business began as a part of railroad management improvement businesses in 2006 and it is being promoted as a core business of KORAIL. In the process of the promotion, it became the model for developing the area around the railroad station, by establishing the project of development that harmonizes with Hangang (River) eco-friendly through the agreement with the local government, Metropolitan City of Seoul. KORAIL is promoting a business developing the existing railroad station into ultramodern complex station. KORAIL is also considering a way to link the sites along the railroads to regional development

to develop the sites into residential, office, commercial facilities. Currently, 3 locations are under development, including the Haeundae and U-Dong. The development of sites along the railroads will be expanded from now on. Finally, KORAIL is undertaking Malaysia Railroad Vehicles Consulting Project that makes KORAIL's technologies acknowledged. KORAIL also positively promotes overseas projects such as Texas T-bone project and Construction of Railroad in the UAE.

**Sales Trend by Business** (in 100 millions of KRW)

| | | 2005 | 2006 | 2007 | 2008 (Plan) |
|---|---|---|---|---|---|
| Passenger business (KTX Sales Amount) | | 13,854 | 14,255 | 15,150 | **16,488** |
| | | (8,375) | (9,038) | (10,137) | **(11,111)** |
| Metropolitan Business | | 4,667 | 4,667 | 5,176 | **5,506** |
| Logistics Business | | 3,118 | 3,195 | 3,524 | **3,776** |
| Business Development | Business Development | 662 | 822 | 881 | **928** |
| | Yongsan Station Area Development Business | - | - | 3,736 | **18,003** |

● Income of Yongsan station area development business is the gain on disposition of investment assets, and it is included in non-operating income on the balance sheet.

## Sales and Composition Ratio



**2005** — **Total Sales KRW 3,402.9 billion**
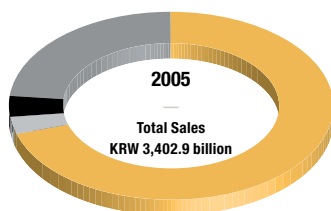
| | |
|---|---|
| ● Transportation Business | 72.4% (24,636) |
| ● Business Development | 2% (662) |
| ● General Entrust | 2.4% (817) |
| ● Maintenance Entrust | 23.2% (7,914) |

**2006** — **Total Sales KRW 3,530.2 billion**
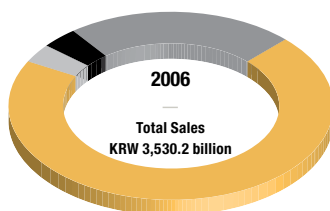
| | |
|---|---|
| ● Transportation Business | 72.6% (25,613) |
| ● Business Development | 2.3% (822) |
| ● General Entrust | 2.4% (836) |
| ● Maintenance Entrust | 22.7% (8,031) |

**2007** — **Total Sales KRW 3,570.3 billion**
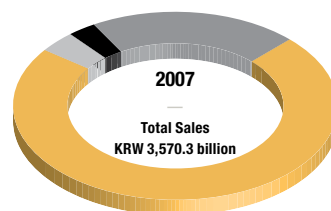
| | |
|---|---|
| ● **Transportation Business** | **74.8% (26,712)** |
| ● **Business Development** | **2.5% (881)** |
| ● **General Entrust** | **2.0% (737)** |
| ● **Maintenance Entrust** | **20.7% (7,373)** |

## Volume of Transportation

● KTX (in thousands of people)　● General (in thousands of people)　● Metropolitan Area Transit (in thousands of people)　● Freight (in thousands of ton)



| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | 32,370 | 36,490 | **37,315** |
| | 82,633 | 77,841 | **93,315** |
| | 835,993 | 854,814 | **878,664** |
| Total | 950,996 | 969,145 | **1,009,294** |
| | 41,669 | 43,341 | **44,531** |

## Transportation Distance



| | 2005 | 2006 | 2007 |
|---|---|---|---|
| | 19,076 | 19,079 | 18,680 |
| | 11,928 | 12,337 | 12,916 |
| | 10,108 | 10,554 | 10,927 |
| | 957 | 1,069 | 1,127 |
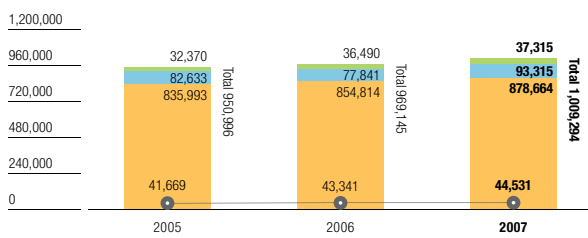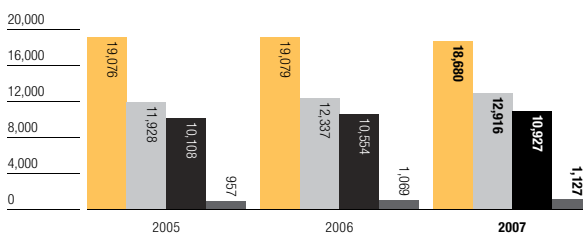
**Passenger transportation distance (** ● Trunk line (in millions of people km) ● Metropolitan area (in millions of people km)**)**
**Freight transportation distance (** ● General freight (in millions of ton/km) ● Container (in thousands of TEU)**)**

● Techniques of measurement, Management information system (EIS), Online Analytical Processing (OLAP)

## Profitability

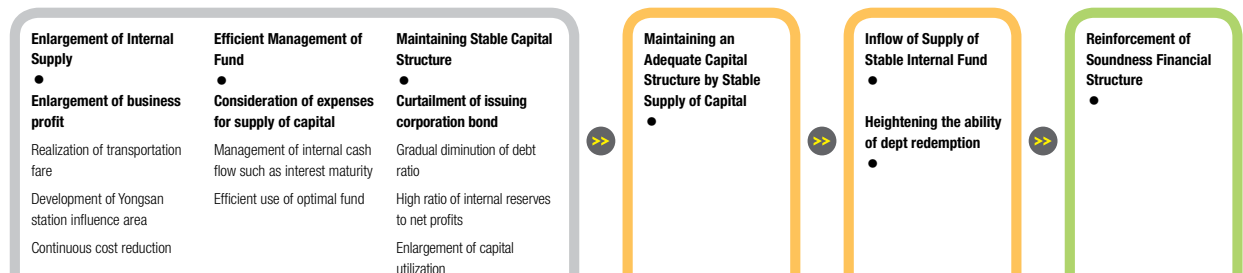### Financial Structure Improvement Efforts

To reinforce financial healthiness through the reduction of debt ratio, mid-long term funds supply strategy was established which included extension of internal supply, efficient operation of funds, maintaining stable capital structure, etc.

Yongsan Station Area Development • Yongsan station area development business requires KRW 28,191.8 billion of investment expenses. Forthcoming income of development is expected as KRW 30,876.9 billion, and after-tax income is KRW 2,585.2 billion. KORAIL invests 25% of holdings and expects an investment profit of over KRW 600 billion. An improvement of financial structure is being realized, by the possibility to reduce external supply. This is possible because it is expected to inflow every year from 2007 to 2015, KRW 8 trillion and KRW 1.2 trillion for the income by transferring land of the development of Yongsan station influence area and profit of installment interest of the payment, respectively.
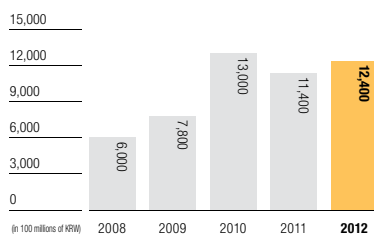
Risk Management System •

Enterprise Risk Management (ERM) System _ By the corporation-wide viewpoint, an efficiently predictable risk management system is constructed in two stages. In the year of 2006, as a stage of preparation, the corporation-wide risk management was investigated by the construction of risk management system by every business parts, and by the Enterprise Resource Planning (ERP) system. In 2007, as a 1st stage, risk prevention and afterwards management inspection system for whole organization was constructed through organizing corporation-wide team of exclusive charge for the risk management. By this, risk manual was created and a system for stepwise risk management was constructed. In 2008, as a 2nd stage, a ERM system is planned to be completed through the introduction of ERM system and settlement of risk management and operation of an early alert system.

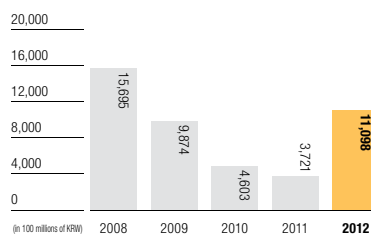### Mid-Long Term Capital Supply Strategy Diagram

| **Enlargement of Internal Supply** ● **Enlargement of business profit** Realization of transportation fare Development of Yongsan station influence area Continuous cost reduction | **Efficient Management of Fund** ● **Consideration of expenses for supply of capital** Management of internal cash flow such as interest maturity Efficient use of optimal fund | **Maintaining Stable Capital Structure** ● **Curtailment of issuing corporation bond** Gradual diminution of debt ratio High ratio of internal reserves to net profits Enlargement of capital utilization | >> | **Maintaining an Adequate Capital Structure by Stable Supply of Capital** ● | >> | **Inflow of Supply of Stable Internal Fund** ● **Heightening the ability of dept redemption** ● | >> | **Reinforcement of Soundness Financial Structure** ● |

### Financail Structure Improvement Projection

**Inflow Amount of Yongsan Station Area Income by Transferring Land**

| (in 100 millions of KRW) | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|
| | 6,000 | 7,800 | 13,000 | 11,400 | 12,400 |

**Scope of External Supply**

| (in 100 millions of KRW) | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|
| | 15,695 | 9,874 | 4,603 | 3,721 | 11,098 |

**Scope of Redemption of Principal and Interest**

| (in 100 millions of KRW) | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|
| | 12,187 | 13,010 | 15,093 | 14,142 | 12,220 |
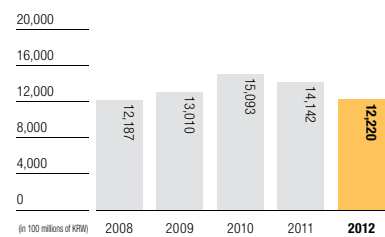
Risk Management of New Business _ By establishing corporation-wide systematic business risk management system, KORAIL has prevented an indiscrete business promotion. KORAIL also newly established an investment deliberation committee and an investment deliberation practical committee to strengthen omnidirectional business risk management of business process and result. KORAIL merged and abolished the existing similar functions through the establishment of investment deliberation regulations. KORAIL also unified risk management system by the business specialty, which includes business development, overseas projects, and new transportation business. The risk management was reinforced in the process of promoting business. This was done by examining by the investment deliberation practical committee at the stage of budget reflection and by the investment deliberation committee at the stage of execution.

**Risk Management Organization**

| Investment Deliberation Committee | • General Deliberation |
| | - Deliberate whether to invest or not, investment scale, investment time and appropriateness of business detail |
| | - Chairperson: Vice-President |
| | - Committee members: Ex-Officio members composed of 7 internal and 3 external experts |
| Investment Deliberation Practical Committee | • Deliberation of Budget |
| | - Duty: deliberation of coincidence with management strategies, legal and technical propriety |
| | - Composition of chairman and committee members: 5 to 10 people besides head of office of planning and coordination |
| | - Committee members: chairman designates 5 to 10 people among the $1^{st}$ – $3^{rd}$ class staff who hold professionalism (professional, accountant, and etc.) |

## Value Based Management (VBM) Model •

Economic Value-Added (EVA) System _ To introduce EVA system in 2005, a study of composing method of value management model and a corporation-wide value structure analysis was executed after calculating Invested Capital (IC), Net Operating Profit After Tax (NOPAT) and Weighting Average Capital Cost (WACC) that are appropriate to the characteristics of KORAIL.
In 2006, total EVA management system was introduced in relation to the total ERP system. In 2007, the EVA system was reestablished depending on the value management system model to rapidly cope with the changing business environment and secure the company's flexibility.

Economic Value-Added (EVA) Management _ Cost reduction and creation of profit were induced by the management of each cost center and profit center in connection with ERP system. Measurement of outcome corresponding to the power and responsibility by each responsibility unit, and standard of inter-corporation business transaction were established. By the effort of these, the 3 years trend of EVA is improving.

**Organization of Value Management Promotion**

| Management | Department | Main Performance |
| --- | --- | --- |
| Corporation-wide Management Accounting Organization | Planning & coordination headquarters | • General management of responsible accounting and economic value added (EVA) system |
| | Finance management office | • Corporation-wide cost reduction plan and standard management for internal transaction system |
| | Head office staff organization | • Outcome evaluation of responsibility unit, etc. |
| Management accounting organization by business | Planning team for each office of business (Passenger, Metropolitan area, Logistics, Vehicles, Facilities, Electricity, and etc.) | • Compilation of branches' budget and establishment of target |
| | | • Responsibility accounting of the businesses and combining information required by system |
| | | • Outcome analysis of the businesses and branches |
| Branch Accounting Organization by Business | Branch operation management team -Budget management by business | • Responsibility accounting of branches and combining information required by EVA system |
| | | • Investment and expenditure control for the goal |
| | | • Analysis of branches' performance |

## Long Term Investment for the Sustainability Management

R&D Investment • KORAIL is promoting 13 core tasks to aim at "creation of next generation BIZ model through ensuring core technology of railroad operation". KORAIL heightened energy efficiency and the base of eco-friendly technology development by establishing a target of reduction of greenhouse gas voluntarily and presenting executing methods under the governmental target of reduction, which was one of the 13 core tasks.

Accoring to the goal, 'Zero Railroad Accident' by 2015, KORAIL is also promoting R&D for the optimization of railroads safety and maintenance & repairing that were classified into safety management, vehicles field, electricity field and facilities field. As a result of each field, 12.1% of operation disorder reduction, 21.2% of vehicles trouble reduction and 22.7% of facility trouble reduction were attained.

In addition, KORAIL's application and registration of knowledge property right and international patent were extended, which showed the efficiency of research and development. KORAIL's R&D Investment was increased in a ratio of 0.7% of 2006 to 1.3% of 2007. KORAIL will, hereinafter, continuously concentrate its abilities on developing technology and making a practical use, to secure future growth power.

Mid-Long Term Investment • After resetting mid-long term investment plan for securing growth power and sustainable management, a total of KRW 1,814.7 billion was invested for the project of vehicles investment. Vehicles purchase contract was engaged for a total of 19 units of KTX-II, in preparation of opening second stage of Gyeongbu high-speed railroad and electrification of Jeonla Line. In addition, KORAIL is planning to purchase new technologic vehicle, tilting train, for prevention of derailment and improvement of running speed, electric motor car (EMU) and electric railcar, for Metropolitan area network and replacing junk vehicles. Together with this, KORAIL has another investment plan of a total amount of KRW 2,890.5 billion. This includes i) investment for efficient utilization of man power such as moving expenses of Yongsan vehicles facilities base, modernization of stations, unmanned automation, and ii) construction for Moving Block System (MBS), Automatic Train Protection (ATP), and Information Technology Architecture (ITA) for the stable operation of integrated management information system.
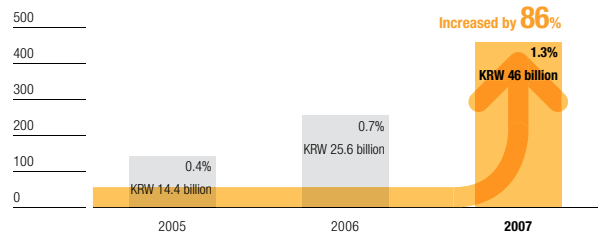
### Reduced CO₂ Emission Amount due to Railroad Allotment Rate

| Railroad Transportation Allotment Rate | | Reduced CO$_2$ Emission Amount (in thousands of ton) | Budget saving by the Amount of Discharge Decrease (in millions of USD) |
|---|---|---|---|
| Passenger | 8% | 92.3 | 33.26 |
| | 10% | 1,679 | 60.46 |
| | 12% | 2,434 | 87.66 |
| Freight | 14% | 1,484 | 53.45 |
| | 17% | 2,802 | 100.89 |

### R&D Investment by Year
(Unit: %, in 100 millions of KRW)

Increased by **86%**

| Year | Value | |
|---|---|---|
| 2005 | 0.4% | KRW 14.4 billion |
| 2006 | 0.7% | KRW 25.6 billion |
| 2007 | 1.3% | KRW 46 billion |

### Investment Plan by Year
(in 100 millions of KRW)

| 2008 | 2009 | 2010 | 2100 | 2012 |
|---|---|---|---|---|
| 10,672 | 11,566 | 9,312 | 7,036 | 7,365 |

KTX-II to come out in 2009
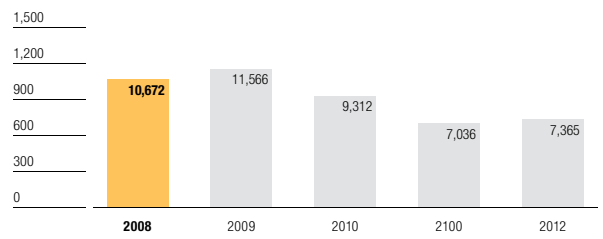
R&D investment

**Registration of Patent Performance**                    (Unit: case)



Increased by **123**%
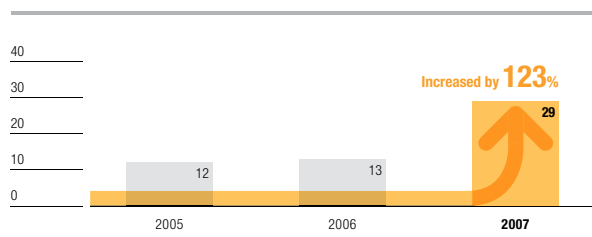
**Registration Status of Patent · Patent on New Device**        (Unit: case)

|                      | 2006 | 2007 |
|----------------------|------|------|
| International Patent  | -    | 1    |
| Patent               | 13   | 29   |
| Patent on new device | 3    | 3    |
| Total                | 16   | 33   |

Government Support • KORAIL is supported by the Ministry of Land, Transport and Maritime Affairs (former Ministry of Construction and Transportation) with the PSO compensation, support for self-improvement of KORAIL, railroad automation facilities, railroad vehicle purchase, and replacement of interior furnishings. KORAIL is doing consigned business such as maintenance and repairs of railroad tracks which is national property consigned by the Ministry of Land, Transport and Maritime Affairs (former Ministry of Construction and Transportation) and Korea Rail Network Authority.

**Government Support Details**                          (in 100 millions of KRW)

|                                                                      | 2005  | 2006  | 2007   |
|----------------------------------------------------------------------|-------|-------|--------|
| **Government compensation and support business**                     | 5,615 | 5,515 | 7,724  |
| PSO compensation                                                     | 3,000 | 3,486 | 2,850  |
| Support for self-improvement of KORAIL                               | 1,000 | 996   | 3,571  |
| Support for railroad automation facilities                           | -     | -     | 1,000  |
| Purchase of railroad vehicles                                        | 1,212 | 709   | 303    |
| Replacement of interior furnishings                                  | 403   | 324   | -      |
| **Government and public corporation Entrusted Business**             | 3,854 | 3,643 | 2,752  |
| Ministry of Land, Transport and Maritime Affairs entrusted business  | 1,766 | 1,709 | 2,197  |
| Korea Rail Network Authority entrusted business                      | 2,088 | 1,934 | 555    |
| **Total**                                                            | 9,469 | 9,158 | 10,476 |

# 3.2

## FINANCIAL STATEMENTS SUMMARY

**Summary of Income Statement**

(in 100 millions of KRW)

|  | 2005 | 2006 | 2007 |
|---|---|---|---|
| **Profits and Losses** | | | |
| Operating income (sales amount) | 34,029 | 35,302 | **35,703** |
| Operating expenses (cost of sales + selling and administrative expenses) | 39,402 | 40,639 | **42,117** |
| Operating income or loss | △5,373 | △5,337 | **△6,414** |
| Non-operating income | 2,499 | 4,087 | **9,474** |
| Non-operating expenses | 3,188 | 4,010 | **3,182** |
| Profit before income taxes | △6,062 | △5,260 | **△122** |
| Provision for income taxes | - | - | **△1,455** |
| Net income | △6,062 | △5,260 | **1,333** |
| **Sales by Business Group** | | | |
| Transportation business | 24,636 | 25,613 | **26,712** |
| Business development | 662 | 822 | **881** |
| General entrusted business | 817 | 836 | **737** |
| Maintenance and entrusted business | 7,914 | 8,031 | **7,373** |

**Summary of Balance Sheet**

(in 100 millions of KRW)

|  | 2005 | 2006 | 2007 |
|---|---|---|---|
| Current assets | 13,648 | 5,900 | **13,446** |
| Property, plant and equipment | 126,811 | 131,746 | **128,691** |
| Total assets | 140,495 | 137,646 | **142,137** |
| Borrowed liabilities | 52,415 | 48,487 | **49,545** |
| Other liabilities | 5,580 | 7,670 | **9,940** |
| Total liabilities | 57,995 | 56,157 | **59,485** |
| Paid-in capital | 86,408 | 93,051 | **92,893** |
| Capital surplus | - | - | **-** |
| Earned surplus (deficit) | △6,062 | △11,321 | **△9,989** |
| Capital adjustment | 2,154 | △241 | **△252** |
| Total owner's equity | 82,500 | 81,489 | **82,652** |

# social value

## chapter 4

Violin's beautiful music comes from the strings playing in harmony. Like a violin, KORAIL dreams of perfect harmony with its neighbor and environment.

**Healthy society increases the value of the company, and the employees' passion brings company's success.**

**Building a firm foundation of growth with mutual cooperation with its business partners,**

**and growing with support from the customers and the shareholders. By giving back portion of its profit,**

**KORAIL ensures the survival of it and its neighbor as a harmonious organic network.**

**Definition of living together is simply "helping each other".**

**KORAIL is living and practicing the very definition of the word 'living together'.**

**KORAIL in Perfect Harmony**

# harmony

# network

# Disclosure on Management Approach
**Customer Service Performance Management System**

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**Vision and Strategy** >>

In conjunction with its vision, KORAIL's business objective is to provide the best competitive transportation service to its customers.
To its effect, KORAIL's strategy for improving Customer Satisfaction (CS) include, creating customer value satisfaction with CS innovation, strengthening service capacity, service 'Level-up' in CS process, and social responsibility to its customers.

**Driving Tasks** >>

KORAIL is actively collecting and reflecting customer feedback to provide personalized customer service to each customer. To improve overall customer satisfaction and customer experience, KORAIL is making improvements in CS process and strengthening human service capacity. In addition, 'meeting customer needs' have been incorporated into the KORAIL CS charter in an effort to faithfully carry out social responsibility.

**Organization** >>

- Customer satisfaction center is responsible for overseeing CS research, CS strategic planning, and CS evaluation in all departments.
- CS team is responsible for the management of CS operation management committees in branches and the performances and planning regarding KORAIL's CS on each service.

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**Materiality Test** _ Using IPS Materiality Test Model™ for KORAIL Materiality test, communication with customers, service, and value creation has been drawn to be the most important (very high) issues, while customer satisfaction policy, and service capacity has been drawn to be the important (high) issues. This information are contained in this report.

**Medium** >>

Compliance with consumer laws

**High** >>

Customer service performance management, Service capacity

**Very High** >>

Communication with customers, Service value creation

**Materiality**

>>

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### Key Achievements and Future Plans

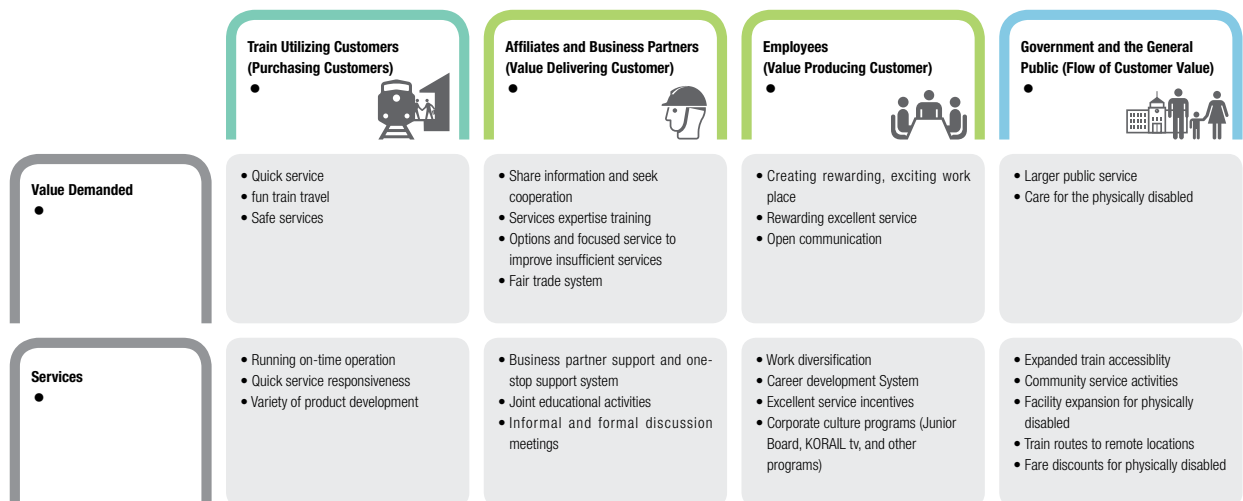| | Item | Key Performance | | | Plan |
|---|---|---|---|---|---|
| | | **2005** | **2006** | **2007** | **2008** |
| **Customer** | National customer satisfaction index (NCSI) (score) | 64 | 67 | **75** | 81 |
| **Satisfaction** | Customer satisfaction for public corporation (score) | 74 | 78 | **86** | 87 |
| **Service rating** | Station/train service monitoring (score) | 83 | 90 | **94** | 94 |
| | VOC processing satisfaction level (score) | - | 80.7 | **82** | 85 |
| **Customized** | The number of customized education | 9 | 61 | **70** | 70 |
| **CS Education** | The number of students in CS educational training | 731 | 3,131 | **3,355** | 3,500 |
| **Service diversity** | Self-ticketing rate/amount (%, in 100 millions of KRW) | 7.7/1,824 | 10.0/2,307 | **15.3/3,620** | 19.1/4,519 |

# 4.1
## CUSTOMER SATISFACTION EFFORTS

With customer satisfaction management as goals, KORAIL is identifying and improving each customer need. This resulted in establishment of KORAIL CS Charter and improvements in vehicle maintenance and on-time performance. KORAIL's train themed gifts designed from customer monitoring results are gaining popularity. In addition, KORAIL revitalized the voice of customers (VOC) and customer representatives, and KORAIL is running various employee programs to improve direct contact services.

### Customer Definition

Customers have been divided into four different categories reflecting the diverse customer needs created by the opening of KTX line and everchanging business environment. Newly defined customer categories include train utilizing customers, affiliates, and business partners, employees, and government, and the general public. KORAIL is promoting innovative, diverse CS business that creates customer value by focusing on providing services that meet the needs of each customer base.

### Customer Service by Customer Type

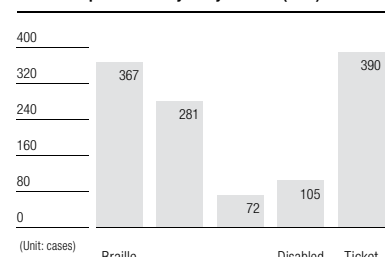| | Train Utilizing Customers (Purchasing Customers) | Affiliates and Business Partners (Value Delivering Customer) | Employees (Value Producing Customer) | Government and the General Public (Flow of Customer Value) |
|---|---|---|---|---|
| Value Demanded | • Quick service<br>• fun train travel<br>• Safe services | • Share information and seek cooperation<br>• Services expertise training<br>• Options and focused service to improve insufficient services<br>• Fair trade system | • Creating rewarding, exciting work place<br>• Rewarding excellent service<br>• Open communication | • Larger public service<br>• Care for the physically disabled |
| Services | • Running on-time operation<br>• Quick service responsiveness<br>• Variety of product development | • Business partner support and one-stop support system<br>• Joint educational activities<br>• Informal and formal discussion meetings | • Work diversification<br>• Career development System<br>• Excellent service incentives<br>• Corporate culture programs (Junior Board, KORAIL tv, and other programs) | • Expanded train accessiblity<br>• Community service activities<br>• Facility expansion for physically disabled<br>• Train routes to remote locations<br>• Fare discounts for physically disabled |

### Customer Satisfaction Improvement

**Improve Train On-Time Performance**   ● 2006  ● 2007

All Train: 95.6% (2006), 96.9% (2007)
KTX: 91.6% (2006), 94.1% (2007)

(Unit: %)
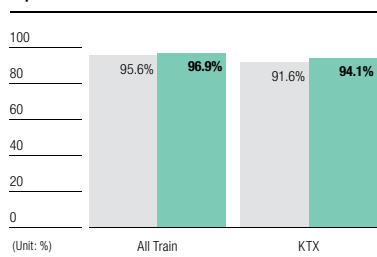
**Status of Metropolitan Rail Network Expansion**

| 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|
| 194.2 | 259.3 | 288.4 | 293.3 |

(Unit: cases)
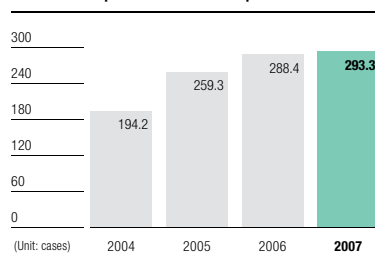
**Facilities Expansion for Physically Disabled (2007)**

| Braille signs | Maps | Escalator | Disabled parking | Ticket counter |
|---|---|---|---|---|
| 367 | 281 | 72 | 105 | 390 |

(Unit: cases)

4

KORAIL SUSTAINABILITY REPORT 2008

**4.1 Customer Satisfaction Efforts**   4.2 Employee Concerns   4.3 Harmonious Coexistence Efforts   4.4 Railroad Safety Efforts
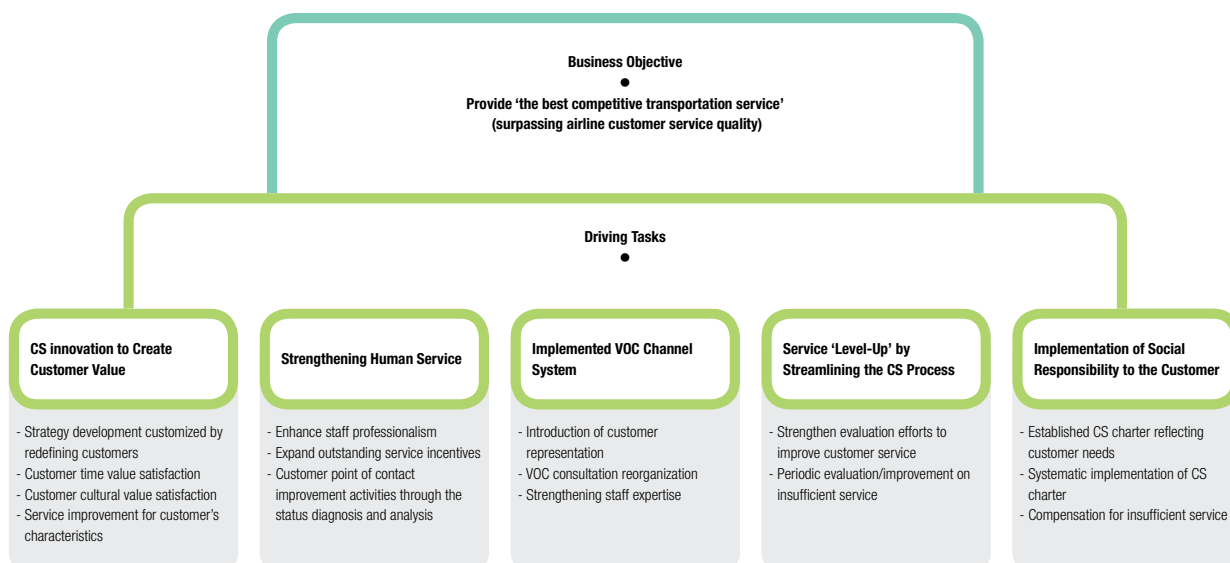
## Customer Satisfaction (CS) Driving System

To reach the customer satisfaction goals of providing 'the best competitive transportation service,' KORAIL is enhancing current service through establishment of service system and customer satisfaction as core of customer service. KORAIL implemented service 'Level-up' through CS innovation creating customer value, strengthening human service capacity, and streamlining CS process. Service 'Level-up,' social responsibility to customers, and VOC system creation are some of the projects KORAIL is engaged in to promote overall customer satisfaction.

**CS Management Goals and Challenges**

**Business Objective**

●

**Provide 'the best competitive transportation service'**
**(surpassing airline customer service quality)**

**Driving Tasks**

●

| **CS innovation to Create Customer Value** | **Strengthening Human Service** | **Implemented VOC Channel System** | **Service 'Level-Up' by Streamlining the CS Process** | **Implementation of Social Responsibility to the Customer** |
|---|---|---|---|---|
| - Strategy development customized by redefining customers<br>- Customer time value satisfaction<br>- Customer cultural value satisfaction<br>- Service improvement for customer's characteristics | - Enhance staff professionalism<br>- Expand outstanding service incentives<br>- Customer point of contact improvement activities through the status diagnosis and analysis | - Introduction of customer representation<br>- VOC consultation reorganization<br>- Strengthening staff expertise | - Strengthen evaluation efforts to improve customer service<br>- Periodic evaluation/improvement on insufficient service | - Established CS charter reflecting customer needs<br>- Systematic implementation of CS charter<br>- Compensation for insufficient service |

**CS Management Organization**

KORAIL's CS activities are handled by Customer Satisfaction Center, which consists of CS leaders in three operational departments in headquarter and six service departments in branches.

**Customer Satisfaction Management Structure**

**Vice President**

**Customer Satisfaction Center**
**(CS strategy, VOC operation)**

| **Passenger Business Headquaters (Logistics/Tourism)** <br> **(Human service, product development)** | **Engineering Headquarters** <br> **(Vehicles/facilities/environmental service)** | **Human Resources Development Center** <br> **(Service development/training)** |
|---|---|---|

| **Regional Branches** | **Regional headquarters** | **Passenger service** | **Operation service** | **Facilities service** | **Rolling stock service** | **Electrical engineering service** |
|---|---|---|---|---|---|---|
| | Sales team | Station/train crew office | Engineer/crew office | Facility/architectural engineering office | Rolling stock management department/RS office | Electrical engineering/signal /information & telecommunication office |

## Customer Satisfaction Management

All business and sales activities of KORAIL in this country and abroad comply with various regulations and respect the customs of each culture. There has been no violation of laws or regulate to date. KORAIL set customer safety as a top priority and provide timely, accurate information to its customers. KORAIL follow the Korean Ad Council's 'self-examination and regulation' in all its advertisements and thus has not violated any law or regulation in advertising and related activites to date.

### Customer Service Charter

KORAIL made an announcement of its Customer Service Charter that lists its promises to its customers and compensation for insufficient or inadequate services. Since its introduction in 1998, Charter underwent several changes to reflect the changing business environment and customer needs. Current Charter was last amended for the fourth time in October 2007. Major revisions include the addition of corporate social responsibility in the Charter preamble, concentration of key service implementation from 86 items based on 150 criteria to 59 items based on 92 criterias, and quantification of 82% of service implementation criterias.

KORAIL website (www.KORAIL.com) is a host of information including assessment of the services provided and quarterly performance in 2007 with compensation and correction of incorrect information. Through its website, KORAIL is continuously monitoring its performance and gathering feedback. Using Customer Service Charter as cornerstone, KORAIL is putting all its effort into creating value for its customer and customer satisfaction.

### The Process of Charter Revision

| Customer Monitor/Polls | Internal Experts | External Experts | Charter/The National Institute of the Korean Language | Confirmation/Publication |
|---|---|---|---|---|
| ● | ● Participation by all department | Charter expert/Customer experts/The National Institute of the Korean Language | ● | ● |
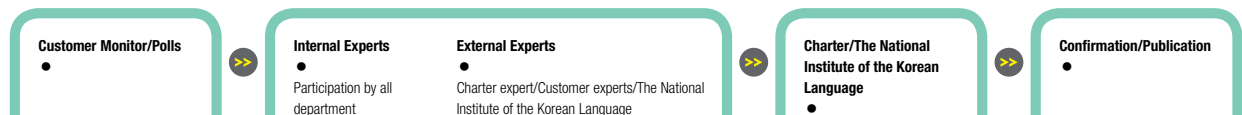
### Customer Service Charter Implementation Performance (summary)

| Item | Performance Standards | Performance (2007 Performance) |
|---|---|---|
| Safety | Driving accident and personal accident decreased by more than 10% per train travel distance (per million km) compared to last year | driving accidents: 0.25 cases (more than 24.2% reduction) |
| | 2007 goal: driving accidents 0.33 case, personal accident under 1.40 cases | Personal accident: 1.10 people (more than 21.4% reduction) |
| Reliability | With the exception of natural disasters and accidents, passenger train operated 100% as scheduled | 100% |
| Accuracy | Passenger train on-time rate at more than 96%, KTX at no more than five minutes, regular train runs at no more than 10 minutes late | KTX 94.1%/General train 97.8% |
| Convenience | More than 95% of customers can buy ticket within five minutes | Introduction of ticket purchasing waiting time at major stations |
| | Railroad Customer Center maintain average telephone response rate at 80% | 61.2% |
| | Trying its best to return lost items to its owner | 54,005 cases |
| Comfortness | Implementation of train (cars) monitoring and correcting insufficient areas to provide a comfortable travel environment | 93.8 points |
| Friendliness | Customer's praise for the excellent concierge service | 2,108 cases |
| Social contribution activities | Reserved 10% of its seat for physically disabled | 15% |
| | Love-Fund, Love Point donation performance and the economic value of social contribution activities | KRW 260 million |
| | Customer appreciation events | 313 events |
| Compensation for Insufficient Services | Cash and travel vouchers as compensation in cases where trains arrive late from scheduled time KTX (more than 20 minutes)/regular train (more than 40 minutes) | 81,078 cases |
| | For a delay of more than 1 hour for the electric train or the last train delayed more than 30 minutes, KORAIL offers no compensation | No cases to report |
| | Fare refund for duplicate seating incident | No cases to report |
| | Estimated processing time alert for a delay in complaint resolution | 1,458 cases |
| VOC | Customer's feedback from internet, postcards, phone, and fax | 47,576 cases |
| | Excellent customer suggestion compensation | 110 cases |
| | Satisfaction level for VOC management | 82.0 points |

## Customer's Demand

Fast Transportation Services • In order to know its customers better, KORAIL conducted various customer satisfaction survey, contact, and collective meetings. Result of the study revealed that customers valued fast service (on-time operations, shorter ticket purchasing waiting time) above all. In order to ensure on-time operation of KTX, KORAIL replaces and improves core parts to prevent vehicle malfunction. KORAIL strengthened capabilities of multi-controller with educational programs to yield an improvement of 96.9% from 95.9% in operational time rate. Additionally, detailed provision in CS Charter was amended to reduce the ticket purchasing time from seven minutes to five minutes for customer satisfaction. Ticket vending machine relocation, ticket purchasable from post office starting January 2007, and other improved services enhance ticket buying experience and convienence for KORAIL customers.

**Key Performance of On-Time Operation Improvement**

| Improvement Task | Summary of Contents | Department |
|---|---|---|
| KTX MB*<br>Restore Normal Functioning | replace and improve core parts to prevent vehicle malfunction | Rolling stock department |
| Multi-type operator training | Establishment of multi-controller policy and Securement of railroad traffic controller center capacity | Railroad traffic controller center |

• MB: Motor Block

Various Entertainment Services • KTX Cinema – To meet the growing demand of the customers, KORAIL introduced world's first movie theater service in high-speed KTX line traveling at 300km, thereby raising the KORAIL brand value. KTX Cinema design implementation include screen vibration dampening technology to maximize viewing pleasure. In its initial planning stages, KORAIL tested its concept through customer representative monitoring and secured investment through strategic alliance with movie studios to minimize business risks.

Mutual Cooperation with Local Governments – With the collaboration of local governments, KORAIL offers various theme trains like the Mountain Bicycle (MTB) Reports train with ridership of 57,913 people in 2007 (began April 2007), and the Sea Train that boasts the scenery of the East Sea for 80 minutes on rail between Samcheok and Gangneung with ridership of 11,220 people in 2007 (began July 2007). Wine Train, Lady Bird, Ski Tour Train are some of the other specialized services KORAIL offers.


KTX Cinema-world's first high-speed train movie theater with screen vibration dampening technology


In the Sea Train, one can enjoy the scenery of the East Sea for 80 minutes on rail over the 58.2 km course between Samcheok and Gangneung


Children enjoying the pedal driven rail-bike over railroad


Wine making and tasting, evergreen forest hiking, national museum visits, and colorful events that you can enjoy on the Wine Train


Facilities such as cafes and karaoke, mobile libraries, observation compartment, small-group and family–only compartments, and other specialized services provided on Lady Bird


Winter ski theme train with the ski loading space, caricature services, and various events in conjunction with Kangwon Land High1 ski resort

## Customer Representatives

KORAIL began operating customer monitor in 1997 to accurately assess the level of customer service and reflect the voice of customers. From 2003 to 2006, customer monitoring evolved to systematic monitoring policy, then in 2007, monitor evolved into customer representation. Customer representation is a KORAIL 'Prosumer' policy initiative with two-way communication to monitor and assess the risk involved in various business activities. Customer representative group totals 1,200 members consisting of student group (red group), domestic homemaker group (green group), socially disadvantaged group (yellow group), planning and analysis group (blue group), and NGO and community group (white group). These various group represent the wide range of customer's voice across age and socioeconomic status.

Additionally, through establishment of on/offline system and hosting biannual meetings, KORAIL collects fresh, up-to-date feedback and suggestion to fulfill committment to customer satisfaction. Internet homepage improvement program registered 1,200 suggestions from customers in 2007. Three suggestions were successfully implemented, and three other suggestions will be applied in the long-term review. For KORAIL's transparent management, 86 cases was completely disclosed, 27 cases was patially disclosed while 243 information was disclosed.

### Customer Representative System



**Exclusive Website for Customer Representatives**
●
Suggestion
'Hot Issue' Discussion
Branches activities

**Branches/Headquarters**
●
Opinions on key policy
Market research
Survey
Service Rating

**KORAIL Customer Representative**

**Customer Representatives**
●
Representation by group
Total 1,200 people
50-100 people per Branches
Headquarters customer representative
(Branches Staff/Experts Group)

**Customer Representatives Meeting**
●
Branches/Headquarters customer representatives
Biannual meeting
Key business policy

### Recruitment and Operation of Customer Representatives

| | |
|---|---|
| Organization | General customers such as regular customers, and NGO arranged by region and age |
| Recruitment | Self-applicants (general) and professional experts referrals to help increase participation and professionalism |
| Role | Active customer feedback activities in all rail stations |
| Operation | Create biannual, quarterly, and normal activities to secure the customer channel |
| Feedback | Project management card (handling status reported) Biannual evaluation meeting (results released) |
| Incentives | Participants recieve cash points, theme train tickets, and other gift certificates |

### Summary of Major Policy Issues from Customer Representatives

**Issues**

- Establish waiting line ethics
- Homeless-related issues
- Prevent illegal boarding
- Adjust KORAIL membership fee
- Cafe car installation/operation
- Improve train boarding ethics

Customer representative participation service monitoring

Monitoring result implementation service improvement

Waiting line ethics implementation expansion in all domestic stations

**Contents Reflecting the Major Policy**

Movie train promotional marketing diversification

Operating mobile ticket examination to discourage illegal boarding

### The Number of Customer Suggestions Compensation

(Unit: cases)



| | 2006 | 2007 |
|---|---|---|
| | 21 | 110 |

4    KORAIL SUSTAINABILITY REPORT 2008

**4.1 Customer Satisfaction Efforts**   4.2 Employee Concerns   4.3 Harmonious Coexistence Efforts   4.4 Railroad Safety Efforts

## Voice of Customer (VOC)

KORAIL operate Management Improvement Card (suggestion box) policy to reflect the customer feedback. To actively handle complaints directly from the field, KORAIL's 'Want Slip' policy (Feb. 2008) stations KORAIL representatives at each field location to resolve any complaints that are heard or filed. 2008 VOC Topics for Improvement Selection Committee raised 78 suggestions from VOC for improvement, of which 52 were adopted (28 fully implemented and 24 in the process).

Additionally, KORAIL created VOC database and its important contents organized into a VOC 'complaint forecast' chart (occurrence risk, occurrence, proliferation risk, and proliferation). Using this forecast, KORAIL is able to prevent and respond appropriately to any complaint issues and adopt monthly (then gradually switching to weekly) plan of action.

### Resolution for Major Customer Complaints

|  | Voice of Customer (VOC) | Resolution |
|---|---|---|
| May 2007 | List passenger transportation policy on the website | Passenger transportation policy provided on the bottom left of the reservations screen |
| October 2007 | Train connection information and information request | Installed banner link on the homepage |
| April 2007 | Lack of information on KTX family membership | How-to-guide provided for compensation and confirmation |
| October 2007 | Better guide on how to test print tickets from home | Reissued guide on how to test print tickets from home |
| May 2007 | Install click banner for reservation deposit return | Installed shortcut menu in the internet homepage |

### Customer's Suggestion Management Process

| Suggestion (by Customer Representative) | Exclusive Websites/Bulletin board/Registration by branches |
|---|---|

| Suggestion Analysis (by Branches) | Analyzed by branches (monthly) |
|---|---|

| Selection of the Challenges (by Passenger Transport Division) | Team meeting/Request of departmental review/Sharing the card of challenge lists |
|---|---|

| Suggestion Reply and Notice (Feedback) | Suggestion Reply/Selection of excellent suggestion/Suggestion registration and publication |
|---|---|

## Human Services

To redefine the framework of customer satisfaction, KORAIL began an outstanding company benchmarking and service innovation activites using the results from the customer satisfaction survey in 2004. Above activities revealed the necessity of strengthening human services, and KORAIL began actively enhancing the capabilities of the operating program. Customer satisfaction training programs were expanded and strengthened for the entire employees to participate in voluntary basis. To foster customer satisfaction-oriented culture, company began awarding excellent customer service (weekly and monthly) in 2006. KORAIL received 2,108 appraisals for the friendly service through VOC in 2007. 115 employees (weekly award) and 14 employees (monthly award) received excellent customer service award. KORAIL also began recognizing train stations with excellent customer service with plaque, award, and designation as the 'Best Station.' Moreover, KORAIL is operating intensive trainings and workshops for CS managers to secure human services in the customer interface areas such as service managers and CS coaches. In addition, KORAIL has expanded its service managers 132 to 256 and promoted CS competency training and customized field training such as 'Let's go! Service Academy' with its affiliates.

### The Challenge Management Card

(Unit: cases)

|  | Number | Contents |
|---|---|---|
| Customer Representative (Customer Support team) | 3 | Improving the internet homepage for customer representatives (New bulletin board, sorting by branches, notes taking features) Offering customer representatives the opportunity to participate in various events |
| Services (Marketing Team) | 1 | Transfer discount guide in Asan Station |
| Services (Marketing Team) | 1 | Accurate guide of SMS ticket usage information |
| Services (Passenger Service Team) | 1 | Flexible operation of announcements in night train rooms |
| Daegu Branch Sales Team | 1 | Location change of 'home ticket only exit' in Dongdaegu station |

### Service Training Status

(Unit: people)

|  | Trainees |
|---|---|
| Customer Interface Staff | 615 |
| Non-Interfacing Staff | 305 |

## CS Process

KORAIL has reflected its efforts to improve customer satisfaction level on self-innovative evaluation innovation with CS participation and feedback increases by differential incentives related to the internal management evaluation in CS level of public corporation, VOC process satisfaction level, and service monitoring. In addition, KORAIL is promoting higher customer service quality through self-monitoring of trains and stations, and it is managing services quality with Korail Service ScoreCard System (KSC) that monitors changing train and station environments based on mortoring checklist to adjust and change system and services.

## Facilities to Aid the Disabled and Disadvantaged

To provide service that is more convenient to the vision-impaired, special transmitters that provide voice guide throughout the station's key locations were installed in major train stations. In 2007, 440 transmitters are planned in 20 train stations.

Video phones with direct access to station offices were installed near the trainstation handicap lifts. 19 video phones in Ansan and 7 other stations are operational in 2007. 132 Automatic Gate Machine (AGM) were operational in 52 stations to aid the physically disabled in 2007.

**Facilities Status for the Disabled and Disadvantaged**    (Unit: stations/units)

|  | Quantity |
| --- | --- |
| Voice Guidance for the Blind | 20/440 |
| Video Phone | 7/19 |
| Automatic Gate Machine | 52/132 |

● KORAIL employees whose CS capacity are growing through continued customer satisfaction (CS) related training that strengthen direct human services

● KORAIL staff who are actively participating in the company's effort to provide friendly customer service through its friendly staff and the 'Best Station'

● Convenience facilities for the physically disabled

# Disclosure on Management Approach
## Management System to Raise Employee Satisfaction

**Vision and Strategy**  >>

Great KORAIL increasing the value of time and space. In conjuction with the vision, KORAIL is working towards the goals of nurturing professional talents, focusing on ability and performance, and maintaining great labor relations.

**Driving Tasks**  >>

KORAIL promotes policy that enhance employee satisfaction with a respect and compensation system based on the ability and performance, professional talent nurturing education system, and optional welfare policy to improve employee's quality of life.
With these activities and an active internal communication, KORAIL is working towards forming a great labor relations culture.

**Organization**  >>

- Personnel & labor office manages personnel planning and operations, and labor-management cooperation and welfare.
- Human resources development center is responsible for nurturing talents by planning and executing the company educational policies.

**Materiality Test** _ Using IPS Materiality Test Model™ for KORAIL Materiality test, increased retirement welfare, open dialogue channel, and self and ability development has been drawn to be the most important (very high) issues, while labor relations, respecting employee rights, and resolving employee difficulties has been drawn to be the important (high) issues. This information is contained in this report.

**Medium**  >>

Employment stability
Discrimination free

**High**  >>

Labor relations
Respect employee rights
Resolve employee difficulties

**Very High**  >>

Increased retirement welfare
Open communication channel
Self-development and ability development

**Materiality**

>>

### Key Achievements and Future Plans

| | Item | Key Performance | | | Plan |
|---|---|---|---|---|---|
| | | **2005** | **2006** | **2007** | **2008** |
| **Employees** | Index for employee's organization culture (score) | - | 59.0 | **66.4** | 67.0 |
| **Education and** | Education budget (in 100 millions of KRW) | 48 | 62 | **90** | 120 |
| **Training** | Trainees (number of people) | 42,071 | 91,954 | **118,504** | 170,000 |
| | Common ability training (Budget (in 100 millions of KRW)/people) | 171/726 | 25/17,564 | **30/38,935** | 33/45,000 |
| | Leadership skills training (Budget (in 100 millions of KRW)/people) | 1/520 | 2/1,381 | **5/6,196** | 5/1,257 |

# 4.2
## EMPLOYEE CONCERNS

Care and respect for the employees, valuable asset of the company, is what allows for a sustainable company and even a sustainable society. KORAIL provides a workplace with equal opportunity, performance based review and fair compensation, and a workplace where each employee can foster their own abilities so that they will grow with the company. KORAIL dreams of becoming a company where company and family, and labor and company exist on understanding and harmony.

### Providing a Great Place to Work

**Employees**

Based on 2007 figure, KORAIL employees 31,678 people averaging to about 14.7 years in work history. KORAIL provides the equal employment opportunity to fulfill its social obligation as public company, and KORAIL plans to continue expanding employment of train professionals.

**Employee Status by Position**  (Unit: people)

|  | Women | Disabled | Person of National Merit | Local Talent | Engineering | Total |
|---|---|---|---|---|---|---|
| Officers | - | - | - | 2 | 3 | 7 |
| Executives | 15 | 4 | 3 | 482 | 250 | 632 |
| Administrative | 287 | 32 | 16 | 8,767 | 2,910 | 895 |
| Sales | 1,642 | 188 | 118 | 242 | 112 | 9,184 |
| Technician | 34 | 16 | 9 | 1,281 | 1,168 | 1,481 |
| Field technician | 244 | 462 | 226 | 18,037 | 10,531 | 19,936 |
| Government service | 1 | - | - | 5 | 1 | 6 |
| Specialist | 119 | - | - | 124 | 31 | 137 |
| Total | 2,342 | 702 | 372 | 28,940 | 15,006 | 31,678 |

**Employee Status**  (Unit: people)

|  |  | 2005 | 2006 | 2007 |
|---|---|---|---|---|
| Employment | Regular | 30,963 | 30,499 | 31,678 |
|  | Contractor | 3,020 | 2,972 | 1,484 |
|  | Woman Managers | 16 | 18 | 18 |
|  | Average Work History (years) | 14.0 | 13.4 | 14.7 |
|  | Employee Total | 33,983 | 33,471 | 32,818 |
| Hires | Female | 339 | 34 | 339 |
|  | Disabled | 8 | - | 18 |
|  | Local Talent | 1,089 | 123 | 712 |
|  | Engineering | 2,131 | 70 | 597 |
|  | Total Employment | 2,874 | 166 | 889 |
| Turnover | Turnover Rate (%) | 1.6 | 3.2 | 2.9 |

### Compliance with the Principle of Equal Employment

According to the Code of Ethics (chapter two part eight, chapter six part three), KORAIL does not discrimmate against any person based on age, gender, education, religion, birthplace, and disability. KORAIL provide an equal opportunity for training and promotion based on personal skill and quality, and compensation based on the fair assessment of one's performance and achievement. When hiring new employees, company does not discriminate against any person based on gender, education, religion, and disability, but special attention is paid to prevent any restrictions by age and/or region discrimination. KORAIL began expanding employment of local talents in 2005 and science/engineering majors in 2006. As of the end of December 2007, employees average 14.7 years of work history with KORAIL, and new hires receive average of KRW 26 million. Men's average wage is KRW 56.14 million, while women's average wage is KRW 48.35 million.

Female Employee  •  To ensure equal opportunity among men and women in the promotions and job trainings, KORAIL introduced the gender equality goal and hired 517 women (507 planned) in 2007. Since 2005, KORAIL has been continually expanding the number of women in the headquarters and branches with the affirmative practices to create more opportunities for women in the work place and skills development. As a result, female workers in the planning and staff divisions numbered 600, up by 33% compared to previous year. To improve the status and welfare of the female employees, KORAIL employee policy includes the following: physical/prenatal examination time-off in compliance with the labor law, before/after childbirth and miscarriage/stillbirth vacation (including paid vacation for male employees), maternity leave (one year), and support (½ the wage) for men and women, paid maternity leave (KRW 500,000 per month), after childbirth, and paid holiday vacation days (90 days), and a childbirth bonus. In 2007, KORAIL improved the childcare support system with the expansion of childcare facilities and plans for more facility construction (1~2) every year.

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Expanding Employment Opportunities for the People with Disability •
KORAIL implemented affirmative hiring practices to create more employment
opportunities for the disabled. If KORAIL missed the target goal for disabled
employment, company held affirmative hiring practices, such as selectively
recruiting disabled from 5% of the applicants, recruiting disabled from 2% of
the hired personnel for suitable workplace, and special recruitment with the
recommendation from government agencies. As a result, KORAIL employees
702 disabled personnel, 1.6% more than the required 2% (393 personnel) of
governmental regulation in 2007.

Expanding Employment Opportunities for the Locals and Engineers • Since
2005, KORAIL actively, continually expanded employment rate of local and
regional personnel by targeting regional schools. In 2005, 38% (1,089 people) of
the new hires (2,874 people) were locals. In 2006, 74% (123 people) of the new
hires (166 people) were locals. In 2007, 80% (712 people) of the new hires (889
people) were locals.

Temporary Employment Practice • In 2007, KORAIL instituted regular 7th level
position and one special level position to improve temporary employees's rights.
As a result, KORAIL converted 1,392 temporary employees to regular employees,
which is the biggest number in Korean public corporation history. Once hired,
their special hiring status bares no favoritism in the personnel management
department.

## Respect for the Employee's Rights

KORAIL strictly abides by the Labor Standards Law and the International Labor
Organization regulation on child labor and forced labor. Additionally, KORAIL
implicitly follows the collective agreements and employment rules and regulations
on human rights and working conditions. To protect the rights of employees
according to the Code of Ethics chapter two part eight, KORAIL pursues
policies that prevent sexual harassment, resolve employee work difficulties,
ensure industrial safety, and resolve employee welfare difficulties. Starting
2005, company began offering training on ethical management to level one
management and above. In 2006-2007, ethical management training applied
to all employees. In 2008, KORAIL implemented ethical management seminar
according to the role and responsibility of the personnel. Each ethical seminar
is tailored to regular employees, middle management, and executives. Company
offers year-round ethics and sexual harassment prevention training in compliance
with regulations.

## Talents Nurturing and Performance-Oriented Human Resources Management (HRM)

### Impartiality and professionalism of HRM

KORAIL's HRM set the selection and development of globally competitive talent,
and the personnel management practice based on performance and competency
as a direction of 2007. To improve the fairness and professionalism of personnel
management, KORAIL implemented a three-stage long-term action plan.

**Human Resources Goals and Strategies**

| Human Resources Goals | Fostering Innovation-Oriented Professional Talents | | |
|---|---|---|---|
| Human Resources Strategy | **personal and organizational change and innovation** | **Strengthening Capacity (Common/ Leadership/Position)** | **Self-Initiative Lifelong Learning** |
| | Creating advanced performance with personal and organizational change and innovation | Educational system based on competency modeling | e-learning, Field-oriented educational program, Training based on organiziational and business strategies |
| Foundation of Human Resources | **Educational Infrastructure Development** Connection with Human Resource Management (HRM) ←→ Competency-oriented educational system ←→ Education strategy and implementation ←→ Professional talent management system by department | | |

### Fostering Specialist System

For strategic fostering of specialists by each division, KORAIL implements
competency based educational system through competency modeling by division
and position. In addition, educational programs by the target of fostering are
operated to raise effectiveness for performance of education.

Education Training System • To strengthen the competitiveness of HR by
setting up competency based educational system, fostering specialist system
is established in 2005 and specialist development strategy was reorganized
by educational innovation in 2007. Based on it, educational credit system is
introduced to develop learning culture that offer education consistently and
whenever it needed. And, learning program is diversified by capabilities, including
common competency, leadership competency, job competency, and personal
competency, and offered depending on the stages of job.

The Status of Educational Training • Common competency education is
composed of 4 selected area, such as customer oriented competency, innovative
thoughts, teamwork, and integrity, which comes from competency modeling. The
curriculum for common competency education is designed with the consideration
of behavioral character by capabilities. So, all employees have an opportunity to
take a class, including ethical management and integrity education, organization
revitalization, change management, and customer satisfaction management,
more than one time a year.

## Educational System Chart

**Implement Educational System**
Implement system which is easy to access whenever, wherever, and with whomever.

**KORAIL HRD CENTER**

**E-Learning (Cyber Education)**
- Repetitive life-time and self-directed education by category
- Open learning for job and core competency procedure
- Linked learning of before and after off-site learning

**W-Learning (Workplace Learning Center)**
- On-site work-centered expert course
- Coaching formation and just in time education
- Performing curricular management and education support at headquarter

**C-Learning (Development Learning Center)**
- Education to foster key specialists
- Operation of competency based curriculum (management strategy, globalization, leadership, marketing, and new technology training)
- Problem solving and participating education

**Leadership Competency Education _** Depending on responsibility by position, there are 3 leaders, strategic leader (1st and 2nd level), performance leader (3rd and 4th level), and self leader. In order to foster strategic leader, curriculum for strategic thinking and presenting vision is offered. Performance leader curriculum for middle level leader includes communication skill course for improving interpersonal skills and coaching competency. For the new recruits, curriculum for problem solving method is offered.

**Job Competency Education _** Considering job similarity, field of job is broke down to 12 area, including management planning, sales planning, sales, vehicle planning, vehicle technology, facility planning, facility technology, electricity

## Direction for Education System Development

- Education program offered by competency
- Diversification of education program by competency (offered online and offline at the same time) >>

- Segmentation of educational curriculum by competency level
- Two step composition with basic course and advanced course >>

- Providing common competency education program for necessary commonly necessary competency by employee
- Providing LRM by job position >>

planning, electricity technology, business development, technology development, and specialty and job education keyed to necessary competency, such as professional knowledge and technology, regulation knowledge, and flexibility/adaptability is operated.

**Foreign Language/Information Education _** To develop employee competency for global IT area, 87 cyber foreign course is opened and offered on an on-going basis. Also, certification achievement course which is authorized at home and abroad is operated.

**Other Education _** Mandatory continuing legal education, such as Information security and sexual harassment prevention education program, is offered regularly. Acknowledging the direct relation between employee satisfaction and job efficiency, life plan course, such as financial technology class, is managed. These courses are divided into 3 ages period: before the age of 45, age 45 and over, and pre-retirees. Education and training policy is managed with educational credit system which provides fair performance evaluation based on the level of

## Roadmap for Fostering Specialists

| | | 2007 | 2008 | 2009~2010 |
|---|---|---|---|---|
| Phase | | Solidify Foundation | Development Stage | Mature Stage |
| Direction of Fostering Specialists | | Building up performance-oriented HRD system | Strategic forstering core/based human resource | HR implementation |
| Driving Tasks | The Leadership of Change and Innovation | • Establishing KORAIL's HR<br>• Ethic management, organization revitalization, extending procedure for change and innovation<br>• Introducing leadership education by position | • Fostering professional specialist by field<br>• Management of human resource pool<br>• Nurturing internal instructors | • Leading role for professional specialist and global specialist<br>• Cultivating human resources in phases<br>• Entering education consulting business |
| | Competency-Oriented Education System | • Education curriculum development by competency (common/leadership/job)<br>• LRM design by field | • Introducing and operating competency diagnosis system<br>• LRM maintenance by competence<br>• Development of educational performance analysis tool | • Settlement of specialist fostering system<br>• Competency development customized by employee's characteristics based on performance diagnosis |
| | Lifetime Learning Foundation | • Strengthening new technology education<br>• Carrying out career development plan<br>• Introducing life time design education<br>• Introducing and operating learning organization<br>• Extending E-learning by competency | • Customized job conversion training program operation<br>• Implementing support system for learning by introducing mentoring<br>• Revitalizing learning organization activities | • Settlement for corporate culture of learning<br>• Operating college in the company<br>• Entering E-learning business |

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self development effort and helps to implement constant learning system for employee.

## Competency-Oriented Training System

| Common Competency • | • Customer-Oriented<br>• Innovative thinking<br>• Teamwork<br>• Ethic |
| --- | --- |

| Leadership Competency • | • Strategic thinking<br>• Job driving force<br>• Communication<br>• Problem-solving competencies etc. |
| --- | --- |

| Job Competency • | • Professional knowledge and technology<br>• Emergency response capability<br>• Process improvement<br>• Safety management |
| --- | --- |

**Eliciting Competency •**
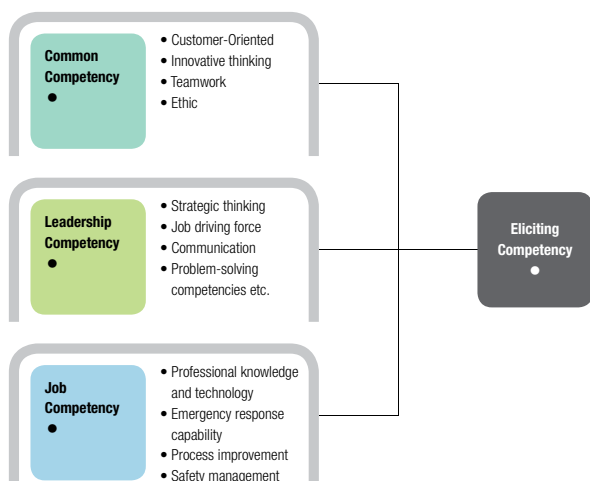
### Training Status and Plan

| | A number of Trainees | Training Time | | Training Expense |
| --- | --- | --- | --- | --- |
| | | Per person (time) | Total in KORAIL (in 100 millions of KRW) | Per person (in thousands of KRW) |
| 2005 | 33,157 | 21 | 76 | 238 |
| 2006 | 93,687 | 60 | 62 | 194 |
| 2007 | 135,082 | 88 | 79 | 247 |
| 2008 | 170,000 | 111 | 120 | 375 |

• Training time estimation: average number of class performance per person (21 hours per course)

### Securing Professional Specialist

In 2006, KORAIL has established and implemented the strategy for education and recruiting employee to securing specialist who has superior competency applicable to railroad industry. KORAIL is offering an opportunity to build on-site experience and learn theories in practice through internship. From 2007, when hiring new employee, KORAIL has applied apprenticeship, which is converted from previous internship when hiring new employee. In addition, the recruiting system, that can help company to hire best talent, allows recruiters to quickly and efficiently manage recruiting process. KORAIL makes every effort to obtain specialists and increase positive corporate image with providing high quality service to candidates, including development of convenience program (sending SMS and email), improvement of information delivered to candidates, and supplement of recruiting FAQ. Competence interview method (Assessment

center) was introduced in 2008, and KORAIL has been trying to select best-fit specialist in differentiated area by developing various interview tools, such as presentation, in-depth interview, group discussion.

### Operation of Career Development System

KORAIL has been in the need for an improved systematic career development criteria and procedure in terms of operation of rotating assignment and career development system focusing on fostering managers. Since 2007, based on career development system operation tasks, career development track and standard career path have been operated and career consulting system, which is career development plan and career consulting, is also managed. These systems allow company to improve job competency, foster professionals, and seek harmony between the need of individuals and organization.

### Operation of Performance-Oriented Position

KORAIL promotes its HR operation that separates its salary from job position in order to lay the foundation for performance-oriented personnel system. In 2007, KORAIL abolished various barriers in HR with dispatching system based on performance. Open competition for promotion established by continuously extending public recruiting has been executed since 2005. As a result, in 2007 16 employees were promoted as follows: 1) four employees in 3rd level promoted to 2nd level as team leaders. 2) Eight employees in 3rd level person performed 2nd level job. 3) Four high performing specialists in 3rd level was promoted to 2nd level. Serial cross positioning (12 employees) and other serial conversion (49 employees) were accomplished. The frequency of public recruiting was increased by 29% compared to 2006, and competition ratio also increased from 3.9:1 to 6.2:1.

**A Number of Public Recruiting** (Unit: case)

Increased by **29**%

| | 2005 | 2006 | 2007 |
| --- | --- | --- | --- |
| | 6 | 91 | 117 |
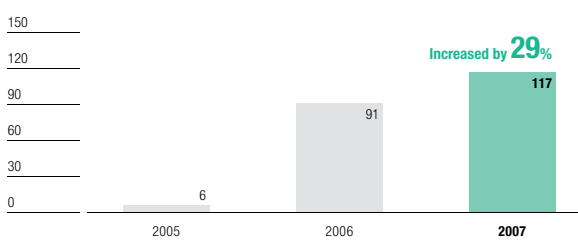
**Competition Rate for Public Recruiting**



| | | |
|---|---|---|
| 4.9:1 | 3.9:1 | 6.2:1 |
| 2005 | 2006 | **2007** |
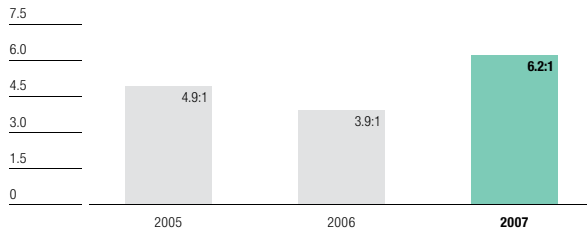
### Fair Evaluation Culture

KORAIL has been accomplished performance-based personal management by objective and fair evaluation of job competence and performance. Since 2005 evaluation and compensation strategy for accomplishment and competence has been performed. According to this strategy, evaluation contents and targets were continuously extended. In addition, an annual salary increment method and selection of the employee based on fair evaluation results have been improved. The evaluation system of performance and competency for 2nd or higher level positions has been implemented since 2007, to evaluate comprehensively, send feedback, and categorize result of evaluation into five stages to reflect on compensation. To ensure objectivity and reliability of the system, comprehensive evaluation is composed of 60% of achievement evaluation, 20% of multi-facet evaluation, 10% of integrity evaluation, and 10% of committee evaluation.

**Performance/Competence Evaluation and Compensation Strategy**

| Stages | ~2006 | 2007 | 2008 |
|---|---|---|---|
| Evaluation | Job grades | Achievements on 2nd level or higher/Competence evaluation | Achievements on 2nd level or higher/Competence evaluation |
| Recipient | 2nd level or higher | 2nd level or higher and professional | 2nd level or higher and professional |
| Raising annual salary | Raising annual salary equally | Raising annual salary differently | Expanding the difference of annual salary increase |

### Performance-Oriented Compensation System

Since 2005, KORAIL has expanded its annual salary increment method and the selection of. From 2007 a regular salary increment was abolished. Instead, annual salary banding, and accumulative basic annual salary differentiation system by job position (Broadbanding by job level) were introduced. The incremental rate of incentive is based on the individual and organizational evaluation. As a result, the incremental gap was extended to 10% from 2006, and the recipient criteria was changed from 2nd or higher level of professionals to 3rd or level.

KORAIL gradually extends the basic annual salary system by employees'

performances and accomplishments in order to facilitate performance-oriented culture with personal goal management.

### Employee's Health and Safety Management

### Industrial Safety and Health Committee

Industrial safety and health committee, the highest decision-making body, maintains employees' health and safety in the best condition and handle main issues related to safety and health to create pleasant working environment. In 2007, during three times meetings, issues regarding physical examination and special aptitude test were discussed.

Through the result of regular health examination for employee, KORAIL improves the work environment with follow-up which meet international labor organization (ILO) agreement. And, there is health and safety management team within the transport & safety center which managed main issues for safety and health to maintain employees' health and safety in the best condition and make comfortable working environment.

**The Status of the Number of Deaths by Job Accident**   (Unit: number of poeple)



| | | | |
|---|---|---|---|
| 6 | 3 | 2 | **0** |
| 2004 | 2005 | 2006 | **2007** |
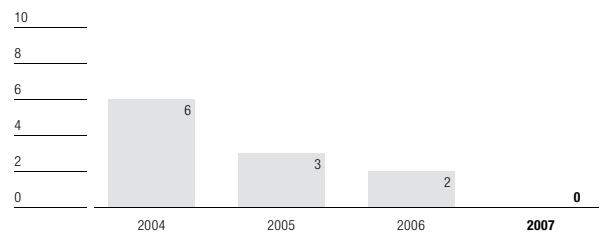
**Main Activities of Industrial Safety and Health Team**

- Establishing plan regarding industrial safety and health
- Making and managing company regulations for industrial safety and health
- Analyzing industrial disaster and establish preventive measures
- Training and checking for industrial safety and health
- Work related to operation of central industrial safety and health committee
- Establish planning for health examination (including health examination job in headquarter)
- Other industrial safety works which followed after the law of industrial safety and health

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## Industrial Safety and Health System Implementation

In 2007, Korean Railroad Industrial Safety & Health (KRISH) was developed so that safety health system was strengthened. Standard system was established by integrating distributed safety and health information. Function focused on prevention activities by system was consolidated and information linked to enterprise resource planning (ERP) result in high-efficiency.

### Industrial Safety and Health System



**Industrial Safety Management**
●
-Status of facilities
-Safety report for work process
-Industrial safety management
-Educational management
-Partner firms management
-Protective device management
-Safety sign

**Prevention management from hazardous factors**

**Industrial disaster management**

**KRISH**

**Prevention management from risky factors**

**Employee health management**

**Industrial Health Management**
●
-Work process management
-The result of health examination
-Measurement of work environment
-Musculoskeletal system
-MSDS

### Industrial Safety and Health System Improvement

After KORAIL turned into a public corporation system, as the importance of industrial safety and health was standing out and becoming issues, KORAIL has improved Industrial safety and health system and organization. In July 2006, industrial safety and health department job was detached from safety management regulation so that it implemented and performed separately. There were 62 full-time safety manager was assigned and managed in 25 branches and subsidiaries to ensure self-imposed safety condition. KORAIL make every effort to strengthen competency for managing industrial safety and health by checking status for industrial safety and health job achievement in 2007, measuring the understanding of industrial safety and health regulations, and opening workshops.

### Railroad Operation Certification Management

To ensure the basic requirement of employee in railroad operation for preventing human error, company had engine driver and controller receive physical examination. The employee who fails to meet requirement stripped their duty or transferred to low responsibility job. The appropriateness of train driver is checked before getting in by aptitude test such as test for alcohol, fatigue, and disease. And safety training is performed. KORAIL generates motivation and promotes improvement of drive skills by selecting best driver by types of car (KTX, diesel locomotive, electric locomotive, and electric car). Job achievement capability evaluation for controller is continuously performed. Reserve controller is selected and apprenticeship training performed for them.

### Consolidation of Industrial Safety Health Management Competency

| Activities | |
|---|---|
| Checking status for industrial safety and health job in institution in work-site (May, 2007) | • Spreading spirit for industrial safety and health and checking status of following industrial safety and health law (17 branches and rolling stock management departments)<br>• Checking and guiding the status for industrial safety and health management and safety management |
| Measuring the understanding of industrial safety and health law (October, 2007) | • Participants: 223 people including management director, safety manager, health department manager<br>• Method: all measured by on-line<br>• Results: achieving 89.6 point on average which is in high-level |
| Opening workshop for strengthening industrial safety competency (November, 2007) | • Studying and discussing professional knowledge by inviting outside and inside experts including professors<br>• Participants: 62 people including safety manager and health department managers |

### Aptitude Test for Train Crew



**Attendance** — Check in for train crew (train crew office)

**Aptitude Testing** — Appropriate rest/fatigue rate/disease or alcohol rate

**Training** — Weather information/railroad condition/safety education

**Train Crew** — Train Shift/compliance with regulation (riding together with a person in management level if necessary)
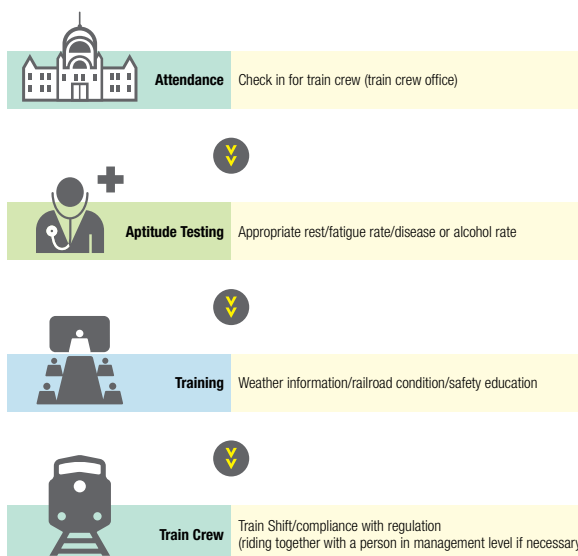
### Industrial Safety and Health Training

In keeping with industrial safety and health training, law of industrial safety and health training article 72: training for management directors required by law, KORAIL is developting and implementing educational training program.

**Cyber Education** • Since 2007 cyber education curriculum has been opened, total 4,656 management directors took a class for 40 hours in six weeks.

**Industrial Disaster Education** • Practical handbook for industrial safety and health was published to increase understanding of industrial safety and health law and apply the law at worksite. Also, case studies for railroad accident

and analysis report was published to raise awareness of safety management, increase sense of safety, and prevent recurrence.

### Welfare System

**Welfare and Benefit System**

KORAIL supports employee's health, safety and happiness. KORAIL operates various welfare system and facilities such as cafeteria style benefits program focusing on recipients to improve quality of life by understanding employee's needs. In addition, mutual aid association and railroad community credit cooperatives have been operated for financial support. The system was improved by lowering the qualification for co-signer system (from three people to one person), lowering loan qualification criteria of association membership (from 1 year or more to 1 month or more), improving loan applying methoad (from turning it into branches to sending it directly to headquarters by mail).

In addition, KORAIL operates daycare center for its employees to reduce the child care duties. Its employee's children dormitory is also operated in order to support employee's children to study and offer pleasant environment.

**Welfare and Benefit System**

| | Main Subjects |
|---|---|
| Insurances by Low | The four social insurances by law which includes the national pension, health insurance, unemployment insurance and worker's compensation |
| Applied to All Employees | Expense for congratulations and condolences, expense in condolence for disaster, educational expense, scholarship, expense for social group, group accident insurance outside work, medical expense |
| Support Facilities | Employee's house, employee's children dormitory |
| Optional Benefit System | Implemented in 2007<br>• Ticket to ride for employee's family is replaced to discount ticket for employee's family Integrate all other welfare systems |
| Contractors and Temporary Worker's | Improve benefit to the level of permanent employee<br>• Vacation system, expense for congratulations and condolences, educational expense, medical expense, offering railroad scholarship<br>• Moving into employee's house and company housing, moving into employee's children dormitory<br>• Optional benefit system, and group accident insurance |

Retirement Allowance System  •  After KORAIL turned into a public corporation system, retirement allowance system has been changed. Public official retirement allowance which includes pension is offered to the person with 20 year or more careers with KORAIL, for less than 20 year, retirement benefits were improved with application of special advantages for public officer's pension to guarantee pension benefit. Among total employees, there are 34% of public officer's pension receivers, 57% of special benefits of public officer's pension receivers, and 9% of pension receivers who receive public corporation pension based on career not only in public corporation but also in government office. KORAIL get consulting service from January to March 2007 in order to introduce retirement allowance system operated since December 2005. Defined benefits were suggested to employee who wants after introducing retirement pension system

as an issue for 2nd and 4th quarter regular labor-management meeting in 2007.

**Family-Friendly Management**

KORAIL makes every effort to improve work environment for employee's family comfort. In 2007 the management and labor become one, one family joint event was held so that it strengthen labor-management cooperation and improve unification as one family based on mutual understanding and support. In additon, KORAIL opened 'one company-one village sharing marketplace' on February 2007, which gives an opportunity to labor and management for participating together in lunar new year. In June 2007, KORAIL also signed a cooperation agreement for labor education with governor in Chungbuk branches. Moreover, KORAIL supports labor-management sports event from trust recovery program, nature preservation campaign, discussion for improvement of labor-management relationship and gaining trust, Together KORAIL seminar, and labor-management workshop.

### Healthy Relationship Between Labor and Management

**Status of Labor Union**

KORAIL respect the right for freedom of association, and guarantee to organize labor union and representative organization. Labor union was started in 1947 as a national railroad labor union, and in 2006 it converted to national transport industry labor union which is industrial union. Employee can registered as union member with entering into company according to Union Shop agreement, and temporary workers also can join the union if they want. There were 77.9% of permanent employees, 25,006 employees, and 33.2% of temporary employees, 393 employees, who joined labor union in Dec. 31, 2007. Also, employee can get help from relief system of labor committee and court in terms of unfair labor practice.

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**Labor-Management Relationship Status During Last Three Years**

| | Main Issues for Labor-Management Relationship |
|---|---|
| 2005 | Convert work system with minimum labors in 2005<br>Introducing flexible working time<br>Integration of employee of technical service and general service<br>Resolving problem of pension disadvantages<br>Peaceful system conversion<br>No labor-management dispute |
| 2006 | Regular agreement and special agreement in 2006, renewal of mediation enactment integration (minimize cost for negotiation)<br><br>Eliminating request for performance evaluation based on career (request 60% career evaluation, and agree to 30%)<br><br>Introducing train driver work system (changing work system which was continued for 108 years)<br><br>Agreement for strengthening industrial safety standard and extending facility by years<br><br>Reinstatement for all discharged employees and strike four days from march 1st to 4th due to elimination of discrimination for temporary employees |
| 2007 | 16 meetings for wage negotiation and 17 days of negotiation period which is shortened<br>Reduction of holiday bonus (implementing simple basis for wage system)<br>Introducing bonus system based on work performance<br>No labor-management dispute |

### Open Communication channel

By 'The law of workers participation and improved collaboration', KORAIL established a joint labor-management conference that runs 27 branches, 3 administrative offices and 315 stations. 'Committee for clothing and safety equipments' for improvement of uniforms and safety equipments and 'committee for welfare' for improved welfare are established permanently as consultative body. KORAIL runs cyber complaint department from 2007. Complaint department must send a trusty worth of answer within 2 days for better communication between labor and management.

Central Labor-Management Association  •  The labor–management association is an open and official communication channel. The central labor-management association was held yearly until 2006. From 2007, it is held 2 times a year. KORAIL aims for growing together from labor–management's participation and cooperation. Also KORAIL observe the laws of labor participation and collaboration.

Labor-Management Consultative Body of HQs  •  Labor-management consultative bodies of HQs by fields are labor-management agreement, industrial safety & health committee, committee for the welfare, joint labor-management committee. KORAIL diversify channel for communication as above committees between labor and management for prevention of a case growing for bargaining. Pay settlement and importing new system are operated by central joint labor-management conference. For year 2007, 59 times of consultative bodies are met (41 fields' labor-management agreement, three industrial safety & health committees, 11 welfare committees and four joint labor-management committees). Branch labor-management Consultations are made of 96 regular

meetings, 190 pending consultations, 403 round-table conferences between labor and management. Also, exceptional consultative body is operating for ERP operation and protection of discharged people.

### Complaint Resolve System

From year 2005, KORAIL introduced complaint resolve system for all employees. At the year 2006, KOAIL introduced cyber complaint system to process complaints better, which reduced complaint by 45%. From previous year. Complaint resolve system runs by branches, administrators, and the main office ombudsmen, a received complaint must get a feedback.

**Complaint Process** (Unit: case)

| | Personnel | Industrial Safety | Welfare | Others | Total |
|---|---|---|---|---|---|
| Received | 444 | 10 | 166 | 20 | **640** |
| Completed | 318 | 10 | 164 | 20 | **512** |

### Employee Satisfaction

Founded on Great Work Place (GWP) concept, KORAIL is researching workplace satisfaction rate such as trust, pride, and fun. Until 2006, the rating was researched irregularly and non-standard direction. From 2007, KORAIL outsourced the research to get the rating once a year. The result from outside specialized company is applied on the standardized index. KORAIL will try to raise confidence index by following detailed plan from midterm and long term strategies in order to improve job satisfaction thorough GWP organization culture activities. GWP organization culture innovation is going to be accomplished by continuous and repetitive activities which based on two axis, leadership action changing and organization culture action.

**2007 GWP Confidence Rating Result**

| | Total Point | Confidence | Pride | Fun |
|---|---|---|---|---|
| Total Point | 51 | 46 | 73 | 52 |

## Communication Channel Outline

### Company-Wide Communication

**Work force and fields concentrated On-Line open communication**

- A labor-management homepage
- Company broadcasting (KORAIL TV)
- Company intranet (integrated groupware) popup windows
- Promotion of usage of text message system (21times)
- Company mail and personal e-mail
- Letter from CEO: management issues and main policies

**Off-Line open communication**

- Publishing weekly newsletters for labor and management ('Going together with KORAIL')
- Notice Paper: media for irregular labors
- Distribution of material for illustration and statement
- Company-wide junior board

### Labor-Management Consultative Body

**Central joint labor-management conference**

**Headquarters consultative body by field**

- Labor-management agreement by type of job
- Industrial safety & health committee
- Committee for welfare
- Joint labor-management committee

**Branch (site operation) labor-management consultative body**

**Exceptional consultative body**

### Labor-Management Exaction Channel

**Labor union representative meeting**

**Difficulties resolve system: operation of cyber consulting room**

**Labor union central committee**

**Labor union central executive committee**

**Operation of union member plenary session**

**Operation of survey of public opinion for pending question**

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Agreement

A prior consultation, a preliminary negotiation

Elicit of final agreement

Operating working committee

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- Usage of company labor-management workforce
- Group activities of external specialists
- Working on opinions from related departments

- Explanation and discussion of labor union (agendas)

- Explanation of public agenda and collecting of public opinion

- Collection of labor unions opinion
- Execution of polls
- External specialist Consultation apply

## Labor-Management Discussions in 2007

| Discussion Issues | Main Contents | Result of Discussion |
|---|---|---|
| Introduction of New System | Introduction of optional welfare system | • Ticket to ride for employee's family is replaced to discount ticket for employee's family Integrate all other welfare systems |
| | Wage system improvement | • Laying basis for negotiation for improvement of wage system by pre-discussion |
| Production Improvement | Rationalization of operation for human resource | • Reducing KRW 39.2 billion by cutting 780 employees in 2008 through rationalization of human resource : 930 jobs are eliminated by department for rationalization of human resource and 150 existing employees assigned to new jobs generating from increasing business |
| | Planning and implementing detail execution method for adjustment allowance | • To identify detail execution method related to human resource operation, labor-management discussion was held by department several times and gap between their positions get closer. |
| | Change 'office type station' to 'profitable new concept station' | • Introduction of 18 new concept station nationally |
| | Operating of one train driver system | • Running test trials for all section where the railroad is constructed |
| Welfare Improvement | Converting the temporary employee to permanent status and improving working condition | • Special hiring for senior employee (administration level 6th, 197 employees) |
| | | • 1,392 employees converted to permanent employee |
| | | • Better working conditions: same condition as permanent status applied |
| | Achievement for labor-management discussion by branches | • Travel health examination performed (Busan branch) |
| | | • Open summer resort (17 branches) |
| | | • Improvement of restaurant operation of industrial restaurant (metropolitan Rolling Stock Management Workshops) |
| | | • Installation of common sports facilities (Daegu branch) |
| Consolidation of the relationship between labor and Management | Planning and participating in 'the management and labor become one/ one family joint event' | • Both labor and management participate in affiliated rural marketplace to sell farm produce for lunar new year |
| | | • Operating financial support business for labor-management partnership |
| | | • Voluntary service for 'Wedding guardian angel' (labor-management jointly) |

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# Disclosure on Management Approach

## Systemized Vision and Strategy for Ethical Management System · a Business Partners · Performance Management

### Vision and Strategy >>

KORAIL set the goal of 'realize sustainable management by strengthening social responsibility' for ethical management system by external specialist' advice, companywide view, and deliberation of ethical management committee in order to set the KORAIL style company culture. Under this goal, KORAIL established strategic agenda of strategic planning and action planning by 'ethical management system', 'trust management', and 'sharing management'. KORAIL also focused on strengthening and spreading of ethical management system and as a long term plan, keep tries consideration of sustainable management.

### Driving Tasks >>

- KORAIL is in stage of internalizing of ethical management system by enhanced effectiveness of a code of ethics, raised role of supervision groups, and spreading chemistry.
- For trust management with business partners, KORAIL practice transparent management such as management disclosure and identifying of policies, execute of buildup of midsized company supporting program. Also KORAIL executes coexistence and co-prosperity by promising practice of ethical management with business partners.
- For sharing management with local societies, contribute construction of social network, revitalize partnership with private organizations. On the other hand, KORAIL puts effort into sharing management by securing funds.

### Organization >>

- Board of directors takes charge of decision making of polices of ethical management and supervision of polices.
- Ethical management committee takes charge of consideration of main policies for stakeholders.
- Management Innovation Office supports main policy decisions, manages promotion of policies, and constructs central parts of the policies.
- Aside from headquarters, branches and Rolling Stock Management Workshops organized 20 small ethical committees which are in charge of handling current issues by organization.
- There are 34 ethical management leaders, as a team leader by organization, who is responsible for development of practical program to fit individual situation.

**Materiality Test** _ As a result of IPS Materiality Test Model™, social contribution activities, trust management activities, ethical management system, etc. were derived as the most important (very high) issues. And the social contribution promoting system, communications with business partners, coexistence cooperation related supporting system, cooperation ethical management education were derived as important (high) issues. These are included in the report in detail.

### Medium >>
Ethical Management, Compliance with Law & Regulations

### High >>
Social Contribution, Promoting System, Communication with business partners, Coexistence Cooperation Related Supporting System, Ethical Management Education

### Very High >>
Social Contribution Activities, Trust Management Activities, Ethical Management System

### Materiality
>>

## Key Achievements and Future Plans

| | Item | Key Performance | | | Plan | Remarks |
|---|---|---|---|---|---|---|
| | | 2005 | 2006 | 2007 | 2008 | |
| Ethical Management | Integrity index for ethical management (full score is 10) | 8.62 | 7.72 | 9.01 | 9.35 | |
| | Rate of people trained in cyber ethic class (number of trainee, %) | -/- | 12,122/38 | 10,306/70 | 4,675/84 | Completion rate uses accumulated value |
| | Rate of people trained in other ethic class (number of trainee, %) | 300/1 | 4,284/14 | 12,621/54 | 90,999/337 | Completion rate uses accumulated value |
| Business Partners | Small-and medium-sized companies products purchase (in 100 millions of KRW) | - | 7,849 | 5,784 | 4,730 | |
| | Technology development products purchase amount (in millions of KRW) | - | 13,988 | 15,336 | 11,980 | |
| | Conditional purchase development products purchase amount (in millions of KRW) | 1,606 | 9,097 | 6,198 | 9,577 | |
| Community | Purchase of product made by disabled/female enterprise (in 100 millions of KRW) | - | 5/117 | 19/312 | -/123 | Products by the disabled were purchased over 7-20% by item |
| | Community contribution activities (hours per person) | 8.27 | 10 | 12.9 | 14 | |
| | Number of disabled employee/employee rate (number of employee, %) | 706/5.2 | 692/4.1 | 706/3.1 | 706/3.1 | |
| | Number of female employee/employee rate (number of employee, %) | 2,693/7.9 | 2,814/8.4 | 2,625/8.0 | 2,607/8.1 | |

# 4.3

## HARMONIOUS COEXISTENCE EFFORTS

An effort of an enterprise for a cooperation system with the community forms circulating coexistence relation that is continued to enlarge a pie through accompanied growth, and gives more sharable portion. KORAIL is not only strengthening ethical management system to prevent corruption and improve integrity of executives and employees, but also endeavoring to build up fair and transparent relationship with the business partners. KORAIL is also striving to make the world connected by rail happy through the sharing practice of organizing a corporation-wide social services corps.

### Efforts of Strengthening Ethical Management System

KORAIL is executing establishment of ethical management practicing code, evaluation of integrity, and on-off line training in accordance with yearly plan to enhance effectiveness and expand sympathy based on the foundation of ethical management system, without violating any laws and regulations. KORAIL is respecting private political opinions of executives and employees, but does not involve unfairly in the politics nor offer unlawful donations or expenses to political parties, politicians, candidates for an election, etc. in accordance with the section two, chapter four of the ethics codes. In May 2007, KORAIL also joined the UN Global Compact that is a spontaneous international agreement to conform the standard to be kept by the enterprises. Then KORAIL declared officially to carry out the 10 major principles with regard to human rights, labor rights, protection

### Ethical Management Driving System

| ETHICS | Strategic Task | Driving Organization |
|---|---|---|
| **Plan** | **KORAIL Ethical Charter, Ethic Codes, Code of Conducts**<br>KORAIL Ethics Management Master Plan<br>Plans by Year | Management Innovation Office<br>Ethical Management Committee<br>Board of Directors (Report) |
| **Do** | Implementaion of Values by Stakeholder / Reliable Management, Sharing Management, Environmental Management | Supervising Department by Business |
| **Check** | Self Examination of Ethical Management Level/Consulting by External Experts <Corporation-wide Ethical Management Evaluation Index Development and Expansion><br>Internal Management Evaluation (Including Affiliates) <Development and Expansion of Evaluation Index> | Management Innovation Office, Audit Office → Ethical Management Commission, Ombudsman |
| **Action** | Ethical Management Master Plan and Ethics Model Supplement<br>Reflection and Practice of Next Year's Business Plans | Management Innovation Office<br>Ethical Management Committee<br>Board of Directors (Report) |

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of the environment, and the anti-corruption, and promised to practice social responsibilities.

**Strengthening of Organization Sytem**

Ethical management committee is in charge of deciding and supervising main policies of ethical management. The committee is also concentrating on strengthening role of the ethical management supervising system, practicing conduct charter, and forming sympathy to strengthen ethics management system.

Ethical Management Committee • Ethical management committee composed of 10 internal and external specialists is in charge of deliberation of important policies to the stakeholders. To activate operation of committee, it has instituted operation manual of ethical management committee that includes extending the terms of committee member to two years that can be reappointed and holding bi-monthly meetings. As a result of such activities, meetings were increased from two times in 2006 to five times (deliberated 12 cases) in 2007.

Integrity Ombudsman • Integrity Ombudsman is a body of meeting introduced in 2006 as a first public corporation, in order to establish a clean and fair business by lighting up and feeding back the whole procedures of important businesses from the third party's point of view. The integrity ombudsman, composed of three external specialists of one from academic area, expert technicians, and citizens body, is undertaking deliberation role on businesses of service and goods purchase. It is holding meetings twice a month and executing site visiting once a month. As a result, 19 cases were reflected in system improvement from a total of 7 times site inspections and 23 cases of system improvement tasks. We published reports for first and second half period ombudsman activity results, and made a face to face report to the CEO. By recognition of these efforts, it was selected as a joint business of Clean wave supervised by the national integrity committee. It also gave presentations of prominent overseas cases.

**Prevention Activities of Corruption and Afterward Control System**

Control Self-Assessment (CSA) • Audit office introduced Control Self-Assessment (CSA) system in November 2005 that is the advanced preventive inspection technique, to operate self-auditing system that is aimed to excavate and improve the potential risk by organization members. It has held workshop to cultivate CSA promoter three times since 2006. Also it carried out CSA promotion meeting towards 21 teams from head office and three teams from branches in 2006 and a total of 43 parts of head office and branches in 2007, to derive a method of improving potential risk, to support efficiently to the attainment of management target, and to minimize operation risk. In the second half of 2007, a monitoring to promote the promotion of construction for Enterprise Risk Management (ERM) was strengthened, examination and evaluation method to the

**Four Principles of UN Global Compact**



- Protection of Human Rights
- Protection of the Right to Work
- Anti-Corruption
- Environmental Protection

**Ethical Management Supervisory Organization**



Board of Directors

President _ Highest Responsible Person for Ethical Management

Auditor

Ethical Management Committee

Management Innovation Office

Audit Office _ Inspection for Standard of Conduct Performance

Branches _ Self Ethical Management Committee, Ethical Management Leader
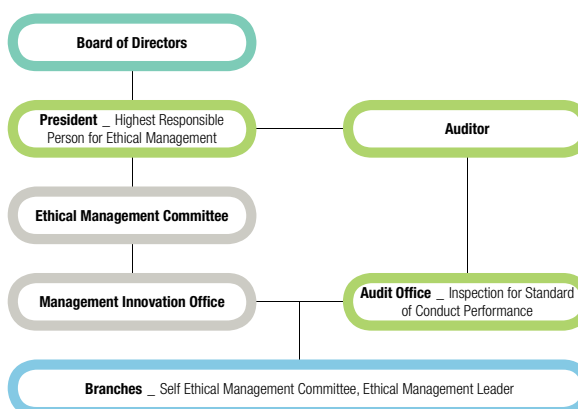
risk management activities were established and managed. Tasks for autonomous anti-corruption-integrity degree promoting business process were selected as the CSA promotion activities and excavating excellent outcome of integrity was promoted actively. As a result of a successful operation of the Control Self-Assessment (CSA), KORAIL had an opportunity of presenting 'Examples of audit office reformation and CSA activities' at a forum supervised by Korea Auditors' Association. KORAIL was selected as a most prominent organization as a result of comprehensive evaluation of anti-corruption policy. Also it was recorded as a Number ONE in an ascending rate of integrity degree.

Interanl Public Interest Report System • Report and reception of corruption are carried out by implementation of internal public interest report system, and the method to protect the reporter was established. Also by receiving a pledge of anti corruption from all the executives and employees, an effort is made to prevent in advance the generation of unfairness and corruption. By introducing clean card system that includes the designation of unfair uses, the usage of corporation

## Ethical Management System Driving Tasks

| Development Stage | Introduction/Competency Building Stage >> | | Takeoff/Expansion Stage >> | | Setting Stage >> | |
|---|---|---|---|---|---|---|
| | Establish Ethical Management System | | Strengthen Ethical Management System | | Enhance Ethical Management System | |
| | ● 2005 | ● 2006 | ● 2007 | ● 2008 | ● 2009 | ● 2010 |
| **Promote Ethics Standard Effectiveness** ● | Ethics Charter, Ethics Code, Code of Conduct | Establishment of ethical management practicing provisions | Establishment of unified ethical standard with affiliates | Registration of sustainability report to GRI and join the Global Compact (enhancement of practicing power) | Build up and practicing guideline corresponding to domestic and overseas "enterprise ethical management standard" | |
| | | Preparation and development of sustainable management report, Build up foundation to join Global Compact | | | • Establishment of consolidated provision of ethical management<br>• ISO26000 | |
| **Strengthening Role of Supervising Organization** ● | Ethical management committee, Anti-corruption promotion planning committee, Management Innovation Office, Audit office, Operation of ethical leader | Activating operation of supervising system | | | | |
| | | Evaluation and reflection of managing staff's integrity grade | | | | |
| | | Development and consultation of self examination of ethical management level index | | | | |
| **Spreading Sympathy** ● | Education and training, home page setup, Self consultation of ethics, Swearing ethics practice | Development of cyber education program | | | | |
| | | Development of changing management program | | | | |
| | | Regularizing workshops for affiliates/business partners | | | | |

## Ethical Management Footprints

### 2005 >>

**Establishment of Ethical Management Master Plan**
●
- Establishment of ethics charter, code of conduct
- Build up supervising organization (newly establish ethical management committee and Management Innovation Office)
- Sympathy sharing through the education and training (mainly for off-line)

### 2006 >>

**Correction and Supplement of Ethical Management Master Plan**
●
- Implementing executives integrity contract system through the high ranking clearness movement
- Integrity degree evaluation of executives for the top down innovation
- Introduction of integrity ombudsman system for the pre-control of operational risks such as an irrationality in main business
- Expansion of whole employees sympathy by the development of Cyber ethical management training program (12,000 employees completed this program)

### 2007 >>

**Strengthening Ethical Management 3C System**
●
- Newly establish integrity reformation T/F team under the ethics management committee to strengthen 3C system.
- Strengthening prior prevention of corruption and afterwards control system
- Promoting effectiveness of integrity ombudsman system
- Expansion of on-site periodical activities and improvement of operating system
- Operation of ethical self checking system

• 3C: Compliance check organization (supervising system), code of conduct (conduct charter), consensus by ethic education (formation of sympathy)

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card on entertaining guests through the operation is prohibited.

**Development of Management Support System Reflecting Ethical Management Elements** • The transparency and responsibility of decision-making was fortified by opening the business handling process record and the sectional individual business routine to the public. This was done through the business management system (Rail-i) in October, 2006. In January 2007, the transparency through the system was fortified by setting up and operating Enterprise Resource Planning (ERP) system (KOVIS) for the promotion of optimization and transparency of management resources such as finance, accounting, and personnel.

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**System Improvement Process**



**Self-Examination of Internal Business Integrity Level**

(Unit: points)

| Object | 1st Examination | 2nd Examination |
|---|---|---|
| Contract Management | 9.13 | 8.96 |
| Various Approvals | 8.71 | 8.80 |
| Property Leasing | 8.95 | 9.04 |
| Construction Works | 9.09 | 9.24 |
| **Total** | **9.04** | **8.98** |

**Clean Call System Improvement and Requirements**

(Unit: cases)

| | Reflected | Not Reflected (Guide) | Total |
|---|---|---|---|
| KORAIL | 3 | 4 | 7 |
| Services | 1 | - | 1 |
| Purchase | 5 | 6 | 11 |
| Others | 2 | 5 | 7 |
| **Total** | **11** | **15** | **26** |

Self Improvement for Integrity Vulnerable Field • A Task Force Team was formed to improve the system of integrity vulnerable fields such as construction, tender, contract, etc. eight items of improvement were selected and executed among the final 15 tasks after the 3rd discussion by analyzing opinions of various stakeholders including business partners. Personnel were reshuffled by rotation for those worked over five years in parts where the corruption probability is high.

Integrity Contract for Executives Duty • An additional economic restraint is charged, when an executive, who is responsible for the frontline of management, is under criminal penalty by violation of integrity duty. This is included in the integrity contract for executive's duty system, which is under execution.

Evaluation of High-Level Staff's Integrity Level • For the purpose of inspecting duty ethics practice status of managing staffs who should be initiative, and utilizing the result of an individual evaluation as personnel materials by CEO, duty ethics status inspection was executed through external expert organization for the managing staffs above team heads of head offices, directors of branches, and head of the railroad train management. According to the evaluation, managing staffs' integrity degree rose significantly comparing to the previous year, from 88.6 points in 2006 to 94.0 points in 2007.

Self-Examination of Integrity Level • Self-examination of integrity level was done through the survey of telephone sampling towards the business partners and customers. This showed that the integrity degree has risen from 8.98 points to 9.04 points. The surveys were done through external expert organization to derive objective evaluation, twice, in April and July, 2007.

In order to improve the difficulties of raising objection by the business partner as a result of 1st examination, Clean Call system was activated. Through this, KORAIL can cope with the public complaints more actively. After the 2nd examination, KORAIL is concentrating on corruption prevention system and improvement of system to cut off potential elements of risky corruption in advance.

Clean Call System • Clean Call system has been executed since February 2007 to find out corruption factors by telephone monitoring the kindness of staffs in charge, fairness, easiness of raising an objection, problems in system or procedures, and satisfaction towards business partners, regarding construction work, property leasing, various approval, and contract. This is also for raising transparency and seeking improvement of cleanliness. Complaints received through the Clean Call are made to be saved on data base system and to be linked to field by field system improvement. Opening exclusive e-mail (cleancall@KORAIL.com) system for reception of Clean Call made it easy to raise objections by business partners.

**Ethics Education**

To strengthen sympathy of executives and employees and to promote right ethical consciousness, various types of education were done through on-off lines. A course for integrity (integrity and corruption) was opened all over the 74 curricula in human resources development center. Currently, 1,349 customer contacting employees, such as ones in charge of contract and accounting, and employees in charge of integrity and heads of teams have completed the curriculum of KORAIL Integrity School. And through the fortification of team by team self education by inviting external specialists, 12,000 people (36% of total executives and

employees) in 2006 and 22,428 people (70% of total executives and employees) in 2007 have completed the course.

## Trust Management with Business Partner

### Characterics of Business Partner

KORAIL observes principles of fair competition in connection with business transactions such as ticket sales agents, commissioners, purchase, properties leasing, etc. Korail also promotes activities for transparent business transactions with all the business partners who have concluded contract with the Corporation from the tender to after-the-fact administration. Through this, we try to contribute to the activation of national economy.

### Sustainablity Management Issues of Business Partner

KORAIL concluded an agreement of integrity execution with the representatives of business partners to offer equal opportunities in the tender and concluding contract of service and goods purchase, and to carry out fair and transparent business transactions in accordance with code of conduct. Also, KORAIL is going to contribute to the economy development and to assist economic activities of female and handicapped by elevating purchasing rate from the enterprises where female or handicapped are representatives of the business partners. Purchase ratio from small and medium companies in 2007 was KRW 578.4 billion, which was corresponding to 40% of total purchase. This result exceeded 31.4% of the target set up under the discussion with the Small and Medium Business Administration. KORAIL is pursuing coexistence and co-prosperity with small

### Purchasing Rate of Small-Medium Company's Product

(In 100 millions of KRW, %)

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| Purchase of Products by Small-medium Companies | - | 7,849 | 5,784 |
| Priority Purchase of Products by Handicapped | - | 5 | 19/23.7 |
| Products of Technology Development | - | 139 | 153 |
| Products of Female Enterprises | - | 117 | 312 |

medium companies by actively executing substantial methods to support small medium companies.

### Driving Task in Trust Management

At 1st stage (Introduction/Competency Building Stage) of trust management development, KORAIL has performed priority promoting tasks such as public disclosure of management performance and strengthening fairness on supply/contract, aiming to provide institutional foundation for a transparent management. At 2nd stage (Takeoff/Expansion Stage), KORAIL is trying to achieve improving the trust of the stakeholders by the introduction and settlement of policy (business) real-name system of affiliates, ERP system set up, concluding an agreement for the ethical management practice with the business partners, aiming to enhance reliability of stakeholders. The 3rd stage (Setting Stage) is projected to perform practicing tasks aiming for the realization of coexistence management on top of the reliable relation with the interested parties through the stabilization of transparent management.

### Driving Task of Trust Management

| Developing Stage | Introduction/Competency Building Stage >> | Takeoff/Expansion Stage >> | Setting Stage >> |
|---|---|---|---|
| | 2005 (Performance) / 2006 (Performance) | 2007 (Performance) / 2008 (Goal) | 2009 (Goal) / 2010 (Goal) |
| Integrity Level (full points: 10) | ( 8.62 points ) ( 7.72 points ) | ( 9.01 points ) ( 9.35 points ) | ( over 9.50 points ) |
| Transparent Management | Set up transparent management foundation such as public disclosure of management performance / Complete stabilization of real-name system of policy (business) | Introduction and settlement (support) of affiliates real-name system of policy (business) | - Stabilization of transparent management<br>- Trust to the stakeholders/realization of coexistence management |
| | | Internal fortification of public disclosure of management performance (including affiliates) / ERP system set up/practice | |
| Co-existing Management with Affiliates and Business Partners | Strengthening fairness of supply/contract / Reformation of purchase/contract | Concluding an agreement of ethical management practice with business partners | |
| | Ethical management agreement in affiliates | | |

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## Trust Management Efforts

In 2005, a preparation of an institutional foundation for a transparent management was promoted through the bull session of invitational business partners, public disclosure of management performance, full scale enforcement of electronic contract, and fortification of conditions of free contract, for the purpose of establishing a fair trading order and forming sympathy with business partners. In 2006, efforts were given to build up relation of partnership with small-medium companies by actively practicing substantial methods to support small-medium companies through the regularization of bull session, the support of small-medium companies, and the purchase of new technological products. In 2007, for the target to grow mutually with small-medium companies, KORAIL promoted practical tasks in 4 supporting areas such as funds, technologies, market, and man power.

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### Trust Management Footprints

| **2005** >> | **2006** >> | **2007** >> |
|---|---|---|
| **Provide institutional foundation for a transparent management** ● | **Practice of substantial methods to support small-medium companies** ● | **Growth accompanied with small-medium companies** ● |
| - Stakeholder's trust enhancement<br>- Hold bull session of invitational business partners (Held 1 time/36 cases/review, reply)<br>- Establishment of 'practical technology operation manual' to support small-medium companies<br>- Implementation of real-name system for policy and business<br>- Full scale enforcement of electronic contract and fortification for conditions of free contract | - Set up supporting system for small-medium companies<br>- Regularization and expansion of bull sessions with business partners (held 13 times/83 proposed cases/review, reply)<br>- Set up supporting system for small-medium companies (issuing business manuals, concluded an agreement with Small and Medium Business Administration)<br>- Joint research and new product development with small-medium companies<br>- Continuous promotion of purchase-conditional new product development project<br>- Establishment and enforcement of promoting plan for joint purchase loan<br>- Expansion of purchasing products by small-medium companies | - Fortification of coexistence management with small-medium companies<br>- System connection for the promotion of joint purchase loan<br>- Implementing sharing outcomes actively<br>- Carry out separate bull sessions with business partners by field and by belongings (occasionally)<br>- Supporting small-medium companies with fund, technology, market, and man power<br>- Strengthening cooperation system of KORAIL (head office/branch office) – Small and Medium Business Administration |

**Bull Sessions with Business Partners** • A bull session named 'Business partners Invited by us', which is supervised by CEO, is regulated to have once every half years, and is being stabilized as a place of collecting opinions of business partners.

**Public Tender and Electronic Supply System** • KORAIL has improved total process of purchasing up to the purchasing cheap goods and strengthened public tender. Also, KORAIL is operating an electronic supply system to cut off fundamentally possible irregularity generated by free contract. Through this, KORAIL was selected as one of 'the 10 most prominent organizations using electronic contracts in 2005' and introduced many times as a prominent example of public organization. The operation of electronic supply system is not only leading the existing supplier to furnish price competitive power, but also assisting new companies to advance into the market and obtain technical. A financial effect of reducing expenses of KRW 600 million is created by the exemption of revenue tax.

**Real-Name System for Business** • Real-name system for business is introduced and operated when establishing and enforcing various business policies. Real-name system for business is a system that presents the carrying out direction of business, and promotes clear and responsible carrying out business to

### Status of Bull Sessions with Business Partners (Unit: cases/frequencies)

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| A Bull Session Supervised by CEO (Frequenies) | 1 | 1 | **2** |
| Suggetions/Application/Guide (Frequenies) | 36 | 50 | **23/8/11** |
| Branches/Bull Sessions by Rolling Stock Management Workshop | - | 12 | **22** |

prevent the situation of unclear locus of responsibility. The real-names of staffs in charge are stated clearly from the reception of popular complaints to the handling process by connecting real-names of policy planners and approvers to the information disclosure to the public, and executing real-name system for service in case of customer contacting field. In case of railroad vehicles, real-name system for maintenance is executed to prevent safety accidents or troubles on the run through the number of responsibilities. By effecting real-name system for service and real-name system for public announcement, responsibility and reliability to stakeholders are enhanced.

**Information Disclosure** • By interlocking electronic cabinet of electronic approval system with pre-information disclosure room of internet web page, this is what discloses the review result of suggestions by business partners, and 52

cases were disclosed to the public in 2006. In addition, KORAIL is strengthening transparent management by opening whole processes of tender, contract, and performing task of major nine construction works (2006) of over KRW three billion at the web page.

Small-Medium Company Supporting System • KORAIL, achieves the profit improvement by producing excellent products through the improvement of technologies from the small-medium companies point of view, contributes to the national economy through obtaining high quality but low cost parts at proper time and through the localization of parts, from the KORAIL point of view. At the same time, KORAIL establishes and operates the supporting plan for small-medium companies to realize social responsibility of public enterprises. KORAIL also shares the outcome and support for funds, market, technology, and man power and support product purchase substantially. KORAIL reflects the evaluation

of supporting status bi-yearly on the internal management evaluation and next year's business plan. Through this, KORAIL is striving to find out and support businesses, which can strengthen competitiveness of small-medium companies and share the outcome with the small-medium companies. As a result of this, the scale of public purchase loan operated by a part of supporting small-medium companies, expanded from two cases for KRW one billion in 2006 to 71 cases for KRW 4.8 billion in 2007. In addition, actual purchasing results of the products are increasing, which are by handicapped, technology development, and female running companies.

Moreover, KORAIL is practicing artificial fish shelter business on railroad vehicle, operation of KTX Cinema train, and operation of Wine Train, by the introduction of research collaboration with small-medium companies and sharing outcome system in the development of new products. KORAIL is strengthening the cooperation system with the Small and Medium Business Administration.

**Supporting System for Small-Medium Companies**



| Plan | Do | Check | Action |
|------|-----|-------|--------|
| Master plan for small-medium companies activation | Resource/market/technology/man power support | Confirmation of supporting small-medium companies (evaluating twice a year) | Reflection and practicing next year's business plan |
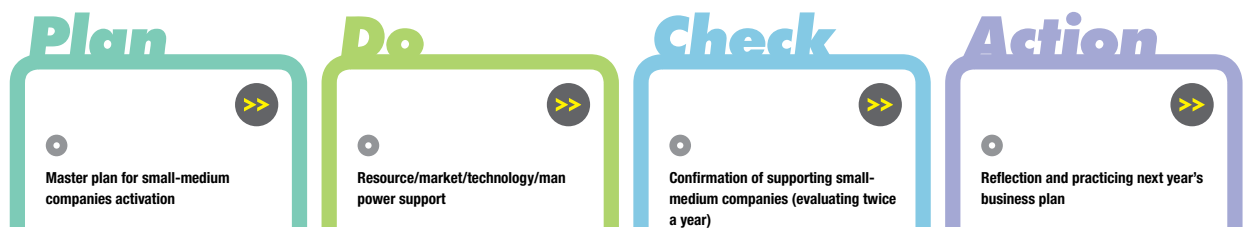
**Status of Small-Medium Companies Support**  (Unit: in 100 millions of KRW, cases, people)

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| Purchasing Products by Small-medium Companies | - | 7,849 | 5,784 |
| Products by Handicapped | - | 5 | 19 |
| Products by Technology Development | - | 139 | 153 |
| Product by Female Enterprise | - | 117 | 312 |
| Selected Tasks of Technology Development (cases, in 100 millions of KRW) | 15/21.4 | 7/9.4 | 8/13.2 |
| Man Power Support in Technology Development (pepole) | - | - | 240 |
| Priority Purchase of New Technology | 49 | 230 | - |

## Community Engagement Management

### Charcteristics and Issues of Active Community

KORAIL, as a member of community, is striving to contribute to the cultural and economic development of the nation and community. As a part of it, having interest in sharing management activities, we are implementing programs such as theme train trip for the socially weak by developing a specialized social contribution program of the KORAIL. Also we are expanding environmental protection activities and supporting for neglected neighbors through the fortification of partnership with local autonomous entity and NGO.

### Vision of Social Contribution

To become respectable KORAIL, the company is promoting strategic social contribution activities on the idea of close adhesion type, systematic-continuous, and community contribution, and forming partnership with the expert body. Through this, KORAIL is willing to make the world happy that connects to the KORAIL.

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**Social Engagement Cooperation System Establishment**

**KORAIL**
- Business plan for social contribution
- Promoting cooperation system and partnership

**Affiliates/Korean Railroad Worker's Union**
- Joint planning, sharing role
- Selective participation considering enterprise characteristics

**Welfare network of cooperation and solidarity**

**Professional NPO**
- Secure specialty by field of social contribution
- Linking beneficial recipient, joint practice

**Requirement by Community**
- Community problem, information of neglected class
- National disaster, environmental problem, etc.

**Conclusion of an Agreement NGO**

| NGO | Cooperating Business |
| --- | --- |
| Korean Red Cross | Operation of homeless outreach team. Operation of joint donation box in the station |
| Habitat for Humanity Korea | Cultivating beautiful village |
| Korea Council of Volunteering | Fund raising and operation of KORAIL Love-Point |
| Community Chest of Korea | Operation of joint donation box in the station, Designated deposit of raised fund |

employees who have participated in the social service, KORAIL promotes to join the casualty insurance. Through the result of various supports, KORAIL induces spontaneous participation of executives and employees in many activities. In addition, the company has established Nanumi Network Partnership by the conclusion of agreement with the NGOs of the Korean Red Cross, Habitat for Humanity Korea, Korea Council of Volunteering, and Community Chest of Korea.

**Company-Wide Scocial Engagement with Service Corps**

Social Service Corps in branches were inaugurated by collecting opinion through the various channels, and reflecting the result of discussion and surveys in the subject of operating method of social service.

Composition and Status of Servie Corps • KORAIL Service Corps is composed of the executive director (president), advisor (auditor and external personnel), deputy executive director (vice president), secretary general (head of Management Innovation Office), secretary, headquarter volunteer corps and regional volunteer corps. Operating committee is composed of external and internal personnel, and is in charge of determining major promoting plans of social contribution activities, funds usage plan, operation of donation of love, distribution rate of Matching Grant, and other important matters in the operation of service corps. An executive office is set up and operated within the Management Innovation Office where the office in charge belongs to. Performing tasks are program development of social contribution, education, instruction, and operation of internet site. The number of service corps and people are showing steady increasing trend as 8,080 people from 135 corps in 2005, 13,280 people from 333 corps in 2006, and 17,000 people from 390 corps in 2007.

**Sharing Management Driving Task**

The 1st stage of sharing management development is introduction/competency building stage and is aiming for strengthening foundation of social contribution and expanding sympathy. This performed practicing tasks, such as establishing a designated department, finding out service groups, strengthening partnership with private corps. Also this carried out discount of railroad fare to the socially weak, outreach of homeless which was core task of strategic theme program development. The 2nd stage is takeoff/expansion stage and promoted development of specialized social contribution program such as a theme train trip with the socially weak, expansion of partnership business with private corps, activation of operation of Love Fund, and introduction of Matching Grant system. In the 3rd stage, which begins from 2009, KORAIL will sincerely implement by settling down sharing management as a corporation culture, to become a corporation respected by the stakeholders. To form sympathy of social contribution business and the foundation of activation, KORAIL admits service activities during the duty hours. KORAIL has created new courses of social service and experience activity, and established a result management system for voluntary service in the new employees training curriculum. For the safety management of the executives and

House repair service activities for the improvement of dwelling environment for the low income neighbors



Service activities of hair cut and domestic assistant, carried out for the elderly who are uncomfortable in conduct and handicapped.

## Sharing Management Driving Task

| Developing Stage | Introduction/Competency Building Stage >> | Takeoff/Expansion Stage >> | Setting Stage >> |
|---|---|---|---|
| | 2005  2006 | 2007  2008 | 2009  2010 |

**Foundation Strengthening of Social Contribution**

Establishment of designated departments,

finding out service corps,

strengthening partnership of private corps

Inauguration of KORAIL social service corps, etc.
Set-up and strengthening corporation-wide social contribution network

Spreading sympathy of set up joint program of labor and management.

Strengthening external partnership with private corps.

Activation of operating love fund

Securing financial resources such as expansion of Matching Grant, and elevation of operation efficiency

Introduction of Matching Grant system

- Stabilize as enterprise culture of sharing management
- Realization of respectful KORAIL

**Program Development of Strategic Theme**

Homeless outreach,

youth service corps,

One company One village sisterhood relationship

Development and operation of specialized social contribution program such as "Theme Train Trip" together with socially weak people

Expansion of partnership business with private corps

Strengthening public profit related marketing

## Sharing Management Footprints

### 2005 >>

**Expansion of Sharing Management**

- Build up promoting system of social contribution business
- Set up NGO cooperating system
- Inauguration of Outreach service corps (one station)
- Rural community love One company One village sisterhood relationship
- Railroad fares discount for the socially weak

Voluntary activities for rural communities

### 2006 >>

**Formation of Foundation for Sharing Management Activation**

- Inauguration of KORAIL social service corps
- Recognition of service activities hours on duty (participating people 62%)
- Specialized social service activities (carry out theme train trip all the year long)
- Creation of love fund
- Introduction of Matching Grant System
- Inauguration of Outreach Service Team (five stations)

Operation of outreach program stretching hands of support to the homeless who is living in the station instead of control-oriented management.

### 2007 >>

**Spreading KORAIL Sharing Culture**

- Various supports of Taean oil outflow accident
- Strengthening KORAIL NANUMI network partnership
- Priority carry out specialized social service activities
- Expansion of fund for social service activities
- 137,489 people in a year, 416,711 activity hours, KRW 1.16341 billion for support, 4% of participating people, 24% of activity hours, 15% of support amount are increased compared to the previous year

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**Organization Chart of KORAIL Social Service Corps**

```
                              ┌──────────────────────────────┐
                              │  Executive Director (President) │
                              └──────────────────────────────┘
  ┌─────────────────────┐              │              ┌─────────────────────┐
  │ Operating Committee │──────────────┼──────────────│  Advisor (Auditor)  │
  └─────────────────────┘              │              └─────────────────────┘
                              ┌──────────────────────────────┐
                              │   Deputy Executive Director    │
                              │        (Vice-President)        │
                              └──────────────────────────────┘
                              ┌──────────────────────────────┐
                              │      Secretary General         │
                              │ (Head of Management Innovation │
                              │            Office)             │
                              └──────────────────────────────┘
```

**Headquarter Volunteer Corps/Regional Volunteer Corps**

| **Visiting volunteer team** | **Culture, leisure volunteer team** | **Guide and advice team** | **Rural village, environmental volunteer team** | **Technical volunteer team** | **General welfare team** |
|---|---|---|---|---|---|
| Home visits, personal helper activities, etc. | Sports, mountain climbing, performances, train trips, etc. | Outreach to homeless neighbor, runaway adolescent counseling, etc. | Rural village helping hand, environmental activities, etc. | Home repairs, facility repairs, etc. | bathing, meal Services, washing, cleaning, etc. |

**Fund Creating Program** • The 'KORAIL Love-Fund' is social contribution activity funds through voluntary donations from employees. The amount of donation depending on the number of accounts is deducted from employee's monthly payment. (KWR 1,000 per account) The Matching-Grant is a system for creating fund for social contribution in proportion to an employee's contribution to the Love-Fund. The matching rate is 20% in 2007. KORAIL is going to raise it by 10% every year until the rate reaches 100% by 2015. Besides this, KORAIL works together with the Korean Red Cross and Community Chest of Korea to install collecting box so that railroad customer and KORAIL employee can voluntarily participate in donation, called as a love points fund raising.

**KORAIL's Specialized Social Service Program**

Public Discounts, Running Railroad in a Remote Place • KORAIL supports guaranteeing mobility for the socially weak by public discounts for railroad tickets. And in order to ensure mobility of the elderly and disabled, KORAIL has been installed 18 platform facilities in 13 stations since 2007. Also, KORAIL fulfill social obligation through operating transportation service continuously for public service purposes, including running railroad in a remote place.

Theme Train Trips • KORAIL has theme train trip program for the disabled, aged, and disadvantaged. The theme train trips are operated once a month with a monthly theme by each volunteer team throughout the nation for the working homeless, disabled, neglected elderly, teen head of household, and new settlers from North Korea.

**Fund Raising Program**

**KORAIL Love Fund Promotion**
●
- Campaign that promotes all employees in KORAIL to support the fund
- 21,923 employees participated voluntarily (the fund raised by KRW 670 million, and the participation rate was 68%).

**Matching-Grant System Settlement**
●
- Supporting budget the same as Love Fund: support KRW 20 million for KRW 100 million
- Started with 1:0.1 matching in 2006, increased by 0.1 every year, and planned on 1:1 matching in 2015.

**Fund Increase for Social Contribution Activities**

**Helping Neighbor Fund Collection**
●
Social contribution activities with local community: conducted on 108 areas throughout the nation
*Co-operation with Korea Red Cross and Community Chest of Korea

**KORAIL Love Point Collection**
●
- Participation of railroad members and KORAIL employees
- 17,458,000 points was used: total seven train trips, 614 people had benefits.

Outreach • KORAIL's outreach team has not just controlled but supported actively the homeless at train stations in winter season, protecting train service users. In emergency of the homeless, the team took care of them. In 2006, stating with 183 participants in Seoul station, the outreach is expanded to five

stations including seoul, Yeongdeungpo, Suwon, Daejeon, and Busan Station with 747 participants. In addition, holiday fund was donated to the homeless care association for winter activites.

One Company- Several Rural Regions Relationship with "Love the Farm" • With Farm Stay program, KORAIL family volunteer teams shared love with farmers in 70 villages state-wide. KORAIL supports medical service activities at villages which had been established relationship with railroad medical association. Opening marketplaces before the holiday and selling local produces also have been supported by KORAIL.

Building Up Beautiful KORAIL Villages Along the Railroad • With human resources in KORAIL, 108 houses' residential environment was improved for needy people and aged living alone who lived along the railroad. Beside this, KORAIL has struck partnerships with nonprofit organizations to perform shared management such as youth volunteer activities, life sharing blood donation, and environment preservation.

Other Activities • 'Senior Volunteer Team', made up of retired railroad people and so called sharing happiness, established in the Daejeon area to operate volunteer services for environment on the Daejeon National Cemetery and welfare facility Chinese character classes. The family members of employees, composed of 7 teams nationally, participate in 'After School Care Center' for elementary schools. The information-technology volunteer team continuously extends distribution of computer and offers information technology education including computer classes for the underprivileged. Also, KORAIL offered free tickets or discount tickets to 1,852 volunteers; the total number of volunteers took KTX, Saemaeul, and Mugungwha, who took railroad to go to damaged area in the west coast due to the spilled oil from oil tanker accident.

**Increase of Railroad Usage by the Disabled**

| | 2006 | 2007 |
|---|---|---|
| | 3,780,000 disabled customers | 3,827,000 disabled customers |

Increased by **47,000** customers
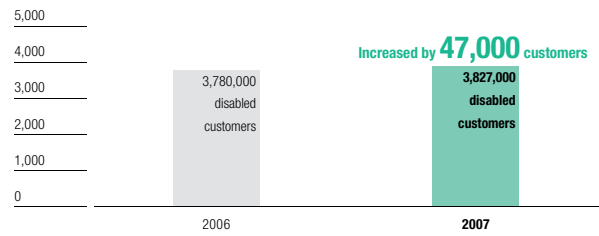
**Operation Status of Theme Train Trips**

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| Number of Services | 1 | 31 | 86 |
| Passengers (people) | 30 | 1,277 | 2,757 |
| Amount of Financial Support (in millions of KRW) | 3 | 100 | 149 |

**Social Contribution Results by Service Type (2007)**

| | Aid Amount (in thousands of KRW) | Volunteer Hours | Volunteers |
|---|---|---|---|
| Guidance Advice | 19,470 | 3,735 | 747 |
| Blood Donation | 484,418 | 198,600 | 99,300 |
| Visiting Volunteer | 58,391 | 25,308 | 6,327 |
| General Welfare | 150,479 | 55,492 | 13,873 |
| Technical Volunteer | 60,230 | 13,080 | 2,180 |
| Culture/Leisure/Health | 295,000 | 44,496 | 5,562 |
| Helping Rural Village | 78,149 | 27,800 | 3,475 |
| Environment/Disaster Recovery | 17,271 | 48,200 | 6,025 |

Environment eco-tourism to bring joy to the kids battling cancer



'Happy Train' which is theme train trips with the socially week

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# Disclosure on Management Approach
## Safety Performance Management System

### Vision and Strategy >>

The goal for safety management is 'Building up global top safety management systems'. To accomplish the goal, four perspectives were selected followed by balanced scored card (BSC): customer, financial, processes, and learning and growth.

### Driving Tasks >>

Safety management policies are improved and safety measures by types is established and operated. Safety management education and certification management are offered and emergency action competency are managed by KORAIL to strengthen the employee's safety management competency. Also, safety management system has been strongly consolidated by railroad management system's expansion and vehicle inspection.

### Organization >>

- The Transport & safety office is in charge of overall management and planning for schedule of railroad operation, and management for safety technicians.
- Through safety strategy meetings newly started on branches and subsidiaries, KORAIL pre-identifies and prevents risk, and performed voluntary safety management.

**Materiality Test** _ Through the results of IPS Materiality Test Model™, safety management system and safety system management were showed as one of the most important factors. Emergency response and safety capability were selected as important issues. The report provided more detail.

| Medium >> | High >> | Very High >> | Materiality |
|---|---|---|---|
| | Emergency Response, Safety Capability | Safety Management System, Safety System Management | >> |

### Key Achievements and Future Plans

| | Item | Key Performance | | | Plan |
|---|---|---|---|---|---|
| | | **2005** | **2006** | **2007** | **2008** |
| **Safety Management** | Operation accident (number of case/million Km) | 0.35 | 0.28 | **0.26** | 0.24 |
| | Personal accident (number of case/million km) | 1.30 | 1.12 | **1.10** | 1.03 |
| | Operation trouble (number of case/million km) | 3.79 | 3.18 | **2.79** | 2.63 |
| | Facility trouble (number of case/million km) | 6.42 | 3.78 | **2.92** | 2.37 |
| | Vehicle trouble (number of case/million km) | 0.12 | 0.11 | **0.11** | 0.10 |

# 4.4
# RAILROAD SAFETY EFFORTS

KORAIL recognizes responsibilities for railroad operation transporting lots of people and materials, and puts all efforts into keeping the railroad safety. A mutual-assistance system was implemented by the cooperation of government and agencies. Various systems were introduced for safe railroad operation and safety facility was installed in platforms. Also, safety education for employees has been conducted and railroad safety experts certified by international safety institution have been nurtured on the international level.

## Safety Management Operation System

KKORAIL aims for implementing 'Global Top' safety management system, and establishes and performs strategies based on 4 categories such as customer, financial, processes, and learning and growth.

### Strategy Operating System

**Goal and Strategy_ Establishing a 'Global Top' Safety Management System**

**Customer**
- Offering trust based transportation services
- Indentifying and taking care of unsafe factors
- Facilities and vehicles safety improvement

**Financial**
- Minimizing railroad accidents' occurrence and obstacles
- Natural and industrial disaster prevention
- Railroad delay prevention

**Processes**
- Optimizing railroad operating conditions
- Highly developed safety facility installation and operation
- Expanding railroad safety management systems

**Learning and Growth**
- Upgrading emergency response systems
- Strengthening railroad employee's competency
- Nurturing international railroad safety experts

### Mid-Long Term Roadmap for Safety Management

**Value Innovation**
**2007**

>>

**Securing Growth Base**

- Building up company-wide safety management systems
- Establishing railroad safety management systems
- Making safety policies and plans
- Strengthening railroad employee's competency
- Optimizing railroad operating conditions

**Innovation for Growth**
**2008~2010**

>>

**Detailed Fulfillment**

- Strengthening company-wide safety management systems
- Improving emergency response competency
- Strengthening safety checking systems
- Improving safety management competency by process improvement
- Attaining competitiveness by optimizing railroad operating condition

**Sustainable Innovation**
**2011~**

**Quantum Leap**

- Rationalization of a company-wide safety management
- Minimizing railroad industry disaster
- Systemized and advanced safety management
- Implementing optimized condition for railroad operation
- Pursuing zero accident

4

KORAIL SUSTAINABILITY REPORT 2008

4.1 Customer Satisfation Efforts   4.2 Employee Concerns   4.3 Harmonious Coexistence Efforts   **4.4 Railroad Safety Efforts**

## Mid-Long Term Roadmap for Safety Management

A mid and long term roadmap is based on performance feedbacks and management environment analysis results. There are 3 steps as follows: First step is, in 2007, implementing railroad safety management and operating system, and laying safety management development foundation by strengthening railroad employee's competency. At second step, between 2008 and 2010, KORAIL performs safety management by strengthening core competency through improving safety management systems and emergency response competency. At third step, after 2011, 'Global Top' safety management systems will be accomplished by performing advanced safety management, administration, and operation etc.

## Safety Management Activities

### Safety Management System

Safety Management Comprehensive Plan • Comprehensive plans for railroad safety are established through decision from the council of directors in order to response proactively toward environmental changes such as recognition of railroad safety, railroad safety law, and technology development. Based on this, decisive power for comprehensive plan of railroad safety shifted from a vice president to a president. The responsibility of railroad safety management is reinforced by assigning a manager who is in charge of safety management by departments. Also, KORAIL newly established a system that has a person in charge of safety in every branches and subsidiaries so that it strengthens the

**Railroad Safety Management System**                                                          NEW Introduced in 2007
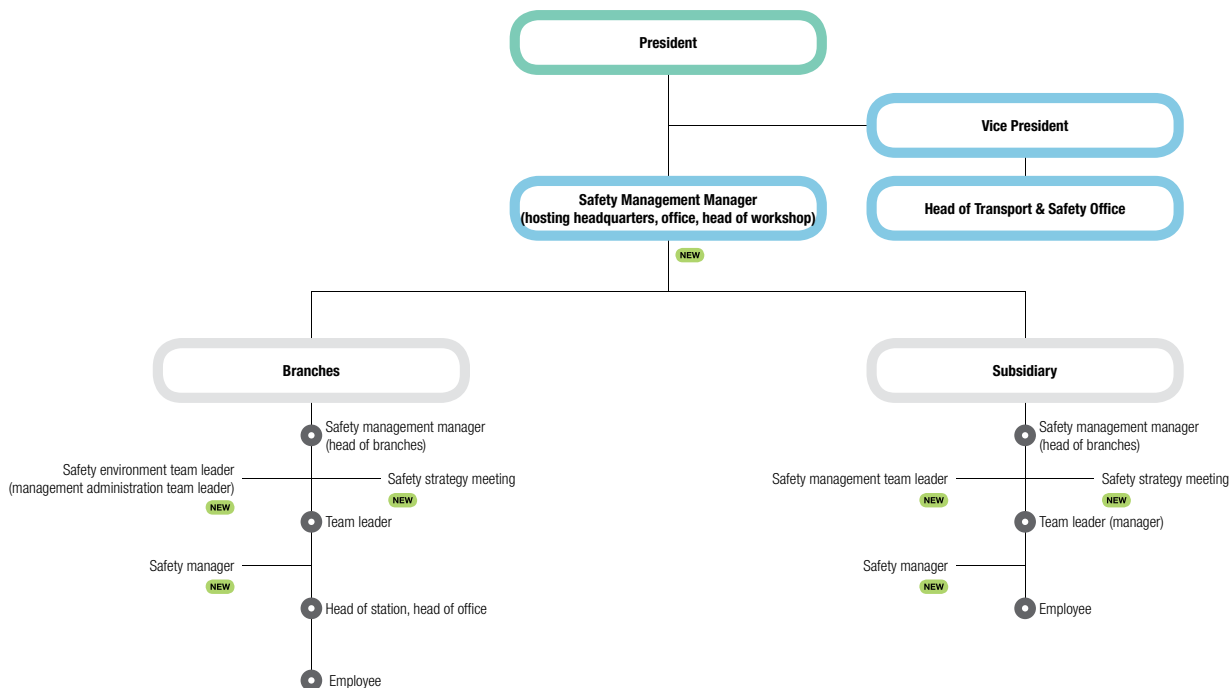


**Safety Strategy Meeting Performance in 2007** (Unit: case)
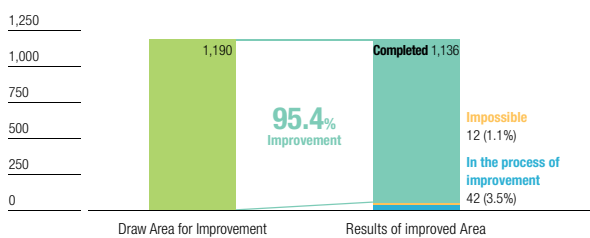


**Railroad Safety Manager Status in 2007** (Unit: person)

power of execution and communication. Introduction of safety strategy meetings between the branches and subsidiaries results pre-identifying and prevention of unsafe factors, and promoting voluntary safety management.

Emergency Response System • According to national disaster management plan, KORAIL make an agreement with 33 institutions and develops collaborative response system, including sharing railroad delay information, and offering SMS information. Through such activities, KORAIL do their best to protect people's life and assets.

Also emergency response guide manual was created by stages and department so as to systemize response activities for emergency.

**Pan-Government Network for Disaster**

- KORAIL
- Public Corporate (14 Institutions)
- Government Institution (18 Institutions)

Offering Real-Time Information

Pan-Government Network for Disaster

- Flood/storm damage information
- Railroad accident information
- Traffic information
- Government service information
- Mountain information

Developing Mutual Assistance System for Disaster
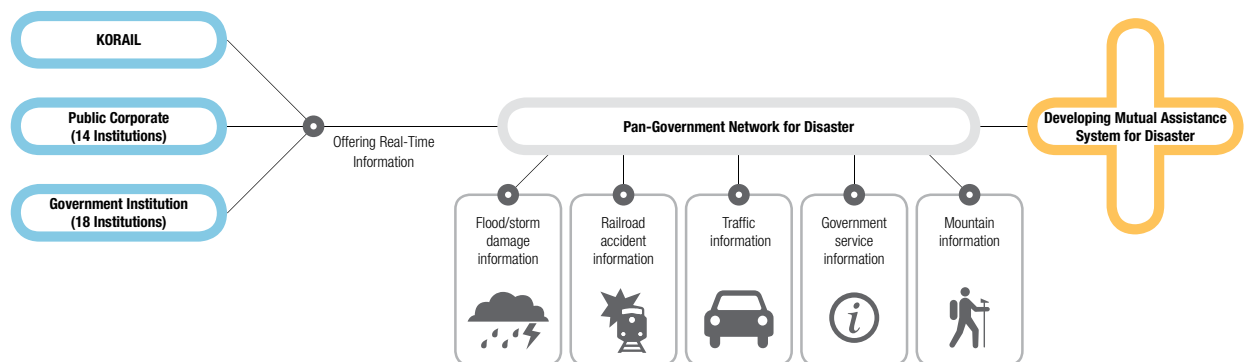
Operating Line and Industrial Safety Management • Safety management team and industrial safety and health team in transport & safety office maintain a high level of safety status and handle main issues regarding safety.

Regular/Occasional Safety Checking _ KORAIL continuously performs safety level checking and improvement by regular and occasional safety checking and guide activities to prevent possibilities for accident.

Comprehensive Safety Assessment _ KORAIL improves safety management on each unit by conducting comprehensive assessment for railroad operation, vehicle and facility safety management in the 137 departments. 12 professional assessors participate in assessment, suggest improvement plan and safety reaction, and identify and share best practices for safety management. This voluntary safety checking systems constantly keep railroad accident rate low.

**Safety Management Main Activities**

**Safety Management Team**
●
- Company-wide safety management system improvement and study
- Establishment and management for comprehensive plan of railroad safety
- Detailed execution plan for national safety management
- Establishment and operation for emergency response plans
- Safety education and promotion job
- Operation for safety technicians
- Various safety checking and prevention activities
- Internal and external assessments and appraisals regarding safety
- Operation for zero accident system
- Safety works caused from other disaster or safety related laws

**Industrial Safety and Health Team**
●
- Establishment and management for industrial safety and health plans
- Improvement and study for industrial safety and health systems
- Development of industrial disaster analysis and prevention activities
- Industrial safety and health education and guide
- Operation for central industrial safety and health committee
- Health examination and corrective action (including headquarter health examination duty)
- Industrial safety and health works caused from other industrial safety and health laws

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4.1 Customer Satisfaction Efforts  4.2 Employee Concerns  4.3 Harmonious Coexistence Efforts  **4.4 Railroad Safety Efforts**

## Regular/Occasional Safety Checking

**Safety Check at a Construction Sites**

Checking status for Safety management and operation
(January 2007-March 2007)

**Safety Checking for Disaster Facilities**

Safety checking on all special management facilities
Checking facilities that intensive checkup requires (semiannually)

**Safety Checking by Individual Regulations**

Safety checking and diagnosis by checking regulations of each
departments (daily, monthly, semiannually, quarterly, yearly)

**Voluntary Safety Checking and Guide Activities All Through the Year**

**Checking through Safety Management Regulations**

Checking safety management status
(daily and 4th day of every month)

**Inspections before Opening, Seasonal Inspections**

Pre-inspections and seasonal inspections for new and improved
line before opening
(seasonally, if occurred)

**Comprehensive Safety Assessment**

Checking overall safety management status
(October 2007 – November 2007)

**Safety Activities in Vulnerable Period**

Activities for mass transit on peak holiday seasons including lunar
new year and Chu-Suk, and activities for bad weather to prevent
disaster (February 2007-September 2007)

### Status for Operation Accident Occurrence Rate
(Unit: case/vehicle, distance traveled: in millions of km)

| Year | Rate |
|------|------|
| 2005 | 0.35 |
| 2006 | 0.28 |
| 2007 | 0.26 |

### Status of Personal Accident Occurrence Rate
(Unit: case/vehicle, distance traveled: in millions of km)

| Year | Rate |
|------|------|
| 2005 | 1.30 |
| 2006 | 1.12 |
| 2007 | 1.10 |

### Improvement Suggestion and Safety Reaction
(Unit: cases)

| | | Common | Sales | Conductor | Vehicle | Facility Construction | Electricity | Control Facilities | Total |
|---|---|---|---|---|---|---|---|---|---|
| Improvement Plans Suggested | | 10 | 8 | 8 | 6 | 8 | 8 | 2 | 50 |
| Correction Required | Safety Reaction | - | - | 26 | - | 31 | 2 | - | 59 |
| | Instructions for Correction | - | - | - | 38 | - | 52 | - | 90 |
| | Improvement Recommendation | - | - | 3 | - | - | 22 | - | 25 |
| | Areas for Improvement | - | 32 | 3 | - | - | - | - | 35 |
| Total | | 10 | 40 | 40 | 44 | 39 | 84 | 2 | 259 |

**Railroad Safety Operating System**

Centralized Traffic Control System (CTC) • The train traffic operation center views the train operation status for all sections from a single location and controls railroad course remotely. CTC allows seeing status for real-time railroad operation and making quick and accurate response possible to help safe railroad operation. It was first introduced in 1968 at Central Line (Mangwoo – Bongyang), and the installation rate is 57% compared to operation distance in Jun 2008. KORAIL make every effort to ensure railroad operation safety for the target installation rate of 72.2% until 2010.

Earthquake Sensing System • KORAIL installed earthquake measuring instrument near railroad line where KTX operated. Information from this facility and nationwide observatory earthquake information from the national weather agency are managed through central monitoring system of high speed railroads observatory center. When earthquake occurs, this system receives alert for danger and responds to it according to railroad operation controlling regulations.

KTX comprehensive monitor and control system • To prevent threat of terror, intrusion, or other exceptional cases for the KTX operated region section, high speed observatory center performs real-time management with 156 monitoring cameras installed in 56 main facilities (tunnel and bridge) in April, 2007.

Automatic Block System (ABS) • ABS is a facility that indicates signals to running train about traffic flow, including stop, move, caution, and reduction of speed, so it helps to prevent railroad accidents from happening. Current installation rate is 72% (2,452 km).

Automatic Train Stop System (ATS) • ATS is a system installed on every train that automatically stop a train or reduce a train speed, if it is hard to identify signal status due to bad weather or train operator do not follow signal system or ignore indicated speed limit because of dozing off while driving.

Automatic Train Control System (ATC) • ATC is installed 9% of operating railroad in 2008, overcoming limitation of operating system which depends on train operator's eyesight, as railroad systems are moving toward high speed and

**CTC Installation Rate** (Unit: km, %)



Increased by **115** km
2006: 1,697.5km / 50%
**2007**: **1,812.5km** / **53.4%**
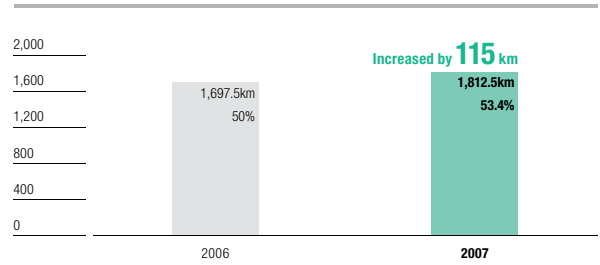
**KTX Operation Difficulties Status** (Unit: case)



2005: 100
2006: 76
Decreased by **43**%
**2007**: **43**
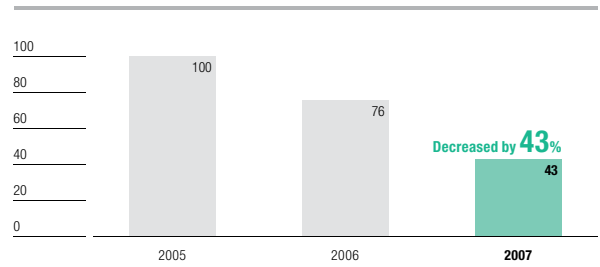
high density railroad. Railroad operating condition is transmitted to trains through track circuits or information transfer devices. If vehicle goes over the speed limit indicated inside vehicle, the ATC system stops train or reduces speed.

Track Circuit Detection System (TLDS) • The TLDS is information system performing real-time monitoring for the status of track circuits. It prevents reoccurrence of the same troubles by reproducing and analyzing previous troubles from monitoring results recorded on the system. 4 locations among total 19 locations were completed installation.

Train Radio Protection System (TRPS) • The TRPS is a safety system installed in KTX after a vehicle rolling accident inside the Namsunghyun station of Gyeongbu Line in April 2006. 92 systems are installed in KTX 46 lines. The system quickly

**Standard for Railroad Operation Controlling by an Earthquake's Size**

| | | Warning Issued | When a Earthquake is Considered Passed | After First Vehicle Operated | After Operated Under 90 km/h | After Checking |
|---|---|---|---|---|---|---|
| **Red Alert (more than 65 gal)** | High Speed Rails | Operation stop | Below 30 km/h | Below 90 km/h | Below 170 km/h | Normal operation |
| | Existing Rails | | | Below 65 km/h | Below 65 km/h | |
| **Yellow Alert (40~65 gal)** | High Speed Rails | Operation stop | Below 90 km/h | Normal operation when everything appears normal | | Normal operation |
| | Existing Rails | | Below 30 km/h | | | |

alerts dangerous situation, including train malfunctions or derailing, to all trains operating near the alerting position to automatically stop the trains.

**Safety Management for Facilities**

Safety Facilities on Platform  •  To ensure passenger's safety and meet social safety standards, safety facilities are installed in platforms. Safety step is installed in 47 stations, platforms facility is in 13 stations, emergency lights is in 10 stations, and screen door is in 1 station in 2006, however 10 stations is going to have it in 2007.

Visual Monitoring System  •  KORAIL developed linked system between visual monitoring system and fire detection facility to perform real-time monitoring for fire incident places and constantly reinforce safety facilities. Currently 11 stations completed installation among the total of 33 underground stations in metropolitan. Also, for customer safety at platform, wireless visual system is installed in driving cab of rail cars to check platforms. In 2007 the system was built up in 36 stations of the Central Line and Bundang Line and 44 vehicles, and KORAIL plans to extend it to 30 stations in metropolitan underground subway and the Central Line (Yongsan-Paldang) and 17 vehicles. KORAIL plans to extend safety fence to 11.2 km every year. Bridge·bridge side walk and safety rail on weak facilities near railroad operation line were extended from 22 stations in 2006 to 122 stations in 2007.

**Safety Management Competency**

Voluntary Safety Management  •  To prevent employee's accident, incident systems are operated to share experience of accident and use it for improvement or education. Also, KORAIL safety check standard list is developed and provided. KORAIL tries to promote railroad safety through various campaigns and promotional activities. A disaster-free campaign was performed voluntarily for controller, operator, and driver of railroad.

Cyber Training (E-Learning)  •  Cyber education curriculums opened towards management supervisor in order to improve education quality by enhancing specialization in education curriculum and standardization of content, reducing the burden of work for education, and solving the problem of face-to-face class due to shift crew and train crew. In 2006 education contents was developed by fields, including sales, operation, facility, vehicle, and electricity, to educate management supervisor of industrial safety and health department. E-learning was conducted for 6 weeks toward 4,656 management supervisors from March 2007 to September 2007. In 2007, KORAIL achieved grade 'B' from the Labor Ministry, the Korea Research Institute for Vocational Education and Training. KORAIL improves quality of education and prevents operational vacuum factor by providing high quality contents and selecting tutors composed of internal experts by fields in January 2007. Also, education for knowledge of safety experts

**Malfunction Cases of the Facilities**                                    (Unit: case)

| Year | Cases |
|------|-------|
| 2005 | 77 |
| 2006 | 49 |
| **2007** | **39** |
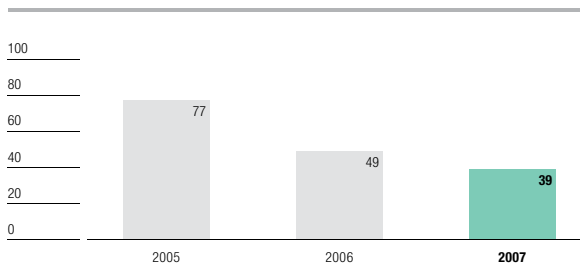
**Visual Monitoring System Installation Status for High Speed Rail**

● CCTV  ● Sensor in the fence

| Year | Sensor (vehicle) | CCTV (km) |
|------|------------------|-----------|
| 2005 | 0 vehicle/0 km | |
| 2006 | 28 vehicle | 11 km |
| **2007** | **128 vehicle** | 34 km |
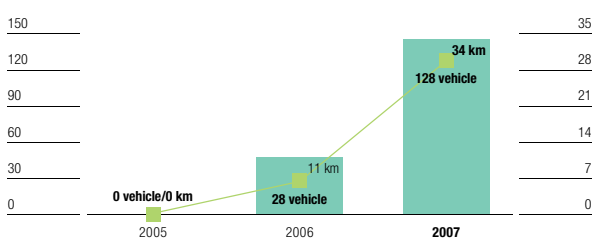
conducted by each filed to improve competency of safety management managers or candidates.

International Railroad Safety Experts • To nurture international railroad safety experts, KORAIL opens education curriculum in KOREA which used to open only in the U.S. Through this course, for two years, total 32 students achieved international railroad safety management experts' certificates approved by World Safety Organization. The one who achieve certificate are working at the KORAIL headquarter or as safety staffs. KORAIL improves the level of safety at domestic railroad by continuously nurturing talents with safety management competency on the international level.

**Training Curriculum of Expert Knowledge for Safety by Fields**

|  | Trainee (person) | Training Contents |
|---|---|---|
| Safety Management and Accident Investigation | 31 | Railroad safety law, industrial safety and health law (newly opened), accident recovery and settlement etc. |
| Industrial Safety and Health Management | 31 | Disaster-free campaign, safety and health management, safety management for operation |
| Experienced Controller Education | 26 | Operation regulations, railroad scheduling, accident response and guideline to report urgent message etc. |
| Safety Checking for Facilities | 54 | Evaluation for facilities condition and structure, safety check for buildings |
| Weather and Actual Practices of Disaster Prevention | 44 | Comprehensive disaster prevention measure, weather management job, practical knowledge for disaster |

●
Control center monitoring operation status with 24 hours monitoring system for safe operation



●
Tunnel monitoring facility



●
Screen door



●
Producing 32 experts for 2 years by operating international railroad safety management experts nurturing program



●
UIC (Union Internationale Chemins De Fer) regular meeting in Seoul



●
Emergency response training

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4.1 Customer Satisfaction Efforts  4.2 Employee Concerns  4.3 Harmonious Coexistence Efforts  **4.4 Railroad Safety Efforts**

# environmental value

## chapter 5

Veins of leaf keep plants healthy
by transporting water and nutrition.
KORAIL keep environment healthy.

The $CO_2$ emission per passenger by train is only 17% of that of road vehicle and 7% of that of freight vehicle.

And transportation efficiency is 8 times more than that of road.

These are the reason why railroad is called the most environmentally friendly transportation.

Life of mankind is managed through transference of people and things.

Building more rails and transferring more trains keep the earth alive.

The sustainability of the world we live improved more and more.

## KORAIL Helps Keep Environment Healthy

# green

network

# Disclosure on Management Approach

## Environmental Performance Management System

### Vision and Strategy >>

KORAIL called for environment management with CEO's commitment and established ECO-RAIL2015 strategy in order to continuously develop eco-friendly transportation and conduct environment-friendly traffic policy. KORAIL will make every effort to lead environmental friendly era in the 21st century by actively performing activity plans based on the goal of environmentally friendly railroad system.

### Driving Tasks >>

- KORAIL will perform green development with the tasks of Eco-Design, Eco-Operation, and Eco-Investment.
- KORAIL actively conducts environment management activities by implementing system through environmental regulations and reviews.
- To improve environment competency, KORAIL extends communication network for environment by joining in UN Global Compact, introduces and applies eco-friendly technology, conducts environment preservation activity, and strengthens green service.

### Organization >>

- Strategy and planning team establishes environment management strategy. Environment team establishes environment policy strategy, manages environment improvement, and coordinates environment management tasks for each branch and station.
- 17 branches and 3 Rolling Stock Management Workshop is operated by environment managers who are assigned in every team.

**Materiality Test** _ The results of materiality test through [IPS Materiality Test Model ™] shows that global warming prevention activity, soil environment management, noise management, environment management system are showed as the most important issue. Environment audit, air pollution management, water pollution management, and eco-friendly purchase are indicated as important issues. Detailed information is included on the report.

### Medium >>

Environment education, environment preservation activities and campaign, harmful substances management

### High >>

Environmental Audit, air pollution management, water pollution management, eco-friendly purchase

### Very High >>

Global warming prevention activities, soil environment management, noise management, environment management system

### Materiality >>

### Key Achievements and Future Plans

| | Item | Key Performance | | | Plan | Note |
|---|---|---|---|---|---|---|
| | | 2005 | 2006 | 2007 | 2008 | |
| **Prevention of Global Warming** | Electrification rate of railroad (%) | 49.2 | 53.6 | **53.6** | 54.2 | Goal: 66.4% by 2010 |
| **Soil Management** | Soil Remediation business (in millions of KRW) | 4,500 | 5,786 | **2,663** | 188 | Detailed soil survey performed in 2008 |
| **Noise Management** | Noise (above ground) day average (dB) | 59 | 60 | **58** | - | Noise vibration regulation (limit) (unit: dB) |
| | Noise (above ground) night average (dB) | 58 | 57 | **56** | - | Residential area: day 70, night 6/ Commercial area: day 75, night 70 |
| **Water-purity Control** | Amount of waste water/amount of sewage from passenger train (ton/year) | 1,570/238 | 1,214/113 | **1,156/99.5** | 1,100/99.1 | |
| | Environment investment expense for water quality (in millions of KRW) | 749 | 649 | **528** | 680 | |
| **Waste Management** | Waste generation amount (general/designated) (ton/year) | 17,289/3,358 | 30,895/2,604 | **19,808/1,846** | 19,500/1,795 | |
| | Environment investment cost for waste (in millions of KRW) | 246 | 341 | **546** | 160 | |
| **Indoor Air Quality Management** | The number of stations on indoor air quality management (in number of stations) | 50 | 50 | **51** | 51 | qualified by the air quality standards |
| **Environmental Products** | Eco-friendly product purchase rate (%) | 70.5 | 70.6 | **71.9** | 84 | |
| | Stock of reusable cups (in cups) | - | 7,614 | **14,211** | 14,500 | |
| | Personal cup usage (in number of people) | - | 11,037 | **17,561** | 17,600 | |
| **Environmental Education** | Environmental education towards all employees (a number of class/year) | 2 | 4 | **4** | 6 | |
| | Railroad environment advisory (a number of meeting/year) | 2 | 2 | **2** | 2 | |
| **Campaign** | Environmental conservation activities and campaigns (station/people) | 735/8,820 | 920/10,623 | **952/11,430** | 960/11,520 | |

# 5.1

## ENVIRONMENT MANAGEMENT STATUS

KORAIL establishes environmental strategy, ECO-RAIL 2015, increasing the railroad transportation rate two times more by 2019. And, plans for innovation of transport connectivity and transfer system, introduction of eco-friendly technology, investment increase, and development for railroad-vehicle of cleaning indoor air (with HVAC; Heating, Ventilating & Air-Conditioning system) have been conducted. KORAIL constantly tries to decrease usage of energy and water, and reduce green house gas and waste emission. Also, KORAIL increases the amount of recycle and replacement rate for eco-friendly energy.

### Environmental Management System

**Environmental Policy**

Sustainability concept, which is composed of promoting possibilities of next generation, improving mankind's quality of lives and at the same time, and minimizing the environmental impact, is the new worldwide trend. KORAIL agrees with this concept and the CEO's strong commitment of continuous investment for environment and minimizing impediment of environmental facts are established on environmental policy.

**ECO-RAIL 2015 Strategy**

Twice railroad transportation rate which is eco-friendly and high energy efficiency by 2019, as a low carbon and green development activities, is the way KORAIL contributes to the nations' economy.

**ECO-RAIL 2015 strategy**

**Vision for Green Growth**
- 



ECO-RAIL 2015

**General Direction**
- 

Railroad centric traffic structure will bring up nation's competitive power and bring down social expenditure.

Increasing railroad transportation rate by promoting accessibility, speed, and easy usage

Building up foundation for sustainable development towards environmentally friendly management

**Strategy Goal**
- 

Reducing $CO_2$ emission by 10% (598,000 ton → 538,000 ton)

Increase the railroad transportation rate twice (15.4% → 26.2% by 2019)

Realizing two hours life zone among metropolitan cities

Increase of train speed (150 km/h → 180~200 km/h)

**ECO-RAIL 2015 Mid-Long Term Acton Plan**

# ECO-RAIL 2015

## Eco-Design

- Eco-Station
- Transport connectivity and transfer system innovation
- Next generation electricity vehicle extension
- Increasing train speed
- Introducing Premium Rapid Electric Train (PRE)

## Eco-Operation

- Eco-Driving
- Expansion of facilities
- Fostering a green environment
- Participating in Emission Trading
- Applying eco-friendly technology including LED etc.
- Strengthen door to door service for logistics

## Eco-Investment

- Expanding railroad investment, including electrification of railroad
- Expanding metropolitan transit business
- Expanding high speed transit business
- Developing railroad-vehicle of cleaning indoor air (with HVAC; Heating, Ventilating & Air-Conditioning system), including hybrid
- Eco-policy, policy promoting conversion to railroad transportation

**Annual Investment plan**

| Task | | Annual Investment Plan (in 100 millions of KRW) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Total |
| Eco-Design | Eco-Station (Eco-friendly Station) | - | - | 250 | 70 | 250 | 126 | 56 | 671 | 1,423 |
| | Transport Connectivity and Transfer System Innovation ✳ | - | 856 | 2,030 | 6,975 | 9,968 | 21,498 | 8,316 | 4,553 | 54,196 |
| | Next Generation Electricity Vehicles Extension ✳ | 3,719 | 2,568 | 6,644 | 5,225 | 15,898 | 10,774 | 3,143 | 3,602 | 51,573 |
| Eco-Operation | Eco-Driving (Saving Energy) | 27 | 27 | 23 | 0.9 | Continuous conducting | | | | 78 |
| | Expansion of Facilities ✳ | 42 | 623 | 1,396 | 799 | 4,894 | 451 | 431 | 461 | 9,098 |
| | Fostering a Green Environment | 33 | 74 | 86 | 85 | 85 | 85 | 85 | 85 | 618 |
| | Participating in Emission Trading | 1.5 | 46 | 2 | 1 | 1 | 0.5 | - | - | 52 |
| | Applying Eco-friendly Technology Including LED etc. | - | 96 | 245 | 246 | 245 | 240 | Included in expense of vehicle purchasing | | 1,072 |
| | Strengthen Door to Door Service for Logistics | 45 | 19 | 47 | 250 | 28 | 208 | 11 | 256 | 864 |
| Eco-Investment | Expanding Railroad Investment, Including Electrification of Railroad ✳ | 30,463 | 42,469 | 83,026 | 7,407 | 26,932 | 14,668 | 17,498 | 70,937 | 293,400 |
| | Expanding Metropolitan Transit Business ✳ | 1,136 | 1,429 | 1,345 | 1,426 | 1,460 | 1,791 | 1,025 | 1,098 | 10,710 |
| | Developing Eco-friendly Railroad, Including Hybrid ✳ | - | 43 | 110 | 170 | 165 | 87 | - | - | 575 |
| Total | | 35,467 | 48,250 | 95,204 | 22,655 | 59,926 | 49,928 | 30,565 | 81,663 | 423,659 |

- ✳: joint project with government

- Total amount of investment expenses by 2015: approximately KRW 41 trillion (investment from KORAIL: KRW 6 trillion, policy investment: KRW 35 trillion)

## Environment Management

### Risk Management

Throughout all business areas, KORAIL reviews and evaluates environmental impacts on the area such as air, water, waste, noise/vibration management etc. And improve business based on the results. Also, to reduce $CO_2$, the main cause of global warming, KORAIL monitors continuously and plans to participate in 'Emission Trading' based on the monitoring results. Especially, to minimize oil leakage from railroad collision and damage of property or casualties, emergency drill of environmental accidents is performed by each department. The environmental accident response manual is published and distributed. Also,

KORAIL raises awareness for 'zero environmental accident' record and solidifies foundation for establishing quick recovery system by promoting understanding of individual response guides.

### Environment Audit

Based on Plan-Do-Check-Action (PDCA) cycle, environmental management work manages each department and branch by evaluating environmental performance and conducting environmental guides. An internal audit system which reflects above evaluation to management evaluation and tries to solve it.

---

### Energy Management System

**Environmental Protection Organization**
● Environmental inspection (Eco-friendly rating)

**+**

**Internal/External Regulation System**
●

**External** _ ISO 14001 standard
**Internal** _ 1. Clarification of law on internal auditor selection
2. Training and education of professional management, who can administrate related management laws, regulation, and other requirements
3. Laws and regulation requirement manual preparation and change self-examination to obligation

**>>**

**Emission Offices**
● Sustainable environmental management system improvement through PDCA (Plan/Do/Check/Action) implementation and perform internal environment audit

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### Environmental Management System Flowchart

**Plan** >> Public Environmental Policy and Strategic Plan

**Do** >> Environmental Protection Activities

**Check** >> Inspection and Error Correction

**Action** >> EMS Re-examination
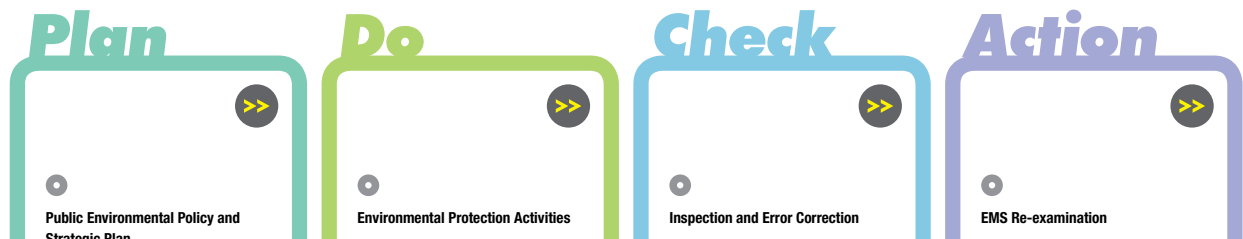
● Soil contamination accident emergency response training



● Gas related accident emergency response training



**5** KORAIL SUSTAINABILITY REPORT 2008

5.0 Environmental Performance Management System  **5.1 Environment Management Status**  5.2 Environment Management Efforts

## Environmental Impact Mitigation

### Energy Usage

Two main type of energy consumed by KORAIL are diesel (oil) fuel used by the diesel train and electricity used by electric train (subway) and facilities. As KORAIL expand the usage of electricity and minimize diesel, KORAIL is doing playing a part in environmental impact mitigation.

**Usage by Type of Energy** (Unit: kl,kwh)

| | | 2005 | 2006 | 2007 |
|---|---|---|---|---|
| **Oil (kl)** | | 275,628 | 250,370 | **232,108** |
| **Electric Usage (kwh)** | Subway (Electric Rail Train) Electricity | 1,652,055 | 1,700,724 | **1,767,584** |
| | Regular (Facility) Electricity | 401,351 | 395,717 | **410,905** |

### Air Pollutant Emissions

Air pollution mainly occurs in engine inspection process that produces dust and fumes, and painting and part washing process where VOCs and liquid mist vapors are produced as byproduct.

### Water Usage and Recycling

By implementing resource consumption reduction campaign and installing water-saving infrastructure, KORAIL was able to steadily reduce resources consumption annually. Further, rainwater recovery system, restroom water recycling system, and landscape water recovery system are also planned.

**Water and Recycle Usage** (Unit: m³/year)

| | 2005 | 2006 | 2007 | Source |
|---|---|---|---|---|
| Water Usage | 6,006,385 | 6,259,964 | **5,917,010** | Water |
| Groundwater Usage | 577,012 | 593,184 | **538,440** | Groundwater |
| Industrial Water Usage | 165,734 | 169,827 | **166,800** | Industrial Water |
| Heavy Water Usage | 19,749 | 22,869 | **21,307** | |
| Water Savings | 743,233 | 824,641 | **949,588** | |

### Wastewater and Sewage Water

Water pollution from railroad business is classified into two different types, sewage water from railroad car restrooms and wastewater from washing vehicles and railroad cars.

**Wastewater and Sewage Water** (Unit: m³/year)

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| Wastewater | 1,570 | 1,214 | **1,156** |
| Sewage Water from Railroad Passenger Vehicles | 238 | 113 | **100** |
| Sewage Water from Railroad Restroom Units | 3,324,173 | 3,439,710 | **3,479,917** |

### Waste and Recycle

To reduce and minimize waste, KORAIL demands closer relationship between its headquarters and workplaces, and supervise its consignment contractors with a thorough compliance with regulation standards of waste management. Before the consignment, KORAIL reviews the contractors' waste handling capability and capacity to secure the waste treatment in complying with the related laws. KORAIL also raise its waste management standards with continuous employee trainings.

**Waste Disposal Process**
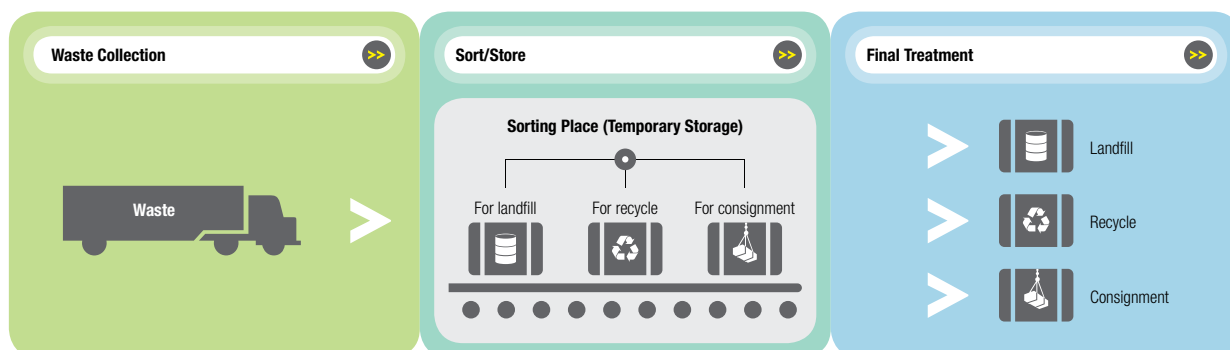
Waste Disposal  •  KORAIL disposes its wastes by sorting out recyclable and consignable wastes at the sorting place (temporary storage) to recycle as much as possible and consign it properly.

Waste Oil Processing  •  In waste oil disposal process, KORAIL tries its best to recycle as much waste oil as possible through recycling process. Waste oil recycling is divided into type that retains its original purpose and nature that can be reused and those that are used for heating oil for that does not retain its original nature.

## Environmental Investments and Environmental Regulations Compliance

### Compliance with Environmental Regulations

KORAIL complies with standard environmental regulation, air protection regulation, water quality and conservation laws, soil protection regulation, and other relevant related regulations. KORAIL holds the company to a more stringent internal standard than the related environmental regulations. For the last three years, KORAIL has not been fined for any regulation violation nor had any environmental accident.

**Waste and Recycle Amount** (Unit: ton/year)

|  | 2005 | 2006 | 2007 |
|---|---|---|---|
| Workplace Waste (General) | 17,278 | 30,353 | 19,773 |
| Workplace Waste (Designated) | 1,786 | 1,472 | 1,007 |
| Recycled Waste | 1,572 | 1,674 | 874 |

**Recycling Processing Performance** (Unit: ton)

|  |  | 2005 | 2006 | 2007 | 2008 (Plan) |
|---|---|---|---|---|---|
| **Recycling (in trains)** | Paper | 559 | 557 | 559 | 560 |
|  | Plastic | 85 | 96 | 103 | 100 |
|  | Can | 162 | 135 | 124 | 130 |
|  | Glass | 200 | 162 | 139 | 140 |
|  | Misc. | 15 | 7 | 5 | 5 |
|  | **Total** | **1,021** | **957** | **930** | **935** |
| **Recycling (in stations)** | Paper | 781 | 843 | 1,195 | 1,200 |
|  | Plastic | 128 | 159 | 158 | 160 |
|  | Can | 337 | 375 | 333 | 340 |
|  | Glass | 433 | 437 | 367 | 370 |
|  | Misc. | 90 | 305 | 194 | 200 |
|  | **Total** | **1,769** | **2,119** | **2,247** | **2,270** |

**Environment-Related Investment** (in millions of KRW)

|  | 2005 | 2006 | 2007 |
|---|---|---|---|
| Soil | 613 | 654 | 864 |
| Water | 749 | 649 | 528 |
| Air | 840 | 341 | 546 |
| Waste | 246 | 158 | 498 |
| Soil Purification | 4,500 | 5,786 | 2,663 |
| Total | 6,948 | 7,588 | 5,099 |

●
Waste oil recycling process

# 5.2

## ENVIRONMENT MANAGEMENT EFFORTS

KORAIL is working hard to mitigate the environmental impact of train operations through increased electric train usage that produces less carbon emission and lean management operations. With the information sharing in cooperation with internal and external stakeholders and sustainability management efforts by mitigating environmental impact of transportation process through smooth transition in air, road, and ocean shipping, KORAIL improves the environment.

### Climate Change Mitigation

#### Efforts to Use Green Energy

Various international railroad institutions began running carbon dioxide emissions reduction programs to combat global warming in 2000. KORAIL also plan to reduce green house gases such as carbon dioxide following the international GHG (green house gas) reduction protocol. KORAIL is in various stages of creating energy saving system after extensive self –review in this age of high oil prices and environmental protection. As a part of larger environmental protection effort, KORAIL replaced diesel trains with energy efficient and green electric trains to raise eco-friendliness of the railroad business.

#### Replacement of Diesel-Powered Trains

KORAIL plans to decommission and replace diesel trains, which emits large amount of carbon dioxide into the air, with electric trains by 2010 to significantly reduce the GHG emission in railroad business. Additionally, KORAIL increased number of electric KTX operations to reduce the carbon emitting diesel train operations.

**Carbon Dioxide Emissions in the Railroad Sector**    (Unit: in thousands of ton $CO_2$/year)

|  | 2005 | 2006 | 2007 |
|---|---|---|---|
| Emissions Amount | 1,387 | 1,336 | **1,349** |

• Emission increase due to increased railroad activity in 2007

**Greenhouse Gas Emission Amount**    (Unit: t-$CO_2$/year)

|  | 2005 | 2006 | 2007 |
|---|---|---|---|
| Electricity | 870 | 888 | **923** |
| Diesel | 714,787 | 649,285 | **601,926** |

**Retirement Plan of Obsolete Vehicle**    (Unit: vehicles)

|  | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|
| Electric Train | 34 | - | - | 32 | 38 |
| Diesel Train | 7 | 8 | 20 | 20 | 20 |
| Diesel Train | 10 | 4 | 10 | 66 | 24 |
| Passenger Train | 2 | 11 | 7 | - | - |
| Freight Train | 851 | 250 | 332 | 10 | 28 |

**Plans for New (Electric) Trains**    (Unit: vehicles)

|  | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|
| High-Speed Trains | - | - | 100 | - | - |
| Electric Trains | 10 | 31 | 23 | 22 | 15 |
| Electric Carriage Vehicle | 270 | 60 | 210 | 656 | 780 |
| Freight Vehicle | 210 | - | 197 | 260 | - |

#### Expanding Energy Efficiency and Alternate Energy Sources

Through the construction of energy efficiency system, KORAIL is working towards direct/indirect reduction of air pollution emission. Automatic exhaust cover on diesel engines and automatic stop system on Saemaeul trains are some of the KORAIL's energy saving technological development and process improvement to improve energy efficiency. Reducing energy consumption also reduce carbon

**Electricity Usage and Savings**    (in thousands of kwh, in millions of KRW)

|  | 2005 | 2006 | 2007 |
|---|---|---|---|
| General Electric Power Usage (in thousands of kwh) | 401,351 | 395,717 | **410,905** |
| Train electric Power Usage (in thousands of kwh) | 1,652,055 | 1,700,724 | **1,767,584** |
| Electricity Saving in kwh (in thousands of kwh) | Increased by 244,010 | Increased by 48,669 | **Increased by 66,860** |
| Electricity Savings in Monetary Value (in millions of KRW) | Increased by 13,593 | Increased by 4,310 | **Increased by 6,019** |

• Increased electricity usage due to increased electric vehicle operation

**Infrastructure Expansion to Improve Energy Efficiency**

| | 2003 | 2004 | 2005 | 2006 | 2007 | |
|---|---|---|---|---|---|---|
| Electric Carriage Vehicle | 1,858 | 1,824 | 1,850 | 2,036 | 2,086 | |
| Diesel Train | 468 | 482 | 456 | 438 | 422 | |
| Electric Train | 106 | 124 | 131 | 151 | 151 | |

| Diesel Train | Continual Usage >> Replacement | Electric Train |
|---|---|---|
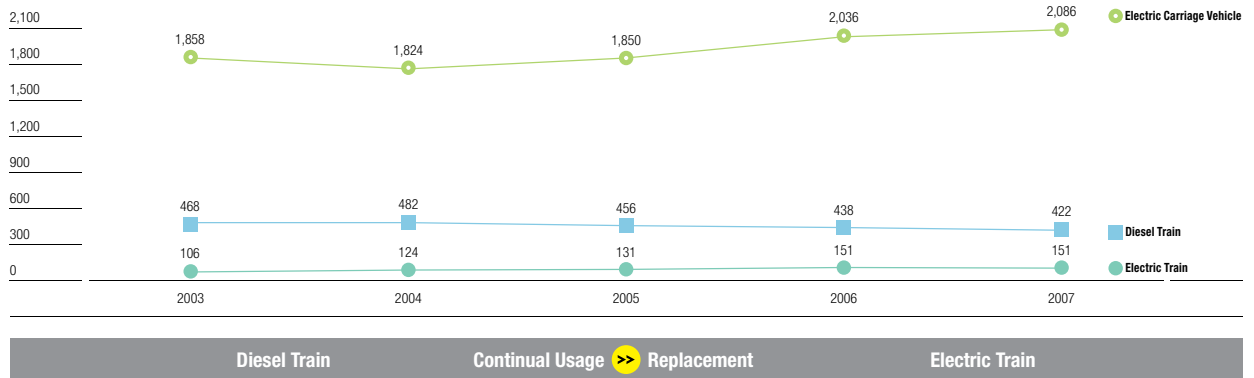
dioxide emissions, so KORAIL is researching various energy efficient methods such as reducing vehicle's weight and improving air-conditioning and lighting system that saves energy while minimizing inconvenience to customers.
To expand the electric usage in the future, new stations will utilize electric power system that uses renewal energy, and campaign to reduce office electric consumption is planned.

**Intermodal System Promotion**

KORAIL will promote intermodal system that integrate railroad and other transportation forms to reduce the transportation related impact on the environment. Intermodal system will not only reduce carbon dioxide emissions, but it will also increase transportation convenience for the public and expand KORAIL's cargo transportation business operation. For example, intermodal system like shuttle operations and bicycle only parking lot will attract more commuters to use railroad even in the short commuting distance.

**Soil Pollution Management**

Soil contamination area around the railroad can be divided into soil contamination due to refueling activities around fuel stations and oil pollution. As a precautionary measure, KORAIL reqularly inspects soil pollutants of facilities to ensure prevention of soil and ground water contamination with installed oil pan (FRP) on the railroad tracks, and installed roll-pad or paved concrete, replace contaminated gravel along the railroad track, and other variety of measures.
Soil purification project consists of three phases.
Phase 1: Business plan based on design continuity in the facility design stage, foundation stability, facility usage research, public accreditation review
Phase 2: Contaminated soil restoration as objective,
Purification process including groundwater extraction and purification systems, water treatment and detergent injection system

Phase 3: Efficiency evaluation, soil pollution level, underground water purity verification, post-management guidelines and standards for monitoring and verification phase.
Long-term soil conservation plan from 2002 to 2007 is completed by Jecheon rolling stock office, Busan rolling stock management department, Busan station, Metropolitan rolling stock management department in order.
After soil purification project, it saw a reduction of 800ppm in soil contamination. After purification project, regular survey on soil and ground water contamination is performed to identify any trend and manage accordingly.

Promoting intermodal system that integrates rail and bus transit

Soil purification activities

KORAIL SUSTAINABILITY REPORT 2008

5.0 Environmental Performance Management System   5.1 Environment Management Status   **5.2 Environment Management Efforts**

## Noise and Vibration Management

### Efforts to Reduce Railroad Noise and Vibration

Government restructured railroad industry by separating one entity into KORAIL, responsible for the rail operation, and Korea Rail Network Authority, responsible for the maintenance and management of facilities and railroad and the installation of sound cover.

To reduce the noise caused by KORAIL operated trains, sound level of trains are regulated except in accident or emergency. Further, noisy diesel trains are being replaced with silent electric trains. KORAIL installed safety rails and other preventative measures around the railroad track to ensure the safety of public. In addition, KORAIL works closely with the Korea Rail Network Authority to install eco-friendly, efficient soundproof walls to reduce noise and vibration.

**Railroad Operation Status**　(Unit: vehicles)

|  | 2005 | 2006 | 2007 |
|---|---|---|---|
| Diesel Trains | 1,047 | 1,018 | **994** |
| Electric Trains | 1,981 | 2,237 | **2,237** |
| High-speed Trains | 920 | 920 | **920** |

**Number of Possible Train Noise Impact Site for Each Region**　(Unit: number)

|  | Seoul Metropolitan Area | Yeongnam Region | Honam Region | Daejeon Region | Gangwon Region |
|---|---|---|---|---|---|
| Selected Location (Number) | 8 | 9 | 8 | 5 | 4 |
| Number of Train Operations for 1 Day on 1 Location in 2007 | 598 | 162 | 66 | 229 | 70 |

### Operation of Railroad Noise Dampening Barrier

KORAIL is installing and operating noise barriers in 34 urban areas expected to be impacted by the noise pollution according to the Ministry of Environment in its noise reduction policy since 2004.

Number of train operation in a day rose then fell after 2005. Average noise fell modest 1-2dB, but it's expected to fall steadily over time. Safety rail expansion, train replacement, and noise reduction measures are some of the results of KORAIL's effort to reduce noise pollution generated by its train operation.

### Reducing Noise Around Railroad

Ministry of Environment & Ministry of Land, Transport and Maritime Affairs has

**Railroad Noise Measurement Results**

Legend: ■ Above ground level at night　● Above ground level at day　▣ Highest predicted level for night　◉ Highest predicted level for daytime (noise unit: dB)



Standard: day time 70dB
Standard: night time 65 dB

| | 2005 | 2006 | 2007 |
|---|---|---|---|
| Highest predicted level for daytime | 63 | 63 | 62 |
| Highest predicted level for night | 61 | 61 | 60 |
| Above ground level at day | 59 | 60 | 58 |
| Above ground level at night | 58 | 57 | 56 |

### Basic Plan of Reducing Railroad Noise by Year

**Review of Railroad Noise Standard Selection and Evaluation Method**

**2007** >>
Ministry of Environment & Ministry of Land, Transport and Maritime Affairs (Former Ministry of Construction and Transportation)
●
Review of railroad noise standard evaluation method (~2009)

**2008** >>
Ministry of Environment
●
Set railroad noise standard for railroad erector

Ministry of Environment & Ministry of Land, Transport and Maritime Affairs
●
Review of railroad noise standard evaluation method

**2010~** >>
Ministry of Environment & Ministry of Land, Transport and Maritime Affairs
●
Set railroad noise standard for railroad erector

**Strengthening Railroad Noise Management**

**2006** >>
Ministry of Land, Transport and Maritime Affairs (Former Ministry of Construction and Transportation)
●
Devising countermeasures for train noise due to train traffic

**2007** >>
Ministry of Environment & Ministry of Land, Transport and Maritime Affairs (Former Ministry of Construction and Transportation)
●
Devise noise prevention measures for train noise near the railroad

**2008** >>
Ministry of Enviornment
●
Automatic Monitoring on rail nois

**2010~** >>
Ministry of Environment, Ministry of Land, Transport and Maritime Affairs
●
Selection and operation of traffic noise regulation zone near railroad

jointly promoted a comprehensive policy for reducing noise pollution from 2006 for five years.

KORAIL has also put into effect detailed plans for combating noise pollution around the railroad. Through these efforts, KORAIL is improving the eco-friendly image of the railroad to the public and the quality of life for the population living close to the railroad.

### Building Eco-Friendly, Green Railroad

Although noise barriers were erected to reduce the noise pollution, it also unfortunately reduced the scenic pleasure of the train travel. Therefore, KORAIL planted various plant species on and near the noise barriers to create an eye pleasing sight. While creating an aesthetic point, it also created eco-friendly, green railroad.

●
Building eco-friendly, green railroad

### Air Pollution Management

KORAIL is working hard to reduce air pollution produced during vehicle painting process, and taking preventative measures by repairing and maintaining facilities for clean air management. Main source of air pollution include the VOCs and liquid mists from parts cleaning process and railroad track bed construction, and dust and smoke from train engine inspection process. KORAIL is working within the regulation standards for these air pollutant management and expanding the air pollution prevention measures through the company's environmental management policy and environmental review policy.

For diesel vehicles (with expired warranty period according to the air protection law part 31 gas emission), low gas emission system is being installed. In tandem with governmental pilot program, diesel engines are being replaced with green LPG engines. KORAIL plans to continue its participation in the LPG engine conversion program.

### Indoor Air Quality Management for Multi-Use Facilities

Among the under and above ground level stations, stations with 2000m² of space report their air quality level and management plan to the state and local government offices. These stations manage high indoor air quality through regular indoor air quality measurement and facility inspection, and various facility improvements.

Currently, KORAIL manages 51 stations (33 underground and 17 above ground

level), and all 51 stations meet the air quality regulation standards (reported December 2007).

To maintain a pleasant station environment, 26 stations underwent various maintenances such as air conditioner replacement, ventilation duct cleaning, and air filter replacement. Additonally, regular ventilation duct cleaning and filter replacement ensure the optimal operation of air conditioning equipment in the stations. KORAIL operate 'cleaning attendants' in each station to reduce dust and improve air quality.

### Water Pollutants Management

45 waste water facilities across the country release treated waste water after purification process according to the Ministry of Environment's environmental standards.

In addition, waste water run off into the sewage and river from business sites are regularly monitored and measured to prevent any negative impact on the community. Any waste water found outside the business sites are either treated or contracted out for proper handling.

### Toxic Chemicals Management

Hazardous chemicals used by KORAIL are sulfuric acid for battery, wastewater treatment chemicals, and chemical paints. To prevent external leakage and hazardous work condition for the workers, these chemicals are properly handled based on safety and health rules on chemical management. Material Safety Data Sheet (MSDS) for every hazardous chemical is prepared and posted at every worksite to prevent accidents due to misinformation. KORAIL share MSDS with its employees and hold regular training to inform proper handling and storage procedure, emergency treatment, and hazardous effects of industrial chemicals.

5  KORAIL SUSTAINABILITY REPORT 2008

5.0 Environmental Performance Management System    5.1 Environment Management Status    **5.2 Environment Management Efforts**

## Collaboration with Stakeholders to Improve Environment

### Eco-Friendly Supply Relationship Establishment

Eco-Friendly Product Purchase Promotion  •  Since the Ministry of Environment's eco-friendly product purchase initiative in July 2005 to facilitate the purchase of eco-friendly products, KORAIL's 71.9%, well over the industrial average, of total purchases are eco-friendly products in 2007. In addition, eco-friendly product catalogs are distributed to each subsidiary, and its purchase methods are educated to ensure the continued purchase of eco-friendly products.

### Efforts for Customer and Community

Unwanted Mobile Phone Collection Campaign  •  In 2007, KORAIL sponsored public campaign for recycling used mobile phones. Discarded mobile phones contain toxic chemicals like mercury that can devastate the environment, but it also contains millions of parts that can be recycled. So in collaboration with the Ministry of Environment, KORAIL recovered unwanted mobile phones by offering 20% discount for each phone on train tickets at 11 high-speed railroad stations. Due to the overwhelming response from the public, over 41,000 phones were collected in contrast to the expected 15,000 phones (in excess of 273%). Recovered phones were handed over to the (Korean) Association of Electronics Environment for parts recycling.

Mini-Park Inside Train Station  •  KORAIL created a small park inside 47 train stations to create a pleasant, relaxing eco-friendly shelter for the local public and customers. More mini-parks are planned in the near future, and these parks will be further developed to become a local cultural venue.

Environmental Information Disclosure  •  KORAIL is operating and managing internet homepage (www.korail.com) as a portal for the public to access KORAIL's environmental record and policy in transparent manner. Sustainability report, containing overall environmental management, pollution prevention, and environmental management and policy, is available on the internet homepage for stakeholders.

Environmental Conference  •  The Railroad Environmental Council meet twice a year to analyze trends in domestic and international environment and set environmental policy. These information are disclosed to the experts, NGO, and stakeholders to strengthen community communication. Through the Railroad Environmental Council, KORAIL receives advice on future direction of its environmental policy to set environmental improvement plans and reflect it on the prevention methods.

### Environmental Improvement with Employee's Participation

Environmental Conservation Activities and Campaigns  •  Through yearly environmental protection activities, company encourages employee awareness on environmental value and make company's environmental contributions public. Through One Company One Mountain One River Activity, land cleaning activity, abandoned station maintenance, and other environmental activities, KORAIL's sustainable management protects mountain and river near the business activities, and strengthens ties with the local residents.

Environmental Leader Activities  •  To identify and improve environmental management deficiencies, environmental leaders are selected from headquarter and each offices to perform regular inspection and review. Any identified issues are corrected, and preventative actions are taken to ensure a sustainable environment improvement.

Acquired ISO 14001 Certificate  •  KORAIL has acquired the ISO 14001 for Busan (Jun. 2002), Daejeon (Nov. 2002), and the metropolitan (Oct. 2003) Rolling Stock Management Workshop that are model cases of environmental management. Also, post management and certificate renewal reviews are continuously conducted to maintain the status. Furthermore, KORAIL is continuing and implementing efforts to increase ISO 14001 certificates acquisitions

Environmental Training  •  KORAIL is operating environmental training to improve environmental consciousness and environmental work performances. Currently, KORAIL has environmental management and ISO operating teams. For the environmental positions, KORAIL is providing internal and external consignment trainings to secure the environmental management capacity.

●
A campaign of collecting cellular phone waste



●
A public park in front of Busan station to be utilized as a recreation area

**CO₂ Emission Amount of Underground Station**

●Bundang Line ●Ilsan Line ●Kwachoen Line

Indoor air quality standard level 1,000 ppm

| 1000 |
| 800 |
| 600 |
| 400 |
| 200 |
| 0 |

| Ori 566 | Migeum 486.5 | Jeongja 552.5 | Sunae 516.7 | Seohyeon 546 | Imae 460.7 | Yatap 520 | Moran 583.2 | Taepyeong 530 | Kyungwon Univ. 542.5 | Bokjeong 544.7 | Suseo 541.5 | Daemosan 437.7 | Gaepo-dong 366.8 | Guryong 389.8 | Dogok 435.7 | Hanti 411 | Seolleung 428.8 |

| Daehwa 421.7 | Juyeop 333.1 | Jeongbalsan 330.7 | Madu 379.5 | Baekseok 351.6 | Hwajeong 404.1 | Samsong 362.4 |

| Beomgye 632.7 | Pyeongchon 771.2 | Indeogwon 421.3 | Government Complex 451.6 | Gwacheon 404.6 | Seoul Grand Park 284 | Seoul Racecourse Park 397 | Seonbawi 371.6 |

**Expansion and Dissemination of Environmental Protection Consciousness** ●

KKORAIL is striving to expand the eco-friendly consciousness of our customers and employees, and conduct leadership as advanced eco-friendly transportation while operating KTX. The company has stocked our trains with leaflet to aware of the strengthes of eco-friendly railroad transportation for external stakeholders as public relations of KORAIL's environmental policy. For internal stakeholders, KORAIL has focused on increasing environmental consciousness and sharing environmental information including systems and new technologies through catching the trend of environment, transportation, government, academia, association, and citizen's organization.

● Environmental conservation initiatives of scuba diving association members



● ECO-RAil 2015 poster



● Railroad environmental consulting council



● Environmental specialist's intensive lecture for employees



5 KORAIL SUSTAINABILITY REPORT 2008

5.0 Environmental Performance Management System   5.1 Environment Management Status   **5.2 Environment Management Efforts**

# 6.1

## THIRD PARTY'S ASSURANCE STATEMENT

**To the Management of the KORAIL (Korea Railroad Corporation) Sustainability Report 2008**

The Institute for Industrial Policy Studies (The Auditor) was engaged by the KORAIL (Korea Railroad Corporation) to review information specified in its 2008 Sustainability Report (The Report) to provide independent third-party assurance on its contents. KORAIL is responsible for the collection and presentation of all information within The Report as well as the maintenance of the underlying data collection system and internal controls. The key objective of our review is to provide independent assurance that all statements and data cited in The Report are free of material misstatement or bias and that the data collection systems used are robust. On the basis of the above, The Auditor presents the following third-party statement of assurance.

**Context and Scope**

In its 2008 Sustainability Report, KORAIL describes efforts and progress made toward sustainability management as well as its plans for the future. The Auditor's review examined the following.

- Reasonable assurance on whether: the financial data specified under "Economy" is properly derived from KORAIL's audited Annual Reports for 2007;
- Limited assurance on whether: the data specified under "KORAIL to Sustainable Tomorrow", "KORAIL, Beyond the 100-Year History", "KORAIL, dreaming of an accompanied growth with society", "KORAIL in Perfect Harmony", "KORAIL helps keep environment healthy", and ". Appendix", of The Report are stated adequately and in full and are free of material misstatement or bias.

* Reasonable assurance constitutes a higher level of assurance than limited.

**Independence**

The Auditor was not involved in the preparation of any part of The Report, and with the exception of this work has no other affiliation with KORAIL that might compromise our independence or autonomy or place The Auditor under KORAIL influence, therefore ruling out any possible conflicts of interest. The Auditor has no relationship with KORAIL regarding any of its for-profit operations and activities.

**Criteria**

The Auditor reviewed whether The Report was written in accordance with the following reporting guidelines: (1) The Global Reporting Initiative's (GRI) G3 Sustainability Reporting Guidelines Version 3.0. (2) The AA1000 Assurance Standard's (AA1000 AS)* three core principles of Materiality, Completeness and Responsiveness; and (3) The local BEST Guidelines (BEST Sustainability Reporting Guidelines)** for sustainability management.

* AA1000 AS is an assurance standard for social and sustainable reporting developed by the U.K.-based Institute of Social and Ethical AccountAbility in November 1999. A nonprofit organization that promotes corporate social responsibility, business ethics and responsible business practices, AccountAbility aims to improve the quality of social and ethical accounting, auditing and reporting through the AA1000 AS.

** The BEST Guideline (B.E.S.T Sustainability Reporting Guideline) was jointly developed by the Ministry of Commerce, Industry, and Energy (MOCIE), the Korea Chamber of Commerce and Industry (KCCI), and the Institute for Industrial Policy Studies (IPS) and provides for five levels of reporting rigor (Level 1~5).

**Work Undertaken and Scope**

The Auditor reviewed the Materiality, Completeness, and Responsiveness of The Report through the process outlined below:

- a review of information contained in The Report as well as the underlying data collection system (validation of internal sustainability-related organizations, systems, and activities)
- data sampling and assessment of high-risk areas to support intensive review of key statements in The Report, internal policies, documentation, and information system
- interviews with managers and staff in charge of sustainability reporting, as well as persons responsible for The Report's source information
- a reconciliation of financial information stated in The Report against the audited Annual Report

1) The Institute for Industrial Policy Studies (IPS)
Established in 1993, the Institute for Industrial Policy Studies has accumulated broad expertise in the area of sustainability management since 2002. "The Auditor" is composed of seven individuals (Dong-Sung Cho, Chul-Ho Shin, Seok-Young Lee, Sung-Pil Park, Dong-Won Lee, Ji-yeon Ahn, Yong-In Kim)-professors at Korea's top universities or expert practitioners with professional accreditation and extensive experience in sustainability management based on majors in business management, accounting, environmental science etc.

## Conclusions

On the basis of the above we provide the following conclusions. The Auditor did not find The Report to contain any material misstatements or bias. All material findings of The Auditor are included herein, and detailed review findings and follow-up recommendations have been submitted to the management of KORAIL.

**Materiality: Does The Report cover economic, social and environmental issues of the greatest importance to KORAIL?**

We are not aware of key issues considered most material by KORAIL that were omitted or excluded from the Report. KORAIL has identified material issues by conducting materiality assessment and has reported on economic, social and environmental performances accordingly as well as on its plan and goal for sustainable growth. We recommend, however, that KORAIL makes more efforts to systemize and firmly establish materiality assessment for continuous identification of material issues going forward.

**Completeness: How reliable is the information and data stated in The Report, and is the underlying information and data collection system complete and robust?**

We conclude that KORAIL's information gathering system for assessing sustainability management performances is appropriate, and that the data gathered are reliable. We have also found that the material issues identified through materiality assessment match the key performance indices, and therefore, conclude that the assessment of management performances is comprehensive. We recommend, however, that KORAIL further refines the assessment and management system for the social and environment areas, and improves its sustainability performance assessment and evaluation system.

**Responsiveness: How well does The Report address information of importance to KORAIL stakeholders?**

We conclude that KORAIL defines customers, employees, business partners, local communities, NGO and the government, and the environment as its stakeholder groups and endeavors to operate stakeholder-specific communication channels for identifying material issues concerning the stakeholders. We recommend, however, that KORAIL diversifies its communication channel by stakeholder to gather more in-depth feedback, and provides in detail its plans for addressing the feedback as well as future communication plans.
- Relative to BEST Guidelines, in view of the level of reporting rigor and intensity of information provided, The Auditor finds The Report to fulfill 96.3% of the reporting requirements necessary to qualify for a Level 4 Report (from among Level 1~5).
- Relative to the GRI Guidelines, The Report meets the content and quality requirements of GRI G3 Application Level A+.

## Issues for Future Consideration

We have found KORAIL to have made efforts to faithfully follow the guidelines in preparing its first sustainability report, KORAIL 2008 Sustainability Report. In the interest of continued qualitative improvements in sustainability management performance and reporting, The Auditor recommends the following for future publication.
- Further refines its materiality assessment in order to identify material issues that sufficiently reflect matters of concern to the internal and external stakeholders and consider the risk level and impact of the issues.
- Increase the portion of quantitative data, and provides balanced data across economic, social and environmental performances.
- Employ diverse methods for involving the stakeholders in addition to surveys and interviews for gathering their feedback.
- Enhance efficiency of report preparation and reliability of the data in the report by strengthening its sustainability management organization and improving its data gathering and management system.

Based upon the above review and recommendations, The Auditor suggests that KORAIL establish a more systematic program of sustainability management and reporting, and continue to follow up with ongoing improvements going forward.

November 20, 2008

**Dong-Sung Cho**
Director, Center for Sustainability Management, IPS
Professor, College of Business Administration, Seoul National University

# 6.2

## ETHICS CHARTER

**KORAIL proudly believes having guided national transportation development as a national main artery.**

**Now we would like to realize [Green Network creating bountiful life] based on the Corporation Philosophy of [customer oriented management] of customer first, [value creation management] creating value added by management innovation, and [trust management] socially respected, and based on the establishment of a vision, 'attaining no. 1 employment preference enterprise through the black-ink balance management', together with the inauguration of Railroad Corporation.**

**Hence, we institute [KORAIL Ethics Charter] as a standard of upright conduct and judging value to be kept by all of the executives and employees, and promise to practice it actively.**

**One.**    We execute duty fairly and clearly by sharing a vision and management philosophy of KORAIL, and by complying with various laws and regulations based on [warm heart], [open thought] and [passionate movement] as employee's spirit.

**One.**    We secure absolute trust of customers by respecting opinion of customers and offering the utmost service based on the understanding that we are not able to exist without customer's satisfaction.

**One.**    We enhance value of corporation and build up mutual trust and cooperative relationship through the transparent and fair business transaction.

**One.**    We contribute to the development of railroad and the nation by realizing sustainable growth through continuous technology development.

**One.**    We practice positively social service activities and contribute to the development of the nation and the community by utilizing national railroad network.

**One.**    We protect positively environment, an important assets of mankind, by realizing eco-friendly railroad.

March 2, 2005

All the executives and employees in KORAIL

**UN Global Compact**
●
KORAIL is endeavoring to improve the value of sustainable global enterprise by expressing and implementing positively practicing will of KORAIL for the various guidelines presented as standards of international enterprise ethics by joining in May 2007. KORAIL is supporting the 4 largest core indices of UN Global Compact that include human rights, labour, environment, and anti-corruption, and will practice these positively in the future.

Promising support and positive practice of the "Proclamation of Caring for Climate; The Business Leadership Platform".

# 6.3

## ECO-RAIL 2015

**KORAIL will do the best for the people to spread the new future in the wealthy green-strong country where the energy, welfare, and eco-friendly environment mixed together, as a green artery that pulls low carbon and green growth.**

ECO RAIL 2015

**ECO-RAIL** Way to the Future
A wealthy future which KORAIL is creating.

**We,**

will improve moving facilities of the people by connecting the whole country within 2 hours.

**We,**

will offer eco-friendly transportation welfare by improving transportation sharing rate by two times.

**We,**

will produce job openings for 140,000 people yearly by expanding eco-friendly investment.

**We,**

will produce a green economy by reducing 10% of volume of carbon dioxide ($CO_2$).

We, will open a Great KORAIL era loved by the people by keeping faithfully these promises.

October 15, 2008
All the executives and employees in KORAIL

6    KORAIL SUSTAINABILITY REPORT 2008

6.1 Third Party's Assurance Statement **6.2 Ethics Charter 6.3 ECO-RAIL 2015** 6.4 Association and Membership Status 6.5 Awards 6.6 GRI/BEST Index 6.7 Reader Questionnaire

# 6.4

## ASSOCIATION AND MEMBERSHIP STATUS

**Domestic Membership**

●

- UN Global Compact Korea Network
- The Council for the Korean Pact on Anti-Corruption and
  Transparency
- Public Innovation Forum
- Korean Association for Public Enterprises
- Korean Society for Railway
- The Korean Association for Public Administration
- Seoul Association for Public Administration
- Railroad Industrial Committee
- The Knowledge Management Society of Korea
- Korean Society of Transportation
- Pacific Asia Travel Association Korea Chapter
- Korea Industrial Technology Association
- Korea Management Association
- Korean Standards Association
- Korea Productivity Center
- Audit Innovation Forum for Public Institution
- The Institute of Internal Auditors

**International Membership**

●

- UN Global Compact
- International Union of Railroad (joined as a permanent member in
  2003)
- Korea·China·Mongolia Railroad Exchange and Cooperation
- Korea·Russia Railroad Exchange and Cooperation
- World Congress on Railroad Research
- EURAIL SPEED (The international conference of high-speed trains)
- Coordination Council for Trans Siberian Transport (International
  Coordinating Council of Trans Siberian Railroad, joined as a
  permanent member in 2003)
- Korea·Japan Railroad Exchange and Cooperation (Ministry of Land,
  Infrastructure, Transport, and Tourism, JR Kyushu, and JR East
  Japan)
- SGS Testing Korea Co., Ltd.

# 6.5
# AWARDS

**Major Certificates and Awards (for the last three years)**

●
### 2008

- Won a Consolidated Prix on Management Quality Grand Awards of Korean Management Awards for Five Consecutive Years.
- Won a Transparent Society Award.
- Selected as an Excellent Enterprise for Quality Competitive Power for Six Consecutive Years.
- Won a Korean Presidential award at National Quality Management Competition for Nine Consecutive Years.
- Won a Grand Prix of National Productivity.
- Won the Korea knowledge Management Award.
- Honored a meritorious organization Award for the National Land Conservation Campaign by the Ministry of Environment.
- Won an 'Editing Award', at Korea Communication Grand Prix (on KORAIL Newsletter).
- Won an Anti-Corruption Grand Prix.
- Won an Original Idea Award of Mecenat Award.
- Won a Group Award for Excellent Social Engagement.
- Acquired the 6th Stage Certificate of Government Renovation Evaluation.
- Won 1st Place for Rising Rate of Integrity Progress.

●
### 2007

- Won a Korean Presidential and Most Excellent Award for Anti-Corruption Policy Evaluation.
- Won a Received Korean Presidential Award at Tasks Competition of the National Quality Division for Six Consecutive Years.
- Acquired Korea's First SGS Qualicert for KTX Services.
- Won a Consolidated Prix on Management Quality Grand Awards of Korean Management Awards for Four Consecutive Years.
- Won the Prime Minister's Award of Government Innovation Evaluation.
- Won the 1st Place in Public Field for Service Quality Index of Railway Customer Center.
- Won an award at Korea Idea Management Conference.
- Won Korea Advertising Awards.
- Won a Korea Presidential award at National Quality Management Competition for Eight consecutive years.
- Selected as a Prominent Example in Customer Service Charter by the Ministry of Planning and Budget.
- Raised Moody's Credit to A3.
- Won a Grand Prix in the Field of Customer Satisfaction of Contact Center.
- Acquired a WSO International Railroad Safety Specialist Certification.
- Renewed ISO 9001 Vehicle Field Certification.

●
### 2006

- Selected as 2006 Korean 100 Great Brands.
- Won a Korean Presidential Award at the national Quality Management Competition for Seven consecutive years.
- Raised the National Customer Satisfaction Index in Rapid Progress.
- Won the 1st Place in Public Field of Korea Industrial Service Quality Index for Two Consecutive Years.
- Acquired CQM Certificate.
- Acquired Korea Laboratory Accreditation Scheme Certificate.

6    KORAIL SUSTAINABILITY REPORT 2008

6.1 Third Party's Assurance Statement   6.2 Ethics Charter   6.3 ECO-RAIL 2015   **6.4 Association and Membership Status   6.5 Awards**   6.6 GRI/BEST Index   6.7 Reader Questionnaire

# 6.6

## GRI/BEST INDEX

Reported | Partially Reported | Not Reported | N/A

| | GRI Index | Wordings/Reasonings | Remark | Page | BEST |
|---|---|---|---|---|---|
| | | **Profile** | | | |
| **Vison and Strategy** | 1.1 | Statement from the most senior decision-maker of the organization | ● | 10, 11 | A_1 |
| | 1.2 | Description of key impacts, risks, and opportunities | ● | 15, 22 | A_2 |
| **Organizational Profile** | 2.1 | Name of the organization | ● | 2 | A_3 |
| | 2.2 | Primary brands, products, and/or services | ● | 16 | A_4 |
| | 2.3 | Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures | ● | 18, 19 | A_5 |
| | 2.4 | Location of organization's headquarters | ● | 14 | A_7 |
| | 2.5 | Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report | ● | 18, 19 | A_7 |
| | 2.6 | Nature of ownership and legal form | ● | 14 | A_8 |
| | 2.7 | Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries) | ● | 16, 17 | A_9 |
| | 2.8 | Scale of the reporting organization, including: * Number of employees; * Net sales (for private sector organizations) or net revenues (for public sector organizations); | ● | 14 | A_10 |
| | 2.9 | Significant changes during the reporting period regarding size, structure, or ownership | ● | 25 | B_8 |
| | 2.10 | Awards received in the reporting period | ● | 106 | CO8 |
| **Report Parameters** | 3.1 | Reporting period for information provided | ● | 2 | B_3 |
| | 3.2 | Date of most recent previous report (if any) | ○ | | B_8 |
| | 3.3 | Reporting cycle (annual, biennial, etc.) | ● | 2 | B_6 |
| | 3.4 | Contact point for questions regarding the report or its contents | ● | 2 | B_9 |
| | 3.5 | Process for defining report content | ● | 24 | B_4 |
| | 3.6 | Boundary of the report | ● | 2 | B-1 |
| | 3.7 | State any specific limitations on the scope or boundary of the report | ● | 2 | B-2 |
| | 3.8 | Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations | ● | 19 | A_6 |
| | 3.9 | Data measurement techniques and the bases of calculations | ● | 2 | - |
| | 3.10 | Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement | ○ | | - |
| | 3.11 | Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report | ○ | | B_5 |
| | 3.12 | Table identifying the location of the Standard Disclosures in the report | ● | 107 | B_10 |
| | 3.13 | Policy and current practice with regard to seeking external assurance for the report | ● | 102 | B_7 |
| **Governance, Commitments, and Engagement** | 4.1 | Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight | ● | 20, 21 | GR1 |
| | 4.2 | Indicate whether the Chair of the highest governance body is also an executive officer | ● | 20, 21 | GR1 GR3 |
| | 4.3 | For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members | ● | 20, 21 | GR2 |
| | 4.4 | Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body | ● | 20, 21 | GR12 |
| | 4.5 | Linkage between compensation for members of the highest governance body, senior managers, and executives, and the organization's performance | ● | 20, 21 | GR7 |

Reported | Partially Reported | Not Reported | N/A

| | GRI Index | Wordings/Reasonings | Remark | Page | BEST |
|---|---|---|---|---|---|
| | | **Profile** | | | |
| **Governance, Commitments, and Engagement** | 4.6 | Process in place for the highest governance body to ensure conflicts of interest are avoided | ● | 20, 21 | GR13 |
| | 4.7 | Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics | ● | 20, 21 | GR4 |
| | 4.8 | Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation | ● | 104, 105 | - |
| | 4.9 | Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance | ● | 20, 21 | GR5 |
| | 4.10 | Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance | ● | 20, 21 | GR6 |
| | 4.11 | Explanation of whether and how the precautionary approach or principle is addressed by the organization | ● | 22 | GR11 |
| | 4.12 | Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses | ● | 104, 105 | GR10 |
| | 4.13 | Memberships in association advocacy organizations in which the organization | ● | 106 | A_11 |
| | 4.14 | List of stakeholder groups engaged by the organization | ● | 12 | C_1, C_2 |
| | 4.15 | Basis for identification and selection of stakeholders with whom to engage | ● | 24 | C_1 |
| | 4.16 | Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group | ● | 12, 13 | C_2 |
| | 4.17 | Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting | ● | 12, 13 | C_3 |
| | | **Economic** | | | |
| | EC | Disclosure on Management Approach | | 38 | |
| **Economic Performance** | EC1 | Direct economic value generated and distributed, including revenues, operating costs, employees compensations, donations and other community investment, retained earnings, and payments to capital providers and governments | ● | 25 | EC1 |
| | EC2 | Financial implications and other risks and opportunities for the organization's activities due to climate change | ● | 15, 96 | EC2 |
| | EC3 | Coverage of the organization's defined benefit plan obligations | ● | 63 | EC3 |
| | EC4 | Significant financial assistance received from government | ● | 46 | EC5 |
| **Market Presence** | EC5 | Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation | ● | 59 | EM4 |
| | EC6 | Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation | ◌ | | EC4 |
| | EC7 | Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation | ● | 60 | EC4 |
| **Indirect Economic Impacts** | EC8 | Development and impact of infrastructure investment and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement | ● | 17, 45 | EC6 |
| | EC9 | Understanding and describing significant indirect economic impact, including the extent of impacts | ● | 16 | EC7 |
| | | **Environmental** | | | |
| | EN | Disclosure on Management Approach | | 90 | |
| **Materials** | EN1 | Materials used by weight or volume | ● | 94 | EV10 |
| | EN2 | Percentage of materials used that are recycled input materials | ● | 94, 95 | EV11 |
| **Energy** | EN3 | Direct energy consumption by primary energy source. | ● | 94 | EV7 |
| | EN4 | Indirect energy consumption by primary source | ● | 94 | EV8 |
| | EN5 | Energy saved due to conservation and efficiency improvements | ● | 15, 96 | EV5 |
| | EN6 | Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives | ● | 96 | EV5 |
| | EN7 | Initiatives to reduce indirect energy consumption and reductions achieved | ● | 96 | EV5, EV25 |
| **Water** | EN8 | Total water withdrawal by source | ● | 94 | EV9 |
| | EN9 | Water sources significantly affected by withdrawal of water | ● | 92 | EV20 |
| | EN10 | Percentage and total volume of water recycled and reused | ● | 92 | EV18 |

Reported | Partially Reported | Not Reported | N/A

| | GRI Index | Wordings/Reasonings | Remark | Page | BEST |
|---|---|---|---|---|---|
| **Environmental** | | | | | |
| **Biodiversity** | EN11 | Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas | | | EV22 |
| | EN12 | Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas. | | | EV22, EV26 |
| | EN13 | Habitats protected or restored. | | | EV27 |
| | EN14 | Strategies, current actions, and future plans for managing impacts on biodiversity | | | EV6, EV26 |
| | EN15 | Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk | | | EV28 |
| **Emissions, Effluents, and Waste** | EN16 | Total direct and indirect greenhouse gas emissions by weight | | 94, 96 | EV12 |
| | EN17 | Other relevant indirect greenhouse gas emissions by weight | | | EV13 |
| | EN18 | Initiatives to reduce greenhouse gas emissions and reductions achieved | | 96 | EV4 |
| | EN19 | Emissions of ozone-depleting substances by weight | | 99 | EV14 |
| | EN20 | NOx, SOx, and other significant air emissions by type and weight | | 15 | EV15 |
| | EN21 | Total water discharge by quality and destination | | 94 | EV17 |
| | EN22 | Total weight of waste by type and disposal method | | 94, 95 | EV16 |
| | EN23 | Total number and volume of significant spills | | 95 | EV21 |
| | EN24 | Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally | | 94 | EV29 |
| | EN25 | Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff | | 99 | EV19 |
| **Products and Services** | EN26 | Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation | | 96-101 | EV23 |
| | EN27 | Percentage of products sold and their packaging materials that are reclaimed by category | | | EV24 |
| **Compliance** | EN28 | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations | | 95 | EV31 |
| **Transport** | EN29 | Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce | | 15 | EV30 |
| **Overall** | EN30 | Total environmental protection expenditures and investments by type | | 25, 90, 92, 95 | EV1 |
| **Social: Labor Practices and Decent Work** | | | | | |
| | LA | Disclosure on Management Approach | | 58 | |
| **Employment** | LA1 | Total workforce by employment type, employment contract, and region | | 59, 60 | EM1 |
| | LA2 | Total number and rate of employee turnover by age group, gender, and region | | 59, 60 | EM5 |
| | LA3 | Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations | | 65 | EM20 |
| **Labor Management Relations** | LA4 | Percentage of employees covered by collective bargaining agreements | | 65, 66 | EM12 |
| | LA5 | Minimum notice period (s) regarding significant operational changes, including whether it is specified in collective agreements | | 66 | EM13 |
| **Occupational Health and Safety** | LA6 | Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs | | 63, 64 | EM14 |
| | LA7 | Rates of injury, occupational diseases, lost days, and absenteeismand number of work-related fatalities by region. | | 63, 81 | EM19 |
| | LA8 | Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases | | 63-65 | EM18 |
| | LA9 | Health and safety topics covered in formal agreements with trade unions | | 63-65 | EM15 |
| **Training and Education** | LA10 | Average hours of training per year per employee by employee category | | 62 | EM27 |
| | LA11 | Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings | | 62 | EM28 |
| | LA12 | Percentage of employees receiving regular performance and career development reviews | | 62 | EM29 |
| **Diversity and Equal Opportunity** | LA13 | Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity | | 59, 60 | EM2 |
| | LA14 | Ratio of basic salary of men to women by employee category | | 59 | EM3 |

**Reported** | **Partially Reported** | **Not Reported** | **N/A**

| | GRI Index | Wordings/Reasonings | Remark | Page | BEST |
|---|---|---|---|---|---|
| | | **Social: Human Rights** | | | |
| | HR | Disclosure on Management Approach | | 58, 68 | |
| Non-Discrimination | HR1 | Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening | | | PN2 |
| | HR2 | Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken | | 73 | PN3 |
| | HR3 | Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained | | 60 | EM30 |
| | HR4 | Total number of incidents of discrimination and actions taken | | 60 | EM7 |
| Freedom of Association | HR5 | Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights | | 65-67 | EM8 |
| Child Labor | HR6 | Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor | | 60 | EM9 |
| Forced and Compulsory Labor | HR7 | Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor | | 60 | EM10 |
| Security Practices | HR8 | Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations | | | EM31 |
| Indigenous Rights | HR9 | Total number of incidents of violations involving rights of indigenous people and actions taken | | 75-79 | CO2 |
| | | **Social: Society** | | | |
| | SO | Disclosure on Management Approach | | 68 | |
| Corruption | SO1 | Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting | | 75-79 | CO2 |
| | SO2 | Percentage and total number of business units analyzed for risks related to corruption | | 71 | CO5 |
| | SO3 | Percentage of employees trained in organization's anti-corruption policies and procedures. | | 72, 73 | CO5 |
| | SO4 | Actions taken in response to incidents of corruption | | 71, 72 | CO5 |
| Public Policy | SO5 | Public policy positions and participation in public policy development and lobbying | | 69 | CO6 |
| Anti-competitive Behavior | SO6 | Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country | | 69 | CO7 |
| Anti-competitive Act | SO7 | Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes | | 73, 74 | CS3 |
| Compliance | SO8 | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations | | 69 | CO9 |
| | | **Social: Product Responsibility** | | | |
| | PR | Disclosure on Management Approach | | 50 | |
| Customer Health and Safety | PR1 | Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures | | 50 | CS4 |
| | PR2 | Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes | | 53 | CS11 |
| Product and Service Labeling | PR3 | Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements | | 53 | CS5 |
| | PR4 | Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes | | 53 | CS12 |
| | PR5 | Practices related to customer satisfaction, including results of surveys measuring customer satisfaction | | 55-57 | CS9 |
| Marketing Communications | PR6 | Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship | | 53 | CS13 |
| | PR7 | Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes | | 53 | CS14 |
| Customer Privacy | PR8 | Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data | | 53 | CS15 |
| | PR9 | Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services | | 53 | CS12 |

🔵 Reported  |  ⚪ Partially Reported  |  ⚪ Not Reported  |  〰 N/A

| | GRI Index | Wordings/Reasonings | Remark | Page | BEST |
|---|---|---|---|---|---|
| | | **Transportation and Logistics** | | | |
| Policy | LT3 | Description of policies and programmes on the management of environmental impacts, including:<br>1) Initiatives on sustainable transportation (e.g., hybrid vehicles);<br>2) Modal shift; and2<br>3) Route planning. | 🔵 | 45, 92, 96 | |
| Energy | LT4 | Description of initiatives to use renewable energy sources and to increase energy efficiency. | 🔵 | 92, 96 | |
| "Urban Air Pollution" | LT5 | "Description of initiatives to control urban air emissions in relation to road transport (e.g., use of alternative fuels, frequency of vehicle maintenance, driving styles, etc.)." | 🔵 | 40, 96 | |
| Congestion | LT6 | "Description of policies and programmes implemented to manage the impacts of traffic congestion (e.g., promoting off-peak distribution, new inner city transport modes, ercentage of delivery by modes of alternative transportation)." | 🔵 | 30, 54, 97 | |
| Noise/Vibration | LT7 | "Description of policies and programmes for noise management/abatement." | 🔵 | 98, 99 | |
| "Transportation Infrastructure Development" | LT8 | "Description of environmental impacts of the reporting organisation's major transportation infrastructure assets (e.g.,railways) and real estate10. Report the results of environmental impact assessments." | ⚪ | 97, 98 | |
| "Mobile Worker Working Patterns" | LT9 | Description of policies and programmes to determine working hours and rest hours, rest facilities, and leave for those driving and operating fleets. | 🔵 | 65 | |
| | LT10 | Describe approaches to provision of facilities to enable mobile workers to maintain personal communications while working. | ⚪ | 65 | |
| Substance Abuse | LT11 | Description of policies and programmes regarding substance abuse (e.g., training and campaigns). | 🔵 | 63, 64 | |
| Road Safety | LT12 | Number of road fatalities of drivers or third parties per million kilometres driven. | 🔵 | 80 | |
| Access to Mail (Mail specific) | LT14 | Description of policies and programmes for public access to mail services (e.g., distance to postal office and mail boxes). | 〰 | | |
| Humanitarian Programmes | LT15 | "Provision of logistics and transportation core competences to deliver humanitarian needs locally and globally measured in terms of: e.g., tons carrying capacity; person months; expenditure, value (fair market terms), and in kind contributions in disaster preparedness and response." | 🔵 | 77, 79 | |
| Use of Labour Providers | LT16 | Criteria for selecting recruitment and placement services. State how these criteria relate to existing international standards such as the conventions of the International Labour Organization (ILO). | 🔵 | 59, 60 | |
| Continuity of Employment | LT17 | Describe measures in place to provide income security and employment continuity for workers employed/contracted repeatedly but not continuously. | 🔵 | 60 | |

**GRI Application Level**
●



**Explanation of Unreported Indicators**
●

**3.2, 3.10, and 3.11:** This report is published for the first time.

**EC6:** There is no complimentary purchasing policy for specific regions due to the equal opportunity of bid qualification with electronic disclosure system.

**EN11, EN12, EN13, EN14, and EN15:** KORAIL is responsible for the operation and Korea Rail Network Authority is responsible for the facilities (Not Applicable).

**EN17:** KORAIL is not currently supervising other indirect greenhouse gas emissions (For example: Emissions from commuting by one's own vehicle could be reduced by replacing it with public transportations such as bus). However, KORAIL will establish a system to decrease the emissions.

**EN27:** There is no recyclable product ratio due to service industry.

**HR1:** KORAIL does not have any major investment contracts including a human right clause. However, KORAIL will include the clause in the future investment contract.

**HR8:** KORAIL is currently operating several trainings including the code of ethics and sexual harassment protection for protecting human rights, but is not managing data on security personnel ratio. However, KORAIL will report performances on managing the data.

KORAIL is ready to hear your opinion for better sustainability report. If you have any comment about sustainability management and 2008 sustainability report of KORAIL, please fill out the below and fax it at 82.42.609.4828 or send it by mail.

## 6.7 Reader Questionnaire

1. **Please, select a group with which you identify (you may choose more than one).**

   □ Employee          □ Business Partner          □ Public Official          □ NGO or Social Association          □ Sustainability Expert

   □ Media          □ Academia          □ Other (          )

2. **What would you like to see in a sustainability report of KORAIL?**

   □ Company Introduction  □ Sustainability Management Overview  □ Financial Performance  □ Environmental Management

   □ Social Responsibility Management  □ Employment and Work Status  □ Customer Management

   □ Cooperation with Business Partner Cooperation  □ Communication with Stakeholder

3. **Please, select one with how you agree. Strongly disagree disagree neutral agree strongly agree**

   |  | StronglyDissatisfied | Dissatisfied | Neutral | Satisfied | Strongly satisfied |
   |---|---|---|---|---|---|
   | The use of terms is clear and easy to understand. | □ | □ | □ | □ | □ |
   | Critical issues are explained enough to cover | □ | □ | □ | □ | □ |
   | readers' concerns and the issues give readers benefits. |  |  |  |  |  |
   | The content of the report is reliable. | □ | □ | □ | □ | □ |
   | The design of the report looks | □ | □ | □ | □ | □ |
   | good and helps readers understand. |  |  |  |  |  |

4. **Which section is necessary to add more information?**

   □ Company Introduction and Sustainability Management  □ Economic  □ Social  □ Environmental

5. **KORAIL will refer to your opinion.**  (In economic section/social section/environmental section/internal customer satisfaction section, etc.)

   □ Which section are you the most impressed by? (                                                                )

   □ Which contents do you need more information in the report? (                                    )

   □ Which contents are the most valuable? (                                                          )

   □ How are you satisfied with the report?          □Strongly Dissatisfied          □Dissatisfied          □Neutral          □Satisfied          □Strongly satisfied

6. **Please let KORAIL know other your commets regarding the sustainability report.**

   _____

   _____

   _____

   _____

   _____

   Thank you for your participation.

Paste here

**From**

Name

Tel.

E-mail

Address

☐☐☐ – ☐☐☐

**To**

**KORAIL**

| | |
|---|---|
| **302-701** | **12-1201, Deajeon Government Complex, 139 Seonsa-Ro, Seo-Gu, Daejeon, Republic of Korea** |
| **Telephone** | +82. 42. 609. 3852 |
| **Facsimile** | +82. 42. 609. 4828 |
| **E-mail** | sustainability@korail.com |

**www.korail.com**

Paste here

Paste here

**ECO RAIL 2015**

**ECO-RAIL** Way to the Future

**A wealthy future which KORAIL is creating.**

Dream

Pyxis

Value

Harmony

★ Eco

# KORAIL
## KOREA RAILROAD

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