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2013 KOREAN AIR SUSTAINABILITY REPORT

2013 Korean Air Sustainability Report

SUSTAINING EXCELLENCE

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ABOUT THIS REPORT

Reporting Principle
GRI 3.1

Reporting Scope
This report covers business activities of all business premises of Korean Air, including its head office as well as its domestic and overseas premises, but does not include data from its subsidiaries or affiliates.

Reporting Period
January 1, 2012 through December 31, 2012 with some qualitative data obtained from our 1H 2013 performance.

Reporting Standards
Data collected over the past three years (2010-2012) for trend analysis

Reporting Frequency
Annually with the latest publication being August 2012.

Assurance
This report received third party assurance from the Korea Standards Association (KSA). For details, see page 88 "Third Party Assurance Statement."

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For more details, visit the Korean Air website at www.koreanair.com or check the electronic disclosure system of the Financial Supervisory Service at http://dart.fss.or.kr.

Altimeter Setting for Sustaining Excellence

We travel with you for a better tomorrow with communication and cooperation

As air pressure varies over time from place to place, a pilot always adjusts his altimeter to the air pressure of the place he is in order to maintain an accurate altitude. Korean Air's sustainability management also starts from its effort to listen to the voice of diverse stakeholders and incorporate their opinions in its business activities. In addition to the company's ultimate goal of generating continued profits, we are committed to fulfilling our responsibilities as a corporate citizen through communication and cooperation with our stakeholders to make a happier and more prosperous future for all.

CEO'S MESSAGE

For many years, Korean Air has impressed customers through optimal operations and change-oriented corporate culture. Keeping the expectations of our stakeholders in mind, we will travel with you for a better tomorrow.

Dear stakeholders,

Let me first express my deep gratitude for your support for Korean Air.

Korean Air has thrived on its close relationship with various stakeholders, including shareholders, investors, employees and their family members, business partners, local communities, NGOs and the government, in the economic, environmental and social areas.

Korean Air has published its Sustainability Report since 2006 for more effective communication with its stakeholders. I am pleasured to share with you Korean Air's achievements through its 2013 Sustainability Report.

In 2012, Korean Air set a goal of promoting communication between the company and other members of society and focused on building mutual trust, and this trust enabled the company to get over the challenges arising from the global economic slump and high oil prices. These challenges still remain and the business landscape surrounding the company is changing so fast. In view of this, efforts to closely work and grow together with all groups of our stakeholders will be needed more than ever and accordingly, Korean Air chose "Traveling with You" as the core value of its business activities for 2013.

"Traveling together" is not about going alone; it is about going together. While traveling together, you need to keep pace and listen to your partner's voice. Internally, we will share values, put company benefits before ours and promote harmony among each other. Externally, we will endeavor to make a warm-hearted society, sharing our benefits with our neighbors.

To this end, we will concentrate on achieving solid growth by establishing stable sources of revenue and improving our fundamentals rather than being intent on quantitative expansion. We will maximize efficiency and productivity by mobilizing all our management resources such as new aircraft, network and global talent, as well as reinforce sales so as to generate stable profits in any given situation. In addition, we will make new products and new growth engines with unique ideas and creativity.

Since Korean Air announced its commitment to conserving the environment in the 1990s, the company has conducted an array of programs such as global reforestation project, introduction of next-generation eco-friendly aircraft with less carbon emissions and noise and efficient use of energy. Also as a leading carrier of SkyTeam, a global airline alliance, the company is striving to effectively address global warming and other environmental issues facing the airline industry.

This year, Korean Air launched a community service group at the group level in a bid to take an integrated approach to all CSR activities and expand their scope, believing that the spirit of sharing is the foundation of a healthy society. Our integrated CSR program called "WITH" offers CSR activities that Korean Air is in a good position to carry out. Along with these efforts, Korean Air will also endeavor to facilitate mutual growth with its business partners and co-prosperity with its local communities through diverse communication channels.

Korean Air has always brought innovation and change to its operations and corporate culture for greater customer satisfaction. Keeping in mind our stakeholders' special love for us as well as their expectations, Korean Air will travel with all our stakeholders for a new tomorrow.

Thank you.

Chairman & CEO **CHO YANG-HO**

COMPANY PROFILE

Since its inception in 1969, Korean Air has grown into Korea's largest flagship carrier. Its parent company is the Hanjin Group and the airline has another premium low-cost unit, Jin Air. Korean Air, a founding member of the SkyTeam global airline alliance, celebrated its 43rd anniversary in 2012. The company's hub airport is Incheon International Airport.

Company name	Korean Air Lines Co., Ltd.
Headquarters	260 Haneul-gil (1370 Gonghang-dong), Gangseo-gu, Seoul, Korea
Tel.	02-2656-7114
Website	http://www.koreanair.com
Main areas of business	Passenger/cargo transportation, aerospace, catering service, in-flight sales, hotels, limousine service

Sales	KRW12,263.9 billion
No. of employees	20,634 (including overseas employees)
Fleet	146 aircrafts
Routes	124 destinations in 43 countries
No. of passengers carried	24.28 million
Freight carried	1.54 million tons
Subsidiaries	Refer to the company's disclosure at http://dart.fss.or.kr

* Disclosure as of December 31, 2012

Sales (Unit: KRW100 million)

Operating Income (Unit: KRW100 million)

Sales by Business Area (Unit: KRW100 million)

Operating Revenues

Operating Results

Market share in sales

Market share in No. of passengers

Market share in cargo transport

ROUTES

Korean Air, as a leading global carrier with 146 aircrafts in its fleet, operates regular routes connecting 13 domestic cities and 111 cities in 42 countries. In 2012, we carried 24.28 million passengers and 1.54 million tons of cargo safely.

BUSINESS PHILOSOPHY

Korean Air seeks to maximize customer satisfaction, create a professional and employee-initiated organization and bring innovation and change to its corporate culture by doing things right according to given standards and principles. In doing so, we believe that we can find ways to grow together with all our stakeholders.

Principle-based Management

Adhering to standards and principles

- Establishing standards and principles that are on par with the global standards
- Pursuing flexibility in business based on the standards and principles
- Eliminating expedients and tricks in business operations

System-based Management

Organizational management based on expertise and autonomy

- Mutual respect for expertise in various fields
- Rational decision-making based on an efficient management system
- Seeking creative solutions through harmonious relations

Customer-oriented Management

Creating customer loyalty with the highest level of customer satisfaction

- A comprehensive and systematic approach to customer relations
- Prompt response to changing customer needs
- Maximizing customer value through management by wandering around

Change-oriented Management

Creating a new corporate culture through innovation and change

- A young and enterprising spirit
- Change-oriented organizational culture
- Future-oriented reshuffling of our business portfolio by focusing on core competencies

Appreciation of Talent

Developing future growth engines with competent human resources

- Attracting talent with global competitiveness
- Continuing to aggressively invest in fostering talent
- A corporate culture that fosters and grows alongside employees

CORPORATE GOVERNANCE

Korean Air's Board of Directors is comprised of executive members who are leaders in the airline industry and other members who have vast expertise in their respective fields. The Board has in operation a reasonable and transparent decision-making process and ensures that our corporate behavior is monitored to maintain sound governance and reliable management.

Governance Structure

Korean Air's BOD makes resolutions on matters of significance other than agenda items requiring resolutions at the general shareholders' meeting under the laws and the company's Articles of Incorporation, while also monitoring the performance of duties by each director. The annual plan for BOD meetings is delivered to board members to improve the attendance and efficiency of the BOD's decision-making process. Senior executives with expertise relevant to issues on the agenda are asked to attend particular meetings to provide information related to the matter at hand. This enables other board members to gain a better understanding of each topic, allowing for more informed decision making. Non-standing members are provided with offices and the right of access to a wide range of corporate information, including the status of the company's operations and performance through the company's intranet Hanway. Under the BOD are four specialized subcommittees that adhere to relevant rules and regulations. These include the Audit Committee, the Management Committee, the Non-Standing Director Nomination Committee and the Internal Transaction Committee (established on December 13, 2012). Of these subcommittees, the Audit Committee is entirely comprised of non-standing directors to ensure the committee's independence in monitoring the company's performance and the BOD's activities. Remunerations to directors are made after acquiring approval at the general shareholders' meeting. In 2012, the BOD held a total of eight meetings to deliberate on 47 items. On average, 10.1 directors were present at BOD meetings in 2012, with the average attendance rate standing at 84 percent (non-standing directors: 89 percent).

BOARD OF DIRECTORS (as of December 31, 2012)

	Name	Position/Career	Remarks
Standing	Cho Yang-ho	Chairman & CEO	Chairman of the BOD
	Chi Chang-hoon	President & COO	
	Lee Tae-hee	General Council	
	Suh Yong-won	Executive Vice President	
	Cho Hyun-ah	Senior Vice President	
	Cho Won-tae	Senior Vice President	
Non-standing	Park Oh-soo	Professor, College of Business Administration, Seoul National University	
	Lee Sog-woo	Lawyer, Doore Law Firm / Former Chief Justice of the South Seoul District Court	
	Lee Hee-beom	Advisor to LG International Corp / Former Chairman of STX Heavy Industries	
	Lee Yun-woo	Chairman of FLC / Former Vice President of Korea Development Bank	Chair of the Audit Committee
	Hyun Jung-taik	Professor, College of International Trade, Inha University / Former President of the Korea Development Institute	
	Kim Seung-yu	Chairman of Smile Microcredit Bank / Former CEO of Hana Financial Group	
	Lee Joo-seok	Advisor to Kim & Chang Law Firm / Former Vice Chairman & COO of Woongjin Group	

* See page 148 of Korean Air's 51st Business Report at http://dart.fss.or.kr for more details about the careers and responsibilities of these directors.

Total remunerations for 2012 were KRW4,183.78 million, with KRW321.82 million actually paid out per director on average.

Independence and criteria in the appointment of directors

Candidates for standing directors are recommended by the BOD and candidates for non-standing directors are recommended by the Non-Standing Director Nomination Committee by unanimous consent. Personal profiles of director candidates are disclosed to stakeholders prior to the general shareholders' meeting.

Process to prevent any conflict of interest within the BOD

In order to prevent any conflict of interest in the BOD's decision-making process, Korean Air's BOD regulations restrict the voting rights of any director who has special interests in a particular agenda. Directors who cannot exercise their voting rights are not counted in the quorum at the meeting.

Channels for employees and shareholders to have their voice heard by the BOD

In addition to business reports, quarterly reports and other regular reports, Korean Air discloses its management information in a timely and accurate fashion to its stakeholders through communication channels such as general shareholders' meetings, IR meetings and IR website. Prior to each BOD meeting, the company gathers the opinions of employees on each agenda item. Furthermore, the company's numerous regulations, including the duties and responsibilities to investors listed in the Business Ethics Guidelines, protect shareholder rights (attending general shareholders' meetings, voting, selection and appointment of BOD members, timely access to information, dividend payouts, etc.), while respecting and responding to shareholder demands.

MAJOR SHAREHOLDERS

Name	No. of shares owned (shares)
Cho Yang-ho	18,566,640
National Pension Fund	6,395,906
KB Asset Management	1,449,424
Korean Teachers' Credit Union (KTCU)	735,885
Korea Investment Management	593,682

OWNERSHIP

BUSINESS ETHICS

Korean Air ensures that all employees strictly adhere to the company's ethical codes. We operate a fair trade monitoring system rules, an internal accounting control system and an internal whistle blowing program in order to promote clean and transparent business activities and to become a trusted company.

Korean Air attended Asia's first signing of the private sector commitment to the Global Code of Ethics for Tourism alongside other Asian tourism businesses and associations.

Code of Ethics

Korean Air established its Charter of Ethics, Ethics Code & Practice Guidelines, Guidelines on Solving Ethical Issues, and Whistleblowing System to encourage employees to comply with codes of ethics. The company also keeps business partners up to date on its ethical policies and programs and encourages them to respect and comply with these codes. The Ethics Code & Practice Guidelines provide the outline of our duties and responsibilities to customers, investors, employees, business partners, competitors, and society as a whole. They also provide guidelines on human rights, the elimination of discrimination, corruption and bribery, as well as information on fair transactions, privacy protection, safety and health of employees, business partners and customers, security, health, environment and mutual growth.

Business Ethics System

Korean Air has a Business Ethics Bureau and Chief Ethics Officer (Directors of the Business Division and Operations Division as well as executive staff in charge) to provide detailed guidelines on the work process for handling ethical issues between the company and employees under Korean Air's Code of Ethics. The Bureau and the Officer also manage and oversee situations to help employees behave according to the Code of Ethics and to make the right decisions.

Internal Inspections to Ensure the Observation of Fair Trade Regulations

Korean Air adopted a voluntary observation program to abide by relevant rules and regulations regarding fair trade, setting up an internal inspection system afterwards for its actual operation. We are running a team dedicated to the promotion of fair trade practices and prevention of unfair trade practices. The team is responsible for monitoring the status of fair trade, inspecting locations of operation regarding the observance of fair trade and checking fair trade voluntary compliance. In 2012, we did not detect any cases of corruption, unfair competition or monopoly practices that require disciplinary measures.

Internal Accounting Control System

Korean Air operates an advanced internal accounting control system to regularly monitor the status of internal operations, ensuring reliable accounting information that enhances transparency in management practices. In addition, we make sure that this monitoring is not confined to the financial sector. We have expanded monitoring to all business practices to detect loopholes in the work process and to make necessary improvements.

Compliance Program

In July 2012, Korean Air appointed its Compliance Officer and compliance standards through a BOD resolution and set up a team under the Legal Affairs Office in support of compliance-related affairs. The compliance standards outline the roles, rights and obligations as well as compliance activities of Compliance Officer.

Efforts to Promote Ethical Mindset in the Entire Workforce

Korean Air runs a Business Ethics section on its internal communication network, providing business ethics training as well as clear, detailed behavioral guidelines to employees. We also operate an online course on business ethics for employees and get them to pledge to uphold the highest standards of business ethics. Roughly 40 percent of the business ethics course is devoted to anti-corruption issues. In addition, security guards attend sexual harassment prevention classes, where videos and other materials provided by the Ministry of Employment and Labor and the Ministry of Gender Equality and Family are shown.

ANTI-CORRUPTION EDUCATION SESSIONS (Unit: persons)

MAJOR MILESTONES OF BUSINESS ETHICS PROGRAMS

Whistleblowing Program

Korean Air operates an internal whistleblowing program to prevent and minimize potential losses to the company which arise from any violation of relevant laws and regulations or ethical codes or guidelines in the course of employees carrying out their work. Any unethical practices can be reported via mail, e-mail (jebo@koreanair.com/whistleblower@koreanair.com), phone, or a personal visit to the Ethics Bureau which verifies the report, and then notifies the results to the person who made the report. The informant's identity and report are kept confidential. All Korean Air stakeholders including employees, business partners and customers are subject to be reported on, and any violation by a business partner is penalized with suspension or termination of transactions according to relevant internal bylaws.

Attendance to Asia's first signing ceremony of the private sector commitment to the Global Code of Ethics for Tourism

Korean Air attended the 1st UNWTO Regional Conference on Tourism Partnership held at the COEX in Seoul on June 1, 2013. The conference was a major international gathering of some 180 participants from the affiliate members of the UN World Tourism Organization and executives of domestic and overseas tourism businesses as well as academic officials from 15 countries to debate on the future tourism for Asia and the Pacific. At the conference, Korean Air participated in the Asia's first signing ceremony of the private sector commitment to the Global Code of Ethics for Tourism, pleading its commitment to upholding ethical principles related to the sustainable development of tourism enshrined in the Code.

The Global Code of Ethics for Tourism, officially adopted by the UN General Assembly at its session in December 2001, provides a set of principles designed to guide key players in tourism. Emphasizing the need to develop sustainable tourism, it aims to help maximize the sector's benefits while minimizing its potentially negative impact on the environment, cultural heritage and societies across the globe. The UNWTO has been conducting world tourism ethics campaigns in collaboration with each country's government to encourage voluntary initiatives in the private sector. 112 private sector tourism businesses around the world have already signed up to follow the Global Code of Ethics for Tourism.

MATERIALITY TEST

Korean Air ran a materiality test on major sustainability issues and prioritized issues to report according to the test results in order to better reflect the information on the report that are of the highest interest to our stakeholders.

Reporting Content Definition Process

Korean Air conducted an assessment of internal and external environmental factors according to the materiality test method provided by the GRI G3.1 Guidelines and the ISO 26000 standard on social responsibility. The materiality test produced material issues that should be taken into consideration in Korean Air's sustainability report.

STEP 1 Media Analysis »

We analyzed media reports released for the past three years – from January 1, 2010 to December 31, 2012 – to understand how our major sustainability issues are dealt with by the media. As a result of the analysis of a total of 7,843 press releases on Korean Air's sustainability management and 2,265 press releases on related companies, we identified issues to be reported.

STEP 2 Analysis of Issues of Related Companies »

Sustainability reports of four domestic and overseas companies were reviewed according to the GRI 3.1 Guidelines to analyze important corporate social responsibility (CSR) issues as well as identify issues relevant to Korean Air.

STEP 3 In-depth Stakeholder Interview »

We selected key stakeholder groups based on the degree of their legal, financial and operational liabilities and impacts on Korean Air's business activities and then conducted in-depth interviews with six major stakeholders in order to identify detailed sustainability issues.

STEP 4 Online Stakeholder Survey »

We conducted a five-day online survey – from May 2 to May 6, 2013 - to gather diverse opinions from major stakeholder groups such as employees, customers, investors, business partners, research institutions and local communities regarding Korean Air's sustainability management and to identify material issues. 181 stakeholders participated in the survey.

Materiality Test Outcomes

Based on the issues identified from the media analysis, analysis of related companies and in-depth interviews, Korean Air assessed their relevance and identified 48 issues in terms of trend and impact and then scored each issue in terms of significance based on the each stakeholder group survey result. At the end of this exercise, a final list of 34 material issues to be included in the report was created.

KEY ISSUES

1 Increased demand for safe products and services 4.31
2 Diversified customer needs 4.13
3 Increased demand for customer information security 4.11
4 Increased demand for business transparency 4.00
5 Growing number of consumers who value health, eco-friendliness and pro-social behavior 3.89
6 Growing low-price airline market 3.88
7 Accelerating technology advancement 3.87
8 Heightened competition 3.87
9 Increased importance of attracting talent 3.87
10 Growing interdependence due to globalization 3.81
11 Easy access to corporate information (via Internet, SNS, etc.) 3.81
12 Increased demand for fair trade 3.79
13 Health and safety at work 3.78
14 Health and safety of customers 3.76
15 Guarantee of fundamental rights at work 3.76
16 Gap in access to digital information 3.73
17 Employee education and training 3.72
18 Climate change (global warming) 3.69
19 Increased demand for and growing exports of high value-added products 3.67
20 Customer information protection 3.62
21 Increased demand for fair competition and mutual growth 3.62
22 Energy use 3.61
23 Products and services labeling (customer satisfaction) 3.59
24 Growing importance of securing and managing a stable supply chain 3.59
25 Market status (wages, purchasing, recruitment) 3.58
26 Increasing socially responsible investment (SRI) 3.58
27 Impact of transport on the environment 3.56
28 Economic achievements (revenues, pensions, government grants) 3.55
29 Strategy to respond to external factors 3.55
30 Stakeholder engagement 3.55
31 Atmospheric emissions, waste water and waste materials, CO2 emissions 3.53
32 Fuel consumption 3.52
33 Provision of job creation opportunities 3.52
34 Increased purchasing of green products 3.50

GROWTH FOR EXCELLENCE

MANAGERIAL ALTITUDE

NO. OF PASSENGERS CARRIED

(Unit: 10,000 persons)

Looking up to the highest place, Korean Air aims to realize solid growth through stable sources of revenue and improved fundamentals.

OPERATING REVENUE

KRW 12,263.9 billion

In 2012, Korean Air posted KRW12,263.9 billion in sales consisting of KRW10,828.7 billion from air transport business, KRW804.1 billion from ancillary business and KRW631.1 billion from other business, which is a 3.9 percent year-on-year growth. Operating income stood at KRW271.6 billion.

NO. OF PASSENGERS CARRIED

24.28 million

The number of passengers carried by Korean Air in 2012 totaled 24.28 million consisting of 16.93 million international flight passengers and 7.35 million domestic flight passengers. Cargo transport volume reached 1.54 million tons with international cargo amounting to 1.42 million tons and domestic cargo amounting to 0.12 million tons.

INVESTMENT IN FLEET MODERNIZATION

KRW 1,481.1 billion

Korean Air invested KRW1,481.1 billion in modernization of passenger planes and cargo planes to expand sales to high-end customers using customized services and new aircraft. We plan to phase out low-efficiency planes such as A300-600 and B747-400 while modernizing other airplanes.

ESTABLISHMENT OF NEW ROUTES

6 routes

Korean Air continues to tap into the new markets while opening new routes. In 2012, we made inroads into the African and the Middle East markets by launching new routes connecting Incheon with Nairobi, Riyadh and Jeddah, while expanding global network by establishing London Gatwick, Da Nang and Yangon routes.

shing stable business
air distribution of economic
tic crisis management.
momentum for future
d growth through global
doption of cutting-edge
nts in R&D."

Growth for Excellence

Stakeholder Interview

"Investors have a keen interest in business performance, among others. Therefore, you must continue to manage business areas you can control while at the same time actively coping with external factors such as foreign exchange rates, oil prices and interest rates. In addition, you will need to continue to carry out customer-focused marketing with upgraded services for greater satisfaction of high-end market customers, just like you were able to provide differentiated transport services after introducing the next-generation aircraft A380."

Joo Hye-mee

Associate Researcher, Utilities/Transport Sector, Corporate Analysis Team, LIG Investment & Securities

DMA

Stakeholder issues identified from materiality test	Priorities of Key Issues
Expansion of low-price airline market	6
Acceleration of technology advancement	7
Heightened competition	8
Growing interdependence due to globalization	10
Market status (wages, purchasing, recruitment)	25
Increasing socially responsible investment	26
Economic achievements (revenues, pensions, government grants)	28
Strategy to respond to external factors	29

● Trend (Impact on the organization) ● Impact (Impact on stakeholders and sustainable development)

Vision

To be a Respected Leader in the World Airline Community

Our Commitment

1 We will do our utmost to increase investment value for our investors.
2 Respecting the free competition principle, we will take the lead in achieving sound development of the air transport industry.
3 We will actively contribute to the sound development of the nation and society.

Performance Indicator

2012 Initiatives	2012 Outcomes
Establish new routes	Established 6 new routes
Modernize aircrafts	Invested KRW1,481.1 billion

"Korean Air is establishing stable business operations through fair distribution of economic benefits and systematic crisis management. We work hard to gain momentum for future growth and sustained growth through global network expansion, adoption of cutting-edge aircraft and investments in R&D."

ECONOMIC PERFORMANCE & DISTRIBUTION

Creating value for stakeholders is our key goal for sustained growth. Korean Air ensures that all benefits generated from its economic activities are evenly distributed to various stakeholders including shareholders, customers, employees, suppliers, public institutions and local communities.

Economic Performance in 2012

Korean Air saw a 3.9 percent year-on-year growth in sales for 2012 by posting KRW12,262.9 billion with an operating income of KRW271.6 billion. Sales revenue from overseas passenger business grew 10.1 percent year-on-year thanks to an increased demand for passenger service, but sales revenue from cargo business declined 11.5 percent year-on-year due to the decreased demand for cargo transport amid the economic slowdown in developed countries. Despite the increase in operating revenue, operating income fell due to the rising oil prices and foreign exchange rates. Still, we focused on developing new markets through global expansion and establishment of new routes such as those connecting Nairobi, Kenya and Yangon, Myanmar. We also reinforced our position as a leading global carrier by successfully introducing new aircrafts such as B747-8F and B777F and effectively operating six A380 aircrafts.

Financial Highlights (KRW100 million)

2010	2010	2011	2012
Total assets	178,885	202,225	206,780
Total liabilities	153,010	180,361	183,044
Total shareholders' equity	25,875	21,864	23,736

Income Statement (KRW100 million)

2010	2010	2011	2012
Sales	112,788	118,053	122,639
Gross profit	24,436	15,995	13,949
Operating income	11,589	3,941	2,716
Income before tax	5,105	-4,430	3,955
Net income	3,762	-3,011	2,596

* Summary statements of financial position and income

As financial statements have been prepared under the Korean International Financial Reporting Standards (K-IFRS) since 2011, balance sheets for 2009-2010 and income statement for 2010 have been re-produced under the K-IFRS for easy comparison.

Distribution of Economic Value to Stakeholders

CRISIS MANAGEMENT

Korean Air manages risks associated with fluctuating oil prices, foreign exchanges rates and interest rates. Both financial and non-financial risk factors are proactively managed in order to maintain stable operations by keeping risks to the minimum.

Non-financial Risk Management

Korean Air's internal bylaws and guidelines take into account all risks that could have a potential impact on business operations and the company runs the required organization to fulfill this responsibility. It also assigns duties and missions, and develops contingency plans and countermeasures to minimize all risks. As a result, everyone at Korean Air is well prepared to deal with any potential risks, minimizing any potential losses to the corporate image, corporate finance or morale.

Risk Management

Category	Factors	Countermeasures
Market Risks	• Global economic developments • Emergence of low-cost airlines • Inroads into the Korean market by the international airlines	• Annually checking economic and aviation industry forecasts and trends as well as their impact on our business, and then developing the necessary countermeasures • Pursuing profitable growth through profit-oriented route operations and an enhanced global network • Focusing on high-end customers through the strategic operation of high-end fleet and enhanced customer services • Timely response to market changes and customer demands through flexible operations according to market demands
Operational Risks	• Airplane accidents or hijacking	• Establishing a safety management system under a safety first policy • Operating a safety & security office under the direct control of the COO to prevent any accidents • Procedures for operating a response center by regulation, guidelines, manuals and division in the event of an airplane accident • Company-wide drills to respond to airplane accidents (annually) • Regularly checking contingency plans and revising emergency response procedures • Operating Safety Coordinators, Go Teams, and Care Teams
Resource Risks	• Oil price hikes	• Consistently monitoring oil prices and developing purchase strategies • Oil price options, oil swaps, etc.
Environmental Risks	• Environmental accidents • Climate change	• Compliance with pollutant emissions regulations, company-wide environmental risk prevention activities and environmental accident contingency plans • Adoption and operation of high-efficiency aircrafts, optimal routes and short-cuts, optimization of fuel loads, economic flight procedures, enhancing aircraft performance • Greenhouse gas inventory system
Regulatory Risks	• Abiding by local laws and regulations in each country • Carbon controls (EU ETS, GHG & Energy Target Management System, etc.)	• Constantly monitoring all laws and regulations • Responding to regulatory risks with legal experts • Maximizing efficiency of fuel use and saving costs through the strategic operation of low-cost emissions trading
Community Risks	• Conflicts with local communities, NGOs, etc.	• Investing in community development infrastructure • Engaging in diverse social contribution activities • Expanding communication channels with local communities

Financial Risk Management

Korean Air has systematically been operating a risk management program since 2001 to control financial risks arising from oil prices, fluctuations in foreign exchange rates, and interest rates. There are two ways of hedging risks: natural hedging and active hedging. Korean Air strategically operates these two strategies to effectively control its market risks.

Korean Air's risk exposure, volatility and strategy

Variable	Position		Effect	Strategy
Market Risks	Annual oil demand: approximately 32 million barrels		1 dollar/barrel change to oil prices leads to a USD32 million loss to Korean Air	**Natural Hedge** • Balancing out income/expense by currency • Maintaining the ratio of fixed-rate liabilities to flexible-rate liabilities at 50:50 level **Active Hedge** • Oil prices/Foreign exchange rate - Basic hedge: hedging 30% of annual exposure according to statistical data and market developments - Additional hedge: additional hedge in the case of an abrupt change in the forecast of oil prices or foreign exchange rates • Interest rates: interest rate swap contract that switches back and forth between flexible and fixed interest rates in line with market developments
Foreign Exchange	Rates Evaluation loss	USD-denominated liabilities: approximately USD7.4 billion	Change of KRW 10 in foreign exchange rate leads to approximately KRW 74 billion loss from evaluation of foreign currency	
	Cash flow	Annual shortage in USD: over USD2.8 billion	Change of KRW 10 in foreign exchange rate leads to over KRW 28 billion change in cash flow	
Interest Rates	Fixed-rate liabilities: KRW 6.2 trillion Flexible rate liabilities: KRW 7.6 trillion		1 percent change in average interest rates leads to a KRW 76 billion change in interest expenses	

ENHANCING GLOBAL COMPETITIVENESS

Having set its business goal of achieving solid growth through the establishment of stable sources of revenue and improvement of fundamentals for 2013, Korean Air is moving forward with a strategy to meet this goal.

Key Opportunities and Threats in 2013

In 2013, Korean Air is expected to see a continued growth in demand for passenger service, particularly in Korea. This, combined with the increasing exchanges of people and materials, enables the company to enjoy a second boom in the Middle East. Another opportunity comes from the third and fourth freedom traffic rights following the increased number of flight slots at the Narita Airport, visa waiver and visa application simplification for Russians and the growing demand for consumer goods ahead of the 2014 World Cup in Brazil and the 2016 Olympic Games.

On the other hand, threats include the growing inroads into the airline market by low-cost carriers (LCCs) and other airlines (OALs) and the resultant intensification of competition, territorial disputes in Northeast Asia, weakening momentum of the Hallyu, or the Korean wave, North Korean risks and the conflicts in the Middle East. Tightening government regulations on business operations, prolonged high oil prices and uncertainty in foreign exchange rate movement are also factors that Korean Air should address.

Enhancing Competitiveness in Passenger Business

While the global economy is projected to moderately recover in 2013, high oil prices and fierce competition in the airline market are likely to continue. Korean Air's passenger business division will expand the company's growth platform by focusing on profit-oriented route operations, increasing premium sales using the company's competitive next-generation fleet and developing new markets with growth potential.

To begin, we will focus on profit-generating routes taking into account different needs. We will also improve our aircraft productivity by operating optimal airplanes suitable for each route.

Second, we will expand sales to high-class customers with the strategic operation of top-notch aircrafts while strengthening marketing alliance with high-end firms for more aggressive marketing in both premium and commercial markets. At the same time, we plan to offer more systematic customer service for greater customer satisfaction.

Management Strategy and Key Projects in 2013

Achieve solid growth by securing stable sources of revenue and improving fundamentals

A. Expand stable sources of revenue

- Enhance market leadership through new aircrafts and global marketing
- Secure new growth engines by developing new markets, products and services
- Enhance system-driven business operations for profitable growth

B. Increase efficiency and productivity of resources owned

- Enhance network competitiveness through optimal aircraft operation and scheduling
- Increase productivity by establishing low-cost, high-efficiency work process
- Increase efficiency by enhancing human and organizational competencies

C. Facilitate organizational fundamentals and dynamism

- Streamline indirect operations and concentrate on productivity improvement in work process
- Enhance change management by promoting two-way communication within and outside the organization
- Put in place a system for fostering talented employees with progressive spirit and strong sense of responsibility

Third, we will secure a platform for sustained growth by developing markets with growth potential. To this end, we will operate regular flights between Incheon and Colombo/Maldives and between Busan and Nanjing and non-regular flights for the development of potential markets in order to expand global network as well as create new demand.

Enhancing Competitiveness in Cargo Business

As the European economies are expected to remain in the doldrums and China is also projected to exit the high growth era, these two major cargo transport destinations are unlikely to make a drastic rebound in the air transport market for some time. The IATA also forecasts a 2 percent growth for the air transport market in 2013. Under these situations, Korean Air will focus on operating cargo planes mostly on profitable routes, providing customers with quality transport service, global network and diverse products and services. In addition, we will make full use of our passenger and cargo supply in order to achieve both cost competitiveness and route profitability.

First, we will strive to secure stable sources of revenue through increased customized services and enhanced alliance with global forwarders. We aim to improve profitability by developing new cargo items, new and value-added products that cater to customer needs based on continued market research and feasibility study.

Second, following the introduction of four new fuel-efficient aircrafts (two B747-8F freighters and two B777F freighters) in 2012, we plan to add two new aircrafts in 2013 while sending old planes into retirement in order to improve efficiency of freight operations.

Third, we will also focus on developing new markets. We will expand our market presence by expanding into Latin American routes, while tapping into the Middle East and African markets by fully utilizing the Riyadh, Jeddah routes opened in late 2012. At the same time, we plan to improve cargo network in major regions in order to expand our reach to untapped cities while striving to reinforce our competitiveness by improving transport quality.

Development of New Routes and New Markets

Korean Air is exploring new markets and new routes in order to secure future growth engines. In 2012, we entered African and the Middle Eastern markets by opening new routes connecting Incheon to Nairobi, Riyadh and Jeddah. We also opened London Gatwick, Da Nang and Yangon routes, thus expanding our global network. We continue to add new routes in 2013, establishing routes between Incheon and Colombo and Male, along with the effort to develop other routes for leisure purposes such as those to Latin America.

Route Operation and Establishment Strategy

Continue to develop markets while improving network

- Expand our presence in Africa and find new growth engines by developing potential markets such as Latin America and Central Asia

Focus on operating profitable routes

- Maximize profits by increasing flights to highly profitable China and the Americas during peak seasons
- Manage target profits through a flight accountability system for new and under-performing routes
- Utilize available cargo planes to attract demand for non-regular cargo flights

Make use of alliance and reinforce network through schedule improvement

- Reinforce dual European route network through an alliance with Czech Airlines
- Adjust flight schedule and supply of Japan routes to reflect the weakening yen

Reinforce marketing for high-class customers

- Reinforce marketing for high-class customers with customized service and new aircraft

New Routes Launched in 2012 and 2013

Investments in Fleet Modernization (Unit: KRW100 million)

Fleet

Model		'11.12.31	'12.12.31
Passenger aircraft	A380-800	5	6
	B747-400	16	15
	B777-300ER	9	10
	B777-300	4	4
	Jumbo jet Total	34	35
	B777-200	18	18
	A330-200	7	7
	A330-300	16	16
	A300-600	7	3
	B737-800	16	20
	B737-900	18	20
	Regional and small aircraft Total	82	84
Passenger aircraft Total		116	119
Cargo aircraft	B747-400F	24	23
	B747-8F	-	2
	B777F	-	2
Cargo aircraft Total		24	27
Total		140	146

Introduction of New Aircraft for Fleet Modernization

Korean Air plans to add 45 new passenger airplanes (four A380s, five B747-8Is and ten B787s) and eight new freighters (five B747-8Fs and three B777Fs) to its fleet from 2013 to 2018 in order to meet the growing market demand for air transport. The new aircrafts are suitable for long-range routes with their high fuel efficiency. Also, with their lighter materials, their flight distance has been significantly expanded. As a result, the existing lower efficiency aircraft, such as the A300-600 and B747-400, will be phased out in the future as we modernize the existing fleet.

Fleet Modernization and Sustainable Growth

Economic benefits: The addition of new routes and increased flights on existing routes with highly efficient, long-range aircraft such as the A380, B747-8 and B787 will contribute to the economic development and reduction in import/export expenses as well as flight duration.

Social benefits: Increased flights will contribute to job creation directly and indirectly and modern fleet will enhance customer convenience, while increasing passengers' choice of aircraft and flight schedule.

Environmental benefits: Continued introduction and operation of highly efficient/low-noise cutting-edge aircrafts such as the A380 and B787 will result in reduced exhaust gas emissions as well as noise during landing and take-off.

Indirect Economic Benefits of the Airline Industry

Air transport is the fastest and the safest form of international transportation of human and material resources, making it the heart of global trade. Its related industries, which include business, travel and tourism, also contribute to job creation. In step with the growth of the world airline industry, the global economy has been developing faster than ever. This has led to the development of the airline industry, creating a virtuous circle. In fact, the global airline industry accounts for 3.5 percent of global gross domestic product (GDP), contributing to creating 56.6 million jobs and USD2.2 trillion in economic value (Source: IATA's 56th World Air Transport Statistics (WATS)).

In 2012, Korean Air transported 24.28 million passengers and 1.54 million tons of freight, thus contributing to the global economic development. Through our global network, we also contributed to the balanced growth of regional economies by hiring 2,000 people. Our direct influence on the import and export of a number of manufacturing and logistics activities and exchange of financial and service businesses served both Korean and regional economic development. Furthermore, we are active in various aerospace business sectors, including the improvement of military aircraft, as well as designing, developing and launching satellites.

20,634

PEOPLE FOR EXCELLENCE

HUMAN ALTITUDE

NO. OF EMPLOYEES

(Unit: persons)

Korean Air's most valuable asset is its talented workforce. We pay close attention to the promotion of health and happiness of our employees.

NO. OF EMPLOYEE

20,634

Korean Air does not discriminate against employees on the basis of gender, age, religion or regional background. We comply with local laws and regulations at all our domestic and overseas business premises and we also observe the regulations set out by the Korean Labor Standards Act as well as ILO conventions.

HOURS OF TRAINING PER EMPLOYEE

Male Female

100/125 hours

Korean Air trains its employees on business management, job functions, service, foreign languages and business manners required for each rank and position while operating specialized courses to foster globally competitive talent.

OCCUPATIONAL INJURY RATE

SAFETY

0.06 %

Korean Air strives to raise safety awareness among employees by carrying out voluntary accident prevention activities at each division. As a result, we have maintained a low occupational injury rate, which stood at 0.06 percent in 2012.

EFFORTS TO PROMOTE HARMONY WITHIN THE ORGANIZATION

WITH Campaign
Happy Hour
One Division-One Village
Sisterhood
Communication Tree

Korean Air operates a number of programs aimed at creating cooperative labor-management relations and communicating with employees. Through these and other programs, we aim to bring vigor to the organization, growing together with our employees.

Stakeholder Interview

"Investors have a keen interest in business performance, among others. Therefore, you must continue to manage business areas you can control while at the same time actively coping with external factors such as foreign exchange rates, oil prices and interest rates. In addition, you will need to continue to carry out customer-focused marketing with upgraded services for greater satisfaction of high-end market customers, just like you were able to provide differentiated transport services after introducing the next-generation aircraft A380."

Kim Seong-cheon
Consumer/Doctor of Law

DMA

Stakeholder issues identified from materiality test	Priorities of Key Issues
Increased importance of attracting talent	9
Health and safety at work	13
Guarantee of fundamental rights at work	15
Employee education and training	17
Provision of job creation opportunities	33

● Trend (Impact on the organization) ● Impact (Impact on stakeholders and sustainable growth)

Vision

Believing that "business is people," we pursue growth of both business and people in parallel.

Our Commitment

1 We respect the dignity of our employees, maintain a trust-based relationship with labor and value our employees as the most valuable asset.
2 We operate our human resource management system in a transparent and indiscriminate way through fair compensation based on the accomplishments, performance and capabilities of employees.
3 We provide the best possible benefits for a higher quality of life for employees and support our employees' self-development and self-realization with a wide range of programs.
4 We provide a healthy and pleasant workplace to our employees.
5 We provide timely and accurate information to employees through effective communication.

Performance Indicator

2012 Initiatives	2012 Outcomes
Apply preventive action skills	Maintained a stable occupational injury rate at 0.06%
Harmony Campaign	One Division-One Village Sisterhood, Communication Tree, Happy Hour, family events

"Korean Air does not discriminate against employees on the basis of gender, age, religion or regional background. We comply with local laws and regulations at all our domestic and overseas business premises and we also observe the regulations set out by the Korean Labor Standards Act as well as ILO conventions."

EMPLOYEES AND HUMAN RIGHTS AT WORK

Korean Air does not tolerate any form of discrimination in employment. We contribute to creating jobs, while offering industry-best wages and protecting human rights in the workplace.

Respect for Human Rights

We do not tolerate any form of discrimination in employment, assignment, evaluation and compensation based on gender, age, religion, or regional background. We also comply with local laws and regulations at all our operations at domestic and overseas worksites, and we do not allow forced labor and child labor as stipulated in the Korean Labor Standards Act and ILO conventions. As a result, we had no cases of discrimination or violations of labor regulations during the reporting period.

No. of Employees by Category (Unit: persons)

	Office (general administration, sales, transportation)	Flight operations (cockpit, cabin)	Engineering (aviation, aerospace, research, procurement, communication and operation management)	Others (computer-related work, catering, etc.)	Total
No. of employees	6,661	8,401	5,144	428	20,634
Male	3,628	2,705	5,073	326	11,732
Female	3,033	5,696	71	102	8,902

* Including overseas employees and excluding executives (as of December 31, 2012)

Elimination of Discrimination against Temporary Employees

Korean Air does not discriminate against temporary workers compared to its full-time employees. We apply equal conditions and compensation, from basic salary and performance incentives to safety allowances and other monetary compensations. We also offer the same benefits to our full-time and temporary employees in terms of free air tickets, compassionate allowances and leaves, medical subsidies and time-share condominiums. However, some benefits that are based on the number of years a person has been with the company, such as individual pension premiums, insurance, and loans, are applicable only to full-time employees.

No. of Employees by Type (Unit: persons)

	Total
No. of employees	20,634
Full-time	17,690
Temporary	2,944

Workforce Breakdown by Age (Unit: %)

Domestic/Overseas Workforce by Region (Unit: persons)

Overseas Employment and Locally Hired Managers

Recognizing that globalization is a prerequisite to becoming a leading global carrier, we mobilize every resource to recruit and retain competent international talent. We do not discriminate against employees based on their nationality, culture, or religion, and we contribute to job creation overseas by hiring people from local communities on a continual basis. Our competency-building human resource development program for both domestic and overseas employees has increased the number of locally hired managers at our global operations.

Locally Hired Managers (Unit: persons)

No. of overseas employees	2,507
Percentage of locally hired employees	89.3 %
Percentage of locally hired managers	12.5 %

Workforce Breakdown by Gender

56.9% Male

43.1% Female

Promotion of Female Employment

Korean Air has continuously been increasing the number of its female workers. As of 2013, the number of female employees stood at over 43 percent of the entire workforce. Lately, the number of female crew members has increased in the flight crew and engineering positions traditionally held by men. For instance, we give pregnancy leaves to flight attendants and fertility treatment leaves to any female employees for artificial insemination and/or in vitro fertilization treatment. We also run various programs to improve gender equality at the managerial level, such as overseas assignment programs and cabin crew member training.

Ratio of Basic Salary of Men to Women by Employee Category

Korean Air does not discriminate by gender. Thus, there is no difference in the ratio of basic salary of men to women by employee category.

Employment of the Disabled

Korean Air has been endeavoring to increase the employment of disabled people since 2000. In 2005, the company advanced this initiative by signing an agreement with the Korean Employment Promotion Agency for the Disabled (KEPAD). While increasing the number of disabled people at the company, we have also expanded the scope of positions for the disabled, from flight booking, ticketing and transportation to computer-related work and general administration in order to accommodate an increasing number of disabled job seekers, including the severely disabled. We have also increased opportunities for disabled employees to become full-time employees. In 2007, we adopted a home-based telework program into full-time employment, ensuring job security for mobility challenged people. In recognition of these efforts, Korean Air was awarded with the grand prize at KEPAD's 2007 True Company Awards.

Return to work and retention rates after parental leave (domestic/full-time staff)

No. of employees on maternity leave	691
Return to work rate after maternity leave	100%
No. of employees on pregnancy/parental leave	1,064
No. of employees on pregnancy leave	452
No. of employees on parental leave	612
Rate of male employees to female employees on parental	1.6 %

* As of December 31, 2012

No. of female pilots (Unit: persons)

No. of female maintenance staffs (Unit: persons)

Disabled employees (Unit: persons)

	2010	2011	2012
No. of disabled employees	131	145	144

	Full-time		Temporary		Total
Disabled employees	138	95.8%	6	4.2%	144

* As of December 31, 2012

Employee turnover ratio (Unit: %)

TALENT DEVELOPMENT

At the center of business management are people and making people change starts with right education. This is a firm belief of Korean Air's management and a guiding principle for all its talent development activities.

Human Resource Development Program

Korean Air's HRD programs are divided into different levels based on the roles and responsibilities required for each position. We identify job preferences of individual employees and use the information as the basis for future resource development and assignment decisions. In addition, individuals' adaptation to the organization is analyzed to provide tailored career development consulting. Each year, we operate "Refresh" courses for new employees and conduct their job satisfaction survey.

We provide a number of training courses covering business management, job skills, service, foreign languages and business manners for all ranks and positions as well as specialized courses to foster globally competent talent. Our online and offline courses are designed to maximize educational effects and we also have specialized competency-building programs for global employees.

Specialized Training Organization

Korean Air has in place an organization specializing in a variety of educational programs. The Human Resource Development Center at Korean Air, which is in charge of company-wide integrated education programs, has recently been reshuffled to put more focus on field-oriented training both at home and abroad. A separate training center also offers specialized courses for flight operations, maintenance and cabin services.

Reinforced Online Education

In a bid to overcome time and location constraints due to shift work and to allow employees to select programs according to their needs, Korean Air is reinforcing online education programs. To this end, we are constantly developing rich content for online courses covering job knowledge, service mindset as well as foreign languages for global operations, while formulating curriculum for greater synergy with offline training.

Training Organization

Company-wide HRD System

Training in 2012

COMPENSATION & BENEFITS

Korean Air operates a fair performance evaluation system that combines performance-based wages with benefits that are closely related to employees' livelihood.

Evaluation Scheme

Korean Air runs its own multi-layered evaluation system according to different job functions which is called the KAL Performance Appraisal System (KALPAS). Every employee is required to develop their own key objectives and plans in line with their team and company goals, with their performance being evaluated by assessing all accomplishments against the indicators. For staff working in the field whose duties are measurable, their performance is evaluated based on the Standard Performance Indicators by job function. As for crew members, their performance is evaluated by tracking their flight destinations, pilot technology by aircraft type, and the ability of following the emergency procedures in the event of an emergency. Korean Air's fair and objective evaluation scheme allows for transparent personnel management and improvement of individual competencies through the feedback of evaluation results. The evaluation results are also reflected in the annual pay rate and promotion review by job function and class under the differential compensation scheme.

Compensation Scheme

Korean Air pays wages and provides incentives that are among the highest in the aviation sector (approximately 300% higher than the legal minimum wage in Korea) and there is no wage gap between male and female employees. This helps employees work to the best of their abilities. In addition to annual performance-based incentives, the company offers safety incentives through safety performance evaluation to encourage employees to pay closer attention to safety. To improve the quality of life, the company ensures that its welfare benefits are closely related to the livelihood of employees. Specifically, Korean Air provides employees and their families with airline tickets annually to help them enjoy their leisure time and broaden global leadership. To enhance their quality of life, the company also offers a wide range of other benefits, including company housing, tuition support for the children of employees, medical subsidies, support for leisure activities and post-retirement plans.

KALPAS

Benefits

Maternity Protection

Korean Air strives to promote women's status through continued increase in female employment and gender equality principles. Our pregnancy leave program for cabin crew members allows employees to take a leave from the date they become aware of pregnancy. We also allow female employees diagnosed to be infertile by medical specialists to take a leave for artificial insemination and/or in vitro fertilization treatment.

Maternity Protection Programs

- **Parental leave:** Up to one year within six years after childbirth; can be used during separate periods one time
- **Paternity leave:** Paid leave for three days (emergency leave)
- **Maternity leave:** 90 days before and after childbirth (45 days after childbirth). This leave can also be taken in the case of miscarriage or premature birth to protect mother and baby
  - Below 16 weeks into pregnancy: 10 days from the date of pregnancy/16 to 21 weeks into pregnancy: 45 days after the date of pregnancy
  - 22 to 27 weeks into pregnancy: 60 days from the date of pregnancy/ over 28 weeks into pregnancy: 90 days from the date of pregnancy
- **Infant care subsidies:** Applicable to children below 6 years of age (different amount by age)
- **Childbirth grants for the third baby:** KRW100,000 for first and second babies, KRW1 million for a third baby
- **Shorter working hours during infant care period:** Employees are allowed to work 15 to 30 hours a week depending on each team's workload for up to one year when combined with the parental leave days. Employees can apply for this program within 3 years after childbirth
- **Pregnancy leave (cabin crews):** Cabin crew members can take a pregnancy leave from the date they become aware of their pregnancy
- **Infertility leave:** Female employees diagnosed to be infertile by medical specialists can take a six-month leave for artificial insemination and/or IVF (renewable one time)
- **Breastfeeding room:** Space for female employees for breastmilk collection, baby bottle sterilization, breastmilk keeping and showers
- **SkyMom classroom:** Online course accessible by employees and their family members who have an interest in pregnancy, childbirth and infant care

HEALTH & SAFETY AT WORK

Korean Air continues to endeavor to create a safe, healthy and accident-free workplace for its employees.

Occupational Injury Prevention Scheme

Workplace Health and Safety Committee

Korean Air operates Workplace Health and Safety Committee to prevent accidents at work. The committee convenes every quarter to deliberate on issues outlined by the Korean Industrial Safety and Health Act. The committee covers all employees and when the company's labor union requests, the company is required to make improvements to safety and health issues under Article 8 of the collective agreement.

Management of Occupational Injuries

Korean Air is promoting safety awareness among employees by carrying out voluntary accident prevention activities at each division. Every employee follows the given work procedures and continues to improve safety risks at workplace. As a result, we maintained a low occupational injury rate at 0.06 percent in 2012.

Korean Air's Job Hazards Analysis allows employees to self-check any hazardous factors and to apply appropriate improvement to the issue. As a result, the prevention rate has significantly improved. As for any work process with the slightest possibility of occupational accident, a risk assessment is conducted, followed by appropriate improvements and follow-ups through regular check-ups.

Aviation Medical Center

Within Korean Air's head office is a 650-pyeong Aviation Medical Center where aero-medical service is provided to all employees as well as customers for safe and healthy flights. The medical center is equipped with cutting-edge medical equipment certified by the US Federal Aviation Administration and has about 70 aero-medical specialists including nurses and industrial hygienists.

For prevention, early detection and treatment of health problems,

Occupational Injuries per 100 Employees (Unit: %)

Employee Health Care Service

A. Primary health care

In the event of any health issues at work, first aid is provided, followed by treatment from a doctor, medicine, and any other necessary medical services. In addition, the company provides vaccination for influenza and cervical cancer to protect employees.

B. Health promotion and health education

Consulting services on improving life habits and health problems are provided by professional dieticians, health coaches, and counselors who help employees quit smoking and operate health programs that suit individual needs. Online and offline health education courses are also available quarterly along with useful health information to aid our employees with the management of their health at anytime and anywhere.

C. Flight attendant physicals

We make every effort in our health management programs for cabin crew members to be as safe as possible. Korean Air issues and manages a domestic/international certificate for aviation physicals, and engages in preventive health care activities to ensure safe flight operations.

D. Prevention of musculoskeletal disorders

In order to protect cabin crew members from musculoskeletal disorders, Korean Air regularly conducts physical fitness tests of cabin crew members and provides continued health management programs fitting individual needs.

E. Management of occupational environment

Korean Air continues to check on a regular basis for any hazards on its occupational environment and subsequently makes appropriate improvements to ensure a safe and agreeable workplace. In addition, a joint team of doctors, nurses as well as occupational and environmental hygienists provide health and medical services such as counseling and education, occupational disease prevention, and improvement to working conditions through regular visits.

F. Mental health management

The Aviation Medical Center's medical personnel organically manage mental health of employees of each position.

Korean Air operates regular and special (employment, return to work, overseas assignments) health check-ups and provides follow-up check-ups and health management services. The integrated medical service system, called KALMED, controls and manages the health of the entire Korean Air workforce as soon as they join the company until they retire.

We also provide counseling, education and patient management programs to promote mental health of employees. In January 2013, we provided online health education to all employees under the theme of "emotional labor and mental health," a topic that has been gaining attention in recent years. Our cyber campus offers open courses on major topics related to mental health such as stress, depression and drinking.

In addition to online training, we have added "stress management" course to our programs for new employees and managers.

The Aviation Medical Center has professional staffs who manage mental health of employees along with mental health counseling in consultation with internal and external aero-medical specialists and has recently opened a "Mental Health" section within the company's intranet to allow employees to do self-examination as well as get necessary information.

Health Management Programs in 2012 (Unit: persons)

	Total
General health check-ups	11,385
Aviation physical examinations	3,608
Physical fitness for cabin crews	5,978
Primary health care (outpatient care)	16,247
Transfer of invalid passengers	3,260

Health Education (Unit: M/H)

COMMUNICATION AT WORK

Korean Air runs programs aimed at establishing cooperative relationship between management and labor as well as listening to the voice of its employees. We aim to grow together with our employees through a variety of employee support programs.

Cooperative Labor-Management Relations

Korean Air upholds the freedom of association and collective bargaining rights as stipulated by the International Labor Organization (ILO) convention. About 82 percent of our employees are covered by the collective agreement. Under Articles 22 and 30 of our collective agreement, we give advanced notification of lay-offs (50 days in advance) and dismissals (30 days in advance) and instant notification in the event of any significant change to business operations. In addition to quarterly labor-management council meetings, annual wage negotiations and biennial collective bargaining sessions, the two sides hold collective negotiation and council meetings whenever necessary. In the event of a need for an enactment or revision to regulations, they form a project team to discuss and consult with each other for the mutually beneficial development of both sides.

Ombudsman Program

Korean Air operates an Ombudsman Committee and HRM Counselor Program to proactively offer solutions to employee grievances and respond to their suggestions to promote a better HR network and raise morale within the organization. All counseling data is recorded and kept in the counseling room and remains confidential. Counselors respect the individual dignity of each person so that they feel comfortable with the counseling. All Korean Air employees can log on to the HRM portal system to contact the HRM or sexual harassment counselors instantly.

Ombudsman Program: Korean Air operates an Ombudsman Committee and HRM Counselor Program to proactively offer solutions to employee grievances including discrimination and respond to their suggestions to promote a better HR network and raise morale within the organization.

Whistleblowing System: Korean Air operates a whistleblowing program to eradicate unreasonable requests, misbehaviors or malpractices involving monetary or non-monetary transactions with suppliers. Not only employees but also outsiders can report a case via mail and the information provider's identify is strictly protected. Measures taken to the reported case are notified to the information provider. Cases received are inspected for the confirmation of facts and corrective actions are subsequently taken. Our whistleblowing program has been effective in removing corruption, misbehaviors as well as inefficiency in corporate policies, procedures and even working practices.

Labor Unions

		2010	2011	2012
Korean Air Labor Union	No. of Members/No. of Eligible Employees	9,943/13,753	9,719/13,889	10,057/ 13,614
	Membership Rate	72%	70%	73.9%
Korean Air Pilots Labor Union	No. of Members/No. of Eligible Employees	1,203/2,115	1,196/2,178	1,181/2,223
	Membership Rate	57%	55%	53.1%

* All collective agreements with the labor unions or labor-management council's resolutions cover the entire workforce at Korean Air, whether union members or not.

Hot line: All Korean Air employees can log on to the HRM portal system to contact the HRM or sexual harassment counselors instantly.

Efforts to Bring Vigor to the Organization

WITH Campaign: Korean Air promotes across-the-board communication and solidarity through WITH Campaign. As part of Korean Air's campaigns to promote harmony, all members of each team gather for Happy Hour on the last Thursday of every month. In addition, WITH Day, a small mission assignment to each team, Photo Contest, Conversation with Children of Employees, inter-departmental Thank-you Letter campaign are carried out to boost employee morale and further enhance their service competitiveness.

Fun Management: As part of Korean Air's "fun" management, we provide a variety of programs in support of social clubs within the company, including a regular talent show "a Small Concert for KAL Men." We also hold an array of events such as a ping pong match and watermelon party to promote communication across the board. These efforts to make the company a communicative workplace enable our employees to display their creativity and abilities to the maximum, thus contributing to providing best customer service and upgrading the company's image as a premium global carrier.

Mentoring for New Employees: To facilitate adaptation of new employees to the organization, employees with rich experience assist new hires in gaining knowledge of work process.

Refresh Course: We send our employees with the second year of employment to various job introduction fairs and regularly hold interviews with them to bring them up as devoted and knowledgeable middle managers. We also survey their individual job preferences and use the findings in future development and reassignment decisions as well as for customized career development consulting.

In addition, we offer various training courses designed to build competencies of field managers and team leaders.

GREENING ALTITUDE

GREENING FOR EXCELLENCE

ENVIRONMENTAL COSTS IN 2012

[Unit: KRW100 million]

Clean and clear sky
Vividly green earth
Korean Air will preserve
our invaluable nature.

Greenhouse Gas Emission in 2012

643,273 tCO_2eq

Korean Air implemented the Greenhouse Gases & Energy Target Management System and as a result succeeded to meet its target 643,273tCO2eq emissions in 2012. This achievement is an 11.06 percent reduction compared to the base year.

CO2 Emissions Reduction through Fuel Savings in 2012

419,020 tCO_2

Korean Air reduced fuel consumption and CO2 emissions by 133,022 tons and 419,020 tons respectively as a result of carrying out 132 energy efficiency improvement tasks.

Energy Consumption in 2012

9,675 TJ

Korean Air achieved its target energy consumption of 9,675TJ as a result of monitoring its 44 business premises under the guidelines of the Low-Carbon Green Growth Act, which is a 10.79 percent decrease compared to 10,845TJ in the base year.

Environmental Costs in 2012

KRW **105** billion

Korea Air spent KRW10.5 billion as environment-related expenses, which include management and operation expenses, outsourced service expenses and investment in environmental facilities.

Greening for Excellence

Stakeholder Interview

"Most companies manage their economic achievements and risks well using well-organized systems, but when it comes to the environment and society, they are relatively weak in terms of business strategy, organization and manpower. Considering the fact that Korean Air is Korea's No. 1 company in the transportation industry, it needs to pay more attention to the impact of factors that can easily go unnoticed through effective allocation of manpower and budget.This should not be confined to areas like greenhouse gases that are required to be reported. The company should also make efforts to identify other areas such as noise and waste that have relatively been less managed and figure out what needs to be done to minimize their impacts on the environment. At the same time, Korean Air should enhance its CSR efforts with a focus on key transit or final destinations to upgrade the country's image."

Kim Jong-dae
Professor, Inha University

DMA

Stakeholder issues from materiality test	Priorities of Key Issues
Climate change (global warming)	18
Energy consumption	22
Impact of transport, etc. on the environment	27
Atmospheric emissions, wastewater and waste, CO2 emissions	31
Fuel consumption	32
Increased purchasing of green products	34

● Trend (Impact on the organization) ● Impact (Impact on stakeholders and sustainable development)

Vision

Enrich people's lives through the harmony between the airline industry and the environment.

Our Commitment

1 We will modernize our fleet and improve flight operation procedures to reduce greenhouse and noise emissions.
2 We will apply stricter internal standards in compliance with domestic and international environmental laws and regulations.
3 We will minimize our environmental impact through preventive environmental management, while continuing to improve our performance.
4 We will continue to improve our operational efficiency to conserve resources and energy.
5 We will train and educate employees to inspire them with environmental activities.
6 We will closely communicate and cooperate with business partners to encourage green management.
7 We will transparently disclose all information on our green management performance and efforts.
8 We will make use of our global network to protect the planet and to contribute to the development of local communities.

Performance Indicator

2012 Initiatives	2012 Outcomes
Respond to the GHG & Energy Target Management System	Emissions were within the level allowed by the government
Reduce CO2 emissions by saving jet fuel	Carried out 132 tasks and saved 133,022 tons of fuel Saved 419,020 tons of CO_2
Continue the global reforestation project	Planted 10,000 trees in Baganuur, Mongolia, and 79,000 trees in China's Kubuqi Desert
Promote communication regarding environmental activities	Published Green Letter (October 2012)

"Korean Air is undertaking a wide array of campaigns to prevent environmental pollution using its company-wide environmental management system and is also creating new opportunities through an active response to climate change. We make continued efforts to reduce aircraft noise as well as improve air quality with strict standards and rigorous management."

OUR IMPACT ON THE ENVIRONMENT

At Korean Air, we make every effort to minimize our environmental impact, while meeting the growing demands for air transportation so as to achieve sustainable growth. We constantly monitor our GHG emissions and the generation of pollutants, recognizing their impacts on the environment.

INPUT

Fuel Consumption by Air Operations (Unit: ton)

	2010	2011	2012	Change (%)
Jet fuel	3,823,040	3,967,681	4,019,028	1.29

* Amount of jet fuel used for domestic and international flight operations

Direct Energy Consumption by Ground Operations (Unit: GJ)

	2010	2011	2012	Change (%)
B-B oil	17,741	15,814	16,333	3.28
B-C oil	245,151	262,658	263,349	0.26
Gas/Diesel	264,247	281,864	296,657	5.25
Boiler kerosene	37,018	17,130	466	-97.28
By-product gas No. 1	20,542	18,345	21,722	18.41
Gasoline	11,587	11,399	11,283	-1.02
Jet fuel	44,194	42,409	33,314	-21.45
LNG	242,949	249,978	272,442	8.99
LPG	6,803	7,339	7,485	1.99
Total	890,234	906,936	922,951	1.77

* Direct/indirect energy consumption amount is monitored on 44 of our business premises and assured by authorities under the Low-Carbon Green Growth Act. [KFQ (2010), PWC (2011-2012)]
* Boiler kerosene used at four premises - Jeongseok Aviation Pavilion, Jeongseok Airfield, Jeju KAL Hotel and Jeju Office - has been replaced with diesel.

Indirect Energy Consumption by Ground Operations (Unit: MWh)

	2010	2011	2012	Change (%)
Electricity & hot water	144,366	143,875	136,011	-5.47

* Electricity and hot water consumption were measured based on Scope 1 and 2. Scope 3 was not used. Boundaries are the same as those for GHG-emitting operations listed in the target management system.
* Electricity and hot water consumption were monitored in accordance with the guidelines of the Low-Carbon Green Growth Act and assured by authorities [KFQ (2010), PWC (2011-2012)]

Water Use (Unit: ton)

	2010	2011	2012	Change (%)
Total amount of water used	1,402,514	1,500,600	1,514,530	0.93
Recycled amount	26,169	24,624	27,519	11.76
Recycling rate	1.87	1.64	1.82	10.98

* Water use does not include leased places [19 premises including regional airports]
* Total amount of water used includes the use of water supply, water recycling and underground water. The amount is calculated by adding up the bills issued by suppliers.
* The recycled amount includes the amount of recycled water used at the Korean Air Building at Gimpo.

OUTPUT

GHG (Scope 1) Emissions by Air Operations (Unit: ton)

	2010	2011	2012	Change (%)
CO_2	12,045,260	12,186,003	12,662,272	1.29
CH_4	18	18	18	0.00
N_2O	370	387	403	4.13
CO_2e	12,160,338	12,306,351	12,780,177	3.85
100RTK	149,315,515	142,326,383	145,090,924	1.94
kg CO_2e/100RTK	81.4	86.5	88.1	1.89

* Greenhouse gas inventory applies Tier 2 IPCC 2006 National Greenhouse Gas Inventory Guidelines
* CO2e is the sum of emissions of CO2 equivalents of CH4 and N20.

GHG (Scope 1) Emissions by Ground Operations (Unit: ton)

	2010	2011	2012	Change (%)
CO_2	58,867	60,315	60,960	1.07
CH_4	3,230	3,236	3,287	1.58
N_2O	1,439	1,452	1,436	-1.10
CO_2e	59,381	60,833	61,474	1.05

GHG (Scope 2) Emissions by Ground Operations (Unit: ton)

	2010	2011	2012	Change (%)
CO_2	65,039	63,912	64,723	1.27
CH_4	0.735	0.731	0.760	3.97
N_2O	0.368	0.365	0.370	1.37
CO_2e	65,169	64,041	64,724	1.07

Air Pollutant Emissions (Unit: ton)

	2010	2011	2012	Change (%)
Dust	17	21	23	9.52
THC	12	16	16.19	1.19
NOx	63,928	64,732	67,379	4.09
SOx	9	10	9	-10.00
SO_2	3,797	3,843	3,977	3.49

* Air pollutant emissions are the sum of the pollutants generated from flight operations and six major sources of air pollutants: Incheon Maintenance & Engineering Division [A], Korean Air Building at Gimpo, Engine Assembly Line in Bucheon, Component Repair Plant in Bucheon, Seogwipo KAL Hotel and Gimhae Tech Center

Amount of Water Pollutants (Unit: ton)

	2010	2011	2012	Change (%)
BOD	15,999	20,978	25,572	21.90
COD	13,256	14,959	19,182	28.23
SS	24,071	30,189	38,904	28.87
T-N	3,241	3,434	4,722	37.51
T-P	0,515	0,570	0,745	30.70

Waste Amount (Unit: ton)

	2010	2011	2012	Change (%)
Incineration	11,831.68	12,209.90	13,332.65	9.20
Landfill	727.1	743.57	868.63	16.82
Recycling	9,750.91	9,481.28	9,834.29	3.72
Total	22,309.69	9,481.28	24,035.57	7.14

* The sum of waste amount is the amount outsourced for treatment and disposal from January 1 to December 31, 2012.
* Waste amount disposed of with biodegradable plastic garbage bags is excluded.

Emissions Concentrations (Unit: %)

Air

	2010	2011	2012
Dust	25.3	24.4	24.6
THC	16.3	17.3	14.4
NOx	39.8	43.3	41.6
SOx	11.6	15.2	17.6

Water

	2010	2011	2012
BOD	9.6	11.0	12.1
COD	19.9	19.4	20.2
SS	16.1	17.6	16.9
T-N	15.8	14.5	14.1
T-P	8.7	9.3	10.0

* Emissions concentrations are percentages vs. legal limits.
* Some data errors regarding air and water pollutants have been corrected through 2012 data standardization

ENVIRONMENTAL MANAGEMENT

Korean Air is putting in place an environmental management system to enrich people's lives through the harmony between the airline industry and the environment.

Korean Air acquired ISO14001 certification for its environment management system in Headquarters, aircraft manufacturing, maintenance, catering and Hotel businesses.

Environmental Management System

Korean Air meets international environmental management standards according to ISO14001 certification in five areas of business: Headquarters & General Division, Aerospace Business, Maintenance & Engineering, Catering Center and Hotel Division.

Certification on Environmental Management System

Certification	ISO14001
Date acquired	December 13, 1996
Date reacquired	November 17, 2011
Agency	BSI (British Standards Institution)
Coverage	All operations ❶ Headquarter operations (Flight Operations, Transportation, Passenger, Strategy Support) ❷ Maintenance (Gimpo, Incheon, Bucheon Plant) ❸ Catering (Gimpo, Incheon Catering Center) ❹ Aircraft Manufacturing (Aerospace Division) ❺ Hotel (Jeju KAL Hotel, Seogwipo KAL Hotel)

Environmental Management System (EMS) Organization

Chairman & CEO

▼

Executive

President & COO

Executives in charge	EMS Department	EMS부서
General	Executive in charge of Environment & Construction Management Department	Environment Team, Environment & Construction Management Department
Maintenance	Head of Maintenance & Engineering Division	Facility & Equipment Team, Maintenance Planning Department
Aircraft Manufacturing	Head of Aerospace Business Division	Facility Management Team, Business Planning Department
Catering	Head of Catering & In-Flight Sales Division	Catering Quality Control Team
Hotel	Head of Hotel Business Division	Operational Support Team

Environmental Management Goals & Achievements

Korean Air adopts three strategies – effective reduction of GHG and energy, enhancement of communication regarding environmental activities and promotion of green management - which forms the basis for the development of detailed initiatives. In 2012, we fell short of waste emissions reduction target but it is still a better outcome compared to emissions of the three years immediately preceding 2012.

Environmental Management Strategy & Goals

Response to GHG emissions regulations

+

Promotion of green management

Effective reduction of GHG and energy

- Compliance with relevant regulations
- Set an effective reduction target and carry out necessary tasks
- Manage GHG emissions focusing on business premises

Promotion of communication regarding environmental activities

- Active engagement with external stakeholders
- Expand communication with internal stakeholders
- Consistently carry out environmental campaigns
- Increase environmental education

Promotion of green management

- Back to the basics
- Standardize environmental statistics
- Preventive emissions control
- Refine contingency plans

Environmental Goals (Achievement rate)

	General	Maintenance	Aerospace	Catering	Hotel	Remarks
Reduce GHG emissions	103.1%	115,5%	108.4%	105.9%	132.7%	Quantitative goals
Reduce waste emissions	98.5%	109.8%	99.4%	98.7%	109.0%	
Keep air pollutant emissions at a stable level	133.4%	131.0%	111.2%	122.5%	-	
Increase recycling of waste	-	-	100.8%	-	-	
Respond to climate change	-	-	100.0%	-	-	Qualitative goals
Preventive environmental management	100.0%	100.0%	100.0%	-	-	
Apply eco-friendly process	-	100.0%	100.0%	-	-	
Improve environmental management system	100.0%	-	-	-	-	
Reinforce environmental trade volume	100.0%	100.0%	100.0%	-	-	
No. of goals	19	11	24	4	4	Total 62

* While we failed to meet the target for waste amount reduction due to increased business activities, we still reduced waste compared to the average reduction in the base year (average of three years immediately preceding 2012).

Assessment and Review of Environmental Impact

Korean Air reviews its environmental impact every three years in order to monitor the environmental impact of its business activities, products and services and to minimize its environmental impact on local communities. The reviews are made on air pollutants, waste and wastewater control, soil pollution, and hazardous substance control at all our business premises to ensure safe and healthy workplaces. In addition, we conduct an assessment every year to check compliance of our business activities with company regulations and related laws and make corrective or preventive measures where required.

Eco-friendly Purchasing and Procurement

In an effort to minimize our impact on the environment, Korean Air reviews eco-friendliness of materials it procures which may have a persistent impact on the environment. Materials that have a persistent impact on the environment include chemicals, oil and power equipment. We assess, among others, the eco-friendliness of engines and aircraft. When we introduce new aircrafts or select engines, we make sure to check their compliance with the international environmental standards regarding noise and discharge gases, receiving guarantee of agreed levels from manufacturers when signing contracts.

Environmental Expenses (Unit: KRW million)

	2010	2011	2012
Management and operation	3,225	3,772	3,633
Outsourced treatment	4,550	4,135	4,145
Legal	5,340	4,877	5,593
Investment in environmental facilities	650	-	-
Total	13,766	12,786	13,371

* Management and operation expenses Includes staff expenses and depreciation cost of environmental protection facilities from maintenance, electricity use, procurement of environmental materials and environmental activities.
- Staff expenses include wages as well as severance pay, incentives and benefits
- Depreciation cost is calculated using the straight-line method taking into account acquisition price and durable years of environmental facilities

* Outsourced disposal cost Expenses spent in outsourced collection, transport and treatment of pollutants, such as measurement of pollutants, service, aircraft deicing waste fluid treatment and airplane toilet sewage disposal.

* Dispute-related legal costs Noise charges for aircraft noise during take-off and landing at domestic and overseas airports, fees for using government-owned airport facilities and other charges levied under environment-related laws.

* Environmental facility investment cost Environmental protection facility and equipment refer to land, buildings, construction machinery, structures, machines and transportation equipment used for the prevention, mitigation or elimination of environmental pollution generated in the course of carrying out economic activities. Environmental facility investment costs are capital outlays such as new acquisition cost of environmental protection facility (excluding acquisition of used assets) and expenditure for large repair of existing facility.

RESPONSE TO ENVIRONMENTAL POLLUTION

Korean Air has in place a proper organization and system for carrying out a number of environmental protection activities from the protection of biodiversity to the management of ozone-depleting substances in order to cope with environmental pollution.

Environmental Risk Management

Korean Air has established a contingency plan and behavioral guidelines at all airports which it operates in Korea in the event of an aircraft accident. We have an emergency network and control devices for saving people´s lives as well as controlling environmental pollutants in the event of an aircraft accident. We also run mock drills to minimize losses in the event of an actual accident based on environmental risk scenarios by type as well as an environmental response center to prevent pollution arising from any possible wreckage in the event of an aircraft accident. We set up an environmental emergency team in the event of a contingency situation that may trigger complaints or social disturbances. With regard to other general situations, such as oil leakage from a storage tank or pollution from the outbreak of a fire, we run an environmental management system (EMS) organization for instant response and countermeasures

Handling Civil Complaints about Environmental Pollution

Korean Air established a standard procedure for communication under environmental management regulations, allowing relevant departments to instantly respond to any complaints about environmental issues. Minor issues are dealt with by the business departments in charge while major issues are referred to upper level and top management for a company-wide response. Complaints are analyzed for causes and education is carried out based on the results to prevent a recurrence of the same complaint. As a result, no complaint about environmental issues has been filed with the company for the past 10 years.

Biodiversity Protection

Korean Air is fully aware of its role as an airline in protecting biodiversity and thus actively participates in international initiatives to protect biodiversity. Korean Air prohibits air transport of endangered species, rare species and protected species under its internal bylaws. In the year of biodiversity, we produced a video called "Many Species, One Planet, One Future, awakening people to the importance of protecting biodiversity. We stopped transporting shark fins, joining a campaign to protect endangered species. In the past, carriage of shark fins was allowed only when a request for the transportation of shark fins was accompanied by a valid permit under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The decision was made in line with the growing global effort to stop the distribution and carriage of shark fins. We submitted our decision to stop the transport of sharks and by-products to the International Air Transport Association (IATA) and have since joined the global effort to protect the natural ecosystem.

Management of Ozone-Depleting Substances

Korean Air has endeavored to replace ozone-depleting substances categorized by the Montreal Convention with alternative ones in line with the requirements set out by the international conventions on the environment. From 2004 to 2008, we replaced seven types of CFC-containing detergents for aircraft maintenance with those without ozone-depleting substances. From 2009 to 2010, we reduced CFC (chlorofluorocarbon) use by eliminating eight Ground Refrigeration Units (GRU) that use CFC refrigerants to cool off overheating aircraft electronic equipment. All chemical substances used by Korean Air are controlled under the Korean Air Chemical Management System (KCMS). However, since 2008 we have not calculated the amount of ozone-depleting substance emissions, as the amount is negligible. Instead, Korean Air conducts an internal review if chemical substances in use can be replaced with eco-friendly ones, maintaining communication with producers to increase the use of eco-friendly products.

RESPONSE TO CLIMATE CHANGE

Climate change has emerged as a major threat to the entire global community. In response, Korean Air has implemented various initiatives aimed at reducing GHG emissions, improving fuel efficiency and strategically securing carbon credits, among others.

Aviation Industry and Climate Change

Climate change is one of the most pressing environmental issues facing mankind today. In 2012, the aviation industry emitted 690 million tons of CO2, which represents approximately 2 percent of the global CO2 emissions (source: IATA).

In light of this, the aviation industry makes a response to climate change its top priority and takes various efforts to deal with it. While the aviation industry's share of contribution to the world's CO2 emissions is small compared with other means of transportation, GHG emissions from the industry are projected to rise in line with the growing demand for air transportation. As GHG emissions from international flight operations cannot be addressed by one country or one airline, a global approach is required. At its 37th session held in October 2010, the International Civil Aviation Organization (ICAO) adopted a resolution to work toward reducing GHG emissions at the global level and create a market-based framework to mitigate GHG emissions, which is the aviation industry's first commitment to mitigating GHG emissions at the global level.

The International Air Transport Association (IATA) also urged the ICAO and governments to come up with solutions to carbon emissions and finally succeeded through its Climate Change Task Force (CCTF)'s research on carbon neutral growth after 2020 in making governments to adopt the historical resolution on carbon neutral growth (GNG2020) at its 69th annual general meeting held in Cape Town on June 3, 2013.

Opportunities and Threats Presented by Climate Change

Climate change presents both risks and opportunities to the global aviation industry directly and indirectly. Climate change entails an increased frequency of natural disasters such as typhoons and hurricanes, which lead to the shutdown of airports, irregular flight operations and even flight cancelations. Consequently, the extended ground standby duration undermines efficient fleet operations, causing additional costs.

A decrease in passenger flights to a given destination due to natural disasters can have a direct impact on our business and sales revenue. Moreover, regulations related to climate change force the carbon-intensive aviation industry that consumes fuels to transport passengers and cargo to spend additional amount of money (e.g., purchase of carbon credits). Rising environmental awareness among consumers can also result in a decrease in market demand for air travel (e.g., people might choose a video conference over a business trip).

Nevertheless, Korean Air is working to turn these risks into opportunities. Efforts to enhance fuel efficiency in response to climate change can lead to cost savings, and efforts to comply with GHG-related regulations can lead to the maximum efficiency in fuel use as well as strategic purchase of cheap carbon credits, which in turn will boost the company's competitive edge compared to other airlines. In addition, our efforts concerning the development of cutting-edge aircraft technology, introduction of the latest operational systems and development of biofuel will also present new opportunities for the aviation industry.

IATA Climate Protection Goals

Policy to Combat Climate Change

EU Emissions Trading Scheme (EU ETS)

The EU Emissions Trading Scheme (ETS) was launched on January 1, 2012. Under the scheme, Korean Air received its own share of emission allowances and performed the Monitoring, Reporting and Verification (M.R.V) procedure using its own GHG collection system known as ETS OMS. However, the EU suspended the inclusion of flights in and from the EU in its Emissions Trading System at the ICAO general assembly, asking the industry to come up with a global scheme. As the ETS may be resumed if a global agreement is not reached, Korean Air maintains existing monitoring of carbon emissions both within and outside the EU.

* Emissions Trading Scheme is an economic instrument to reduce GHG emissions by allowing firms to trade the rights to emit pollutants. Firms that keep their emission levels below their allotted level may sell their surplus permits to other firms that failed to meet required reduction targets.

GHG and Energy Target Management System

Korea's GHG and Energy Target Management System began in April 2010 under the Low-Carbon Green Growth Act and its enforcement decree. As part of the program, high energy-consuming companies that account for over 60 percent of the nation's GHG emissions are required to set energy-saving targets and develop implementation plans. Korean Air is among the firms that must comply with the system and managed to meet its GHG emission target of 643,273tCO2eq and energy consumption target of 9,675TJ in 2012. This achievement is a reduction of 11.06 percent and 10.79 percent respectively compared with 723,243tCO2eq and 10,845TJ recorded in the base year.

	Base Year			2012		
	Air	Ground	Total	Air	Ground	Total
GHG (tCO_2eq)	602,098	121,145	723,243	519,191	124,082	643,273
Energy (TJ)	8,768	2,077	10,845	7,435	2,240	9,675

* Figures above are taken from the GHG emissions and energy use reports (covering domestic ground and air transport operations) submitted to the government under Article 44 (1) of the Low-Carbon, Green Growth Act with attached assurance from a third party institution in March 2013.

Korean Air's 4 Basic Strategies for Addressing Climate Change

Emissions Trading Scheme in Korea

As part of the effort to reinforce the GHG and Energy Target Management System, the Korean government is set to implement a carbon trading scheme in 2015 where each industrial player is assigned a quota for emissions and businesses are allowed to trade the surplus quotas among each other. Subject to the trading scheme are mostly large producers of greenhouse gases (firms emitting over 125,000 tons of CO2 or installations emitting over 5,000 tons of CO2 annually), taking into account sector-specific requirements and national competitiveness. Allotted emissions can be traded and firms are obliged to report actual emissions after verification and the authorities in charge provide certifications based on assessment results. Firms that emit more than quotas are expected to be fined about 3 times average market price with a cap of KRW100,000.

Voluntary Agreement

Korean Air has been striving to reduce its annual GHG emissions since it signed a voluntary agreement (VA) with the Ministry of Land, Infrastructure and Transport in 2010. Our target for the second VA period set from January 1 to December 31, 2012 is a 2 percent improvement in fuel efficiency. Although we did our best to reduce GHG emissions through a total of 126 activities, we failed to meet the 2012 target compared with the base year (2007-2010) due to the sluggish cargo business and increased supply of cargo transport service (2007-2010).

Voluntary Agreement

Activity	Organization	Date
Signed Voluntary Agreement for eco-friendly businesses for reducing GHG and other air pollutants	Ministry of Environment	2006.11
Signed Voluntary Agreement for saving energy and reducing GHG emissions	Seoul City	2009.10
Signed Voluntary Agreement for the aviation industry for reducing GHG emissions	Ministry of Land, Infrastructure and Transport	2010.07
Signed an agreement on promoting green life	Environmental Office	2012.06

Initiatives and Outcomes by Division in 2012

Performance

Improve fuel efficiency by enhancing aircraft and engine performance

- Introduce a periodic engine washing with water program
- Improve performance through the effective management of fan blades of engine
- Calculate accurate fuel consumption rate through the monitoring of aircraft and engine performance and reflect the result in flight planning
- Improve fuel efficiency by installing winglets on B737 fleet

Maintenance

No. of operational initiatives	27
Fuel reduction (ton)	31,186
CO2 reduction (tCO2)	98,235

Weight

Reduce aircraft load weight to the optimal level

- Remove unnecessary equipment and parts from aircrafts
- Use disposable dishes and cups
- Use lightweight containers for luggage
- Load aircrafts with in-flight drinking water based on the reservation rate and flight time
- Manage optimal center of gravity of aircraft in consideration of fuel efficiency

Catering

No. of operational initiatives	3
Fuel reduction (ton)	861
CO_2 reduction (tCO_2)	2,711

Transport (passenger/cargo)

No. of operational initiatives	6
Fuel reduction (ton)	5,411
CO_2 reduction (tCO_2)	17,045

Planning

Reduce flight expenses by developing the optimal flight planning

- Continue to develop optimal alternate airports and shorter routes
- Make reasonable amendments to fuel loading regulations
- Load fuel based on scientific statistics regarding weather conditions and fuel consumption by aircraft type/route
- Prevent unnecessary fuel load through the accurate forecasting of passenger/cargo weight
- Fuel tankering based on oil price differences between departure and arrival airports

Control

No. of operational initiatives	77
Fuel reduction (ton)	49,642
CO_2 reduction (tCO_2)	156,371

Operation

Apply optimal flight speed and economical operation procedures

- Operate flexible flight speed policy based on oil prices and flight costs
- Reduce fuel use and noise during take-off and landing through the use of optimal flaps
- Avoid using reverse thrust while landing
- Save fuel by shutting down unnecessary engines during taxi
- Use more economical ground equipment instead of airplane's own power systems while parking

Operation

No. of operational initiatives	19
Fuel reduction (ton)	45,923
CO2 reduction (tCO2)	144,658

Effective Fuel Management

Effective management of fuel has become more important than ever not only in the context of its impact on the economy, but also in the context of its contribution to the prevention of global warming and the protection of the environment. In 2012, Korean Air spent approximately KRW4.7 trillion in purchasing jet fuel and this cost already accounts for the biggest share of the company's total costs at 39.1 percent. Out of its clear recognition of the impact of effective fuel management on the company's development as well as on the environment, Korean Air created a fuel management team in 2004 and has consistently endeavored to improve fuel efficiency.

Major Initiatives for Effective Fuel Management

Korean Air's fuel efficiency improvement initiatives take place across four categories of aircraft performance, flight planning, operation procedures and weight management, as shown on the left-hand side table.

Payload change by year (KG): Plan vs. Actual

Compliance rate regarding minimum use of reverse thrust while landing (Unit: %)

Fuel Management and Resultant Reduction in CO_2

Improved accuracy in estimation of passenger/cargo weight

An aircraft's fuel consumption varies significantly depending on its weight. Therefore, accurate calculation of the weight of passengers and cargo in the flight planning stage is a prerequisite to optimal fuel loading. Korean Air has consistently improved procedures and systems with regard to calculations of the weight of passengers and cargo and as a result, was able to greatly narrow the gap between planned payload and actual payload as shown in the left-hand side graph.

Economical procedures for flight operations

Korean Air establishes all flight operation procedures with safety and the impact on the environment taken into account. For instance, flight crew members are directed to use minimal engine power while taxing based on flight conditions. It is also recommended that pilots do not lower flaps (high lift device) too much during landing or take off so as to not to increase air resistance. We also revised flight operation procedures so that pilots make minimal use of reverse thrust while landing according to flight conditions. This revision has resulted in fuel savings and noise reduction at airports. Moreover, we have been able to quickly obtain accurate information on the observance of economical operation procedures by analyzing flight recorders installed in aircrafts since late 2012. The second graph on the left-hand side shows the rate of airplanes that used minimum amount of reverse thrust while landing. While the rate may differ from aircraft to aircraft, it is about a 30 percent improvement from 2008 when the procedures were introduced.

Effective Fuel Management

Mounting lighter tow-bar on A380 (new initiative in 2012)

Korean Air is the only domestic carrier that operates A380 fleet and not many airports have equipment needed for A380 operations. A ground-movable

towing bar is mounted on the A380 in case of landing at alternate airports instead of target airports, but the device is rarely used. As the device is very heavy (945kg), we have recently replaced it with a lighter FAK tow bar (215kg) to reduce fuel consumption and as a result succeeded in saving 458,000 LBS of fuel annually.

Removal of 88-inch ULD locking devices from the main deck of cargo aircraft (new initiative for 2012)

When loading cargo on cargo aircraft, cargo is loaded in a pallet or container called Unit Load Device (ULD) and fixed to the aircraft. ULDs come in 96 inches and 88 inches and 96-inch ULDs are widely used to load more cargo. We saved 825,000 pounds of fuel in 2012 by removing lock devices for 88-inch pallets that are less frequently used.

Additional designation of alternate airports for F-grade aircraft (CJU Airport, new initiative for 2012)

Worsening weather conditions at target airports must be taken into consideration when loading fuel because airplanes may have to fly to alternate airports. A380 aircrafts can only land at the airports in Incheon and Gimpo due to their size and aircrafts cannot use the Kimpo Airport at night due to noise. Aircrafts that arrive at the Incheon International Airport at dawn are usually loaded with a sufficient amount of fuel in case they need to land at the nearest Kansai International Airport. We suggested to the Ministry of Land, Infrastructure and Transport that the Jeju Airport be designated as an alternate airport for economic and safety reasons and gained approval. Consequently, we were able to save 825,000 pounds of fuel in 2012.

Development of Biofuel

Development of biofuel for the domestic aviation industry is challenging because it is difficult to secure feedstock due to the geographic conditions and weak infrastructure. As a result, biofuel R&D became late. After Korean researchers succeeded in developing a test product in January 2013, domestic companies began to focus on the development and production of biofuel in earnest. The government has chosen biofuel application technology development as its strategic R&D project and has commissioned the Korea Transport Institute to lead the project in partnership with other research organizations and domestic commercial airlines including Korean Air. Depending on the research outcome, a longer-term strategy for biofuel development for the domestic aviation industry will become available. As part of its GHG reduction efforts, Korean Air is currently preparing to take part in the project more actively based on the research progress.

Entering Mass Production of Sharklets for A320 Series

Korean Air started mass production of sharklets, wing-tip devices for A320 series, in earnest, after supplying the first mass production model to Airbus on April 8, 2012. A320 series are best-selling aircrafts of Airbus that can accommodate 107 to 185 seats and come in four models: A318, A319, A320 and A321. A sharklet is a device attached to the tip of the main wing of A320 series and replaces existing wingtip fence. L-shaped with 1.6m in width and 3.3m in length, sharklets are eco-friendly aircraft structures capable of improving fuel efficiency by more than 3.5 percent by reducing air resistance.

The sharklet development project was commissioned by Airbus to improve aircraft performance by applying fuel-efficient, eco-friendly wing structures to A320 series. Korean Air beat the world's leading aircraft manufacturers from Japan, France and Germany in a competitive bidding held in May 2010 to perform the entire stages from design and manufacturing to test and certification of sharklets that require highly sophisticated composite material technology. Korean Air's successful development of sharklets indicates that Korea's technology and quality in the areas of aerospace and aircraft manufacturing have reached the world-class level. Korean Air now occupies a solid position in the global aircraft wing-tip manufacturing market with the commencement of mass production of sharklets for A320 in addition to the mass production of next-generation wing-tip devices for Boeing's B787, B777 and B747-8.

MITIGATION OF OUR IMPACT ON THE ENVIRONMENT: NOISE ABATEMENT

Noise during aircraft landing and take-off is a major environmental impact on the residents living near airports. Korean Air makes every effort to reduce noise through, for instance, the implementation of noise abatement departure and descent procedures and introduction of low-noise aircraft.

Introduction of Low-Noise Aircrafts that Meet Noise Standards

From its design stage, an aircraft must meet a series of noise standards contained in ICAO Annex 16. Noise level is calculated as the sum of noise measured at three points - 6,500m forward from the runway after take-off, 450m away from the side of the runway and 2,000m away from the runway (with approximately 120m altitude) before landing. Currently, most airports are required to comply with at least Chapter 3 standards, while aircrafts approved since 2006 must satisfy Chapter 4 standards – the highest standards that require the aggregate noise of the three designated points to be 10EPNdB lower than in Chapter 3. At Korean Air, all aircrafts, including those approved before 2006, meet Chapter 4 standards in terms of noise generation. Moreover, the Korean Aviation Act classifies the ICAO Chapters 2, 3 and 4 into six classes, and all of our aircrafts are allocated in the quietest class – class 6.

Noise comparison between A380 and B744

Noise footprint surface comparison (Unit: Km2)

◀ 85dB contour at Incheon -5,000 nm mission

* The A380 carries 40% more passengers with a noise footprint surface (85dB contour) of less than 50% of the B747-400.

Continuous Descent Approach (CDA)

Noise Reduction through Procedural Improvement

To reduce noise, Korean Air developed a guidebook on aircraft operational regulations and noise abatement procedures per aircraft type and applies the procedures to landing and take-off. We duly perform noise abatement procedures during departures and landings as required by airports around the world. We also follow the ICAO's Noise Abatement Departure Procedure (NADP) and Continuous Descent Approach (CDA) in our flight operations according to flight conditions.

ICAO Noise Abatement Departure Procedure

- NADP 1 (Gimpo International Airport): This procedure involves a reduction in power or thrust at or above a prescribed minimum altitude (457m) and a delay in the retraction of flaps/slats until a prescribed maximum altitude (1,220m) is attained. At the prescribed maximum altitude above the aerodrome below, the aircraft accelerates and the flaps/slats are retracted on schedule while maintaining a positive rate of climb.
- NADP 2 (Incheon International Airport): At first, the aircraft climbs using a prescribed thrust for take-offs. Then, as it reaches the prescribed minimum altitude (305m), it retracts the flaps and accelerates to a climbing speed until the aircraft reaches an altitude of 900m. This noise abatement procedure is used for departures when residential areas are farther away.

ICAO Continuous Descent Approach (CDA)

The CDA is a prescribed procedure for descent in which the aircraft follows a smooth and continuous glide path to touchdown. This leads to significant reductions in both noise and CO_2 emissions compared to conventional methods of landing which are akin to descending a flight of stairs.

Noise Abatement Policy

Noise during take-off and landing has greatly declined thanks to the advancements in aircraft manufacturing technology and improvements in flight operation procedures, but there still are limitations in alleviating noise due to the growing demand for air travel and growing population in the vicinity of airports. Most airports in major cities around the world levy noise charges on flights. The noise charges are used in installing soundproof facilities in residential areas and schools near airports. Noise charges vary based on the maximum take-off weight and Korean Air paid approximately KRW5 billion in noise charges in 2012. Apart from this, Korean Air sends children from local communities to Jeju Island as part of its noise abatement events.

INITIATIVES TO MITIGATE ENVIRONMENTAL IMPACTS: LOCAL AIR QUALITY

Korean Air conducts an environmental assessment when it introduces new aircrafts or engines and undertakes a number of activities to reduce LTO emission gases, gas emissions from ground operations and work sites that have an impact on local air quality.

Management of LTO Emission Gases

The entire operational phases – take-off, climb, approach and taxi – comprise a Landing and Take-off Cycle (LTO). Gases emitted from this cycle with impacts on local atmospheric conditions, such as nitrogen oxides (NOx), hydrocarbon (HC) and carbon monoxide, are called LTO emission gases. Of these gases, carbon monoxide emissions have declined 50 percent and hydrocarbon emissions have fallen 90 percent compared with 40 years ago on the back of technical progress in aircraft engine. As aircraft manufacturers move forward with research on cutting down on nitrogen oxides by over 80 percent until 2020, a reduction in LTO emission gases is expected to continue.

LTO NOx emissions (Unit: ton)

Environmental Feasibility of Engines

Korean Air not only meets international environmental standards when it selects new aircrafts or engines, but the company also takes into account its forecast of the changes in the international standards regarding flight operation environment at the time of aircraft introduction before making a final selection of an engine.

Efforts to Reduce Emissions from Ground Operations

Airports emit gases from a number of ground activities, such as aircraft landing and take-off, aircraft engine test, use of auxiliary power units (APUs) to supply power and cooling and heating of aircrafts parked on the ground. A number of vehicles and devices used to support aircrafts also emit gases. As APUs produce a large amount of exhaust gases, it is recommended that Ground Power Service (GPS) be used if possible, because the use of GPS instead of APU significantly reduces airport noise. The Incheon International Airport in particular uses power and air conditioning/heating systems installed at boarding bridges and the Incheon International Airport Cargo Terminal uses internally built GPS systems, thereby contributing to emissions reduction.

Efforts to Reduce Emissions at Work Sites

Air pollutants, such as dust, nitrogen oxides, sulfur oxides and odor, from aircraft maintenance work are mostly generated from the maintenance of aircraft parts. Korean Air operates 106 units of pollution prevention facilities at all its premises, keeping emissions of pollutants at below 50 percent of legal limits.

INITIATIVES TO MITIGATE ENVIRONMENTAL IMPACTS: GROUND

Korean Air also carries out various initiatives on the ground to mitigate its environmental impacts. These initiatives include energy saving at buildings as well as managing waste, waste water and chemical substances according to strict standards.

Recycling rate

* Recycling rate declined 1.6 percent in 2012 due to the decrease in cargo business that generates a large amount of recyclable items and the increase in in-flight meal production that generates a large amount of waste that is either incinerated or land filled.

Saving Energy at Buildings

Korean Air has signed a voluntary agreement with the government on reducing energy consumption and GHG emissions not only on its flight operations but also on its buildings. In 2012, we reduced GHG emissions by 1,832tCO_2eq through 36 initiatives. We also maintained the indoor temperature at below 24℃ in winter and above 26℃ in summer, significantly reducing the use of air conditioning and heating. In addition, we replaced boilers, freezers and pumps with higher efficiency facilities, installed high-efficiency lights and improved facilities such as disrupting pipelines.

Waste Treatment

Different types of waste are generated in the course of aircraft maintenance, operations and transport services. Korean Air's cabin services generate waste on a daily basis and its aircraft maintenance work produces specified waste such as waste oil and waste organic solvents. As part of our effort to reduce waste amount, we incinerate food waste in full under the law while recycling paper, timber, cans and PET bottles.

Unit Amount of Waste Disposed of (Unit: ton)

* The amount of waste disposed has increased due to the growing operations in passenger service, catering, aerospace and hotel service but the unit amount of waste disposed has declined.

Energy Saving Initiatives in 2012

Initiative	No. of cases	Investment (KRW million)	GHG reductions (tCO_2eq)	Energy (TJ)	Saved expenses (KRW million/year)
Replacement with highly efficient facilities	5	565.0	339.0	7.0	78
Air conditioning/heating temperature	15	0.0	757.0	14.9	310
Facility improvement	3	39.0	173.9	3.6	40
Operational innovation	13	0.0	561.7	8.8	322
Total	36	604.0	1831.6	34.2	751

Wastewater Management

Korean Air's main business operations take place in Gimhae, Incheon and Gimpo. Wastewater from its business operations are treated at internal wastewater treatment plants and discharged only when they meet internal requirements that are 50 percent stricter than legal limits. In order to minimize the impact of wastewater on nearby bodies of water and ecosystems, we monitor the water quality and clean nearby rivers on a regular basis.

Management of Chemical Substances

All chemical substances used by Korean Air are controlled under the Air Chemical Management System (KCMS) established in 2006. The KCMS allows each business premise to access to information regarding storage and release of chemical substances as well as the use of each product and substance. The system is regularly updated to reflect amendments to the Occupational Safety and Health Act and new chemical substances regulated by the National Institute of Environmental Research (NIER).

Korean Air Chemical Management System (KCMS)

STAKEHOLDER COMMUNICATION

Korean Air rigorously complies with domestic and international environmental laws and regulations and applies strict internal standards. Through the communication with diverse groups of stakeholders and the execution of preventive environmental activities, we consistently improve our performance, thus minimizing our impact on the environment.

Participation in Public Policy Development

Korean Air participates in public policy discussions through domestic and overseas public hearings as well as association activities. We provide policymakers with the required expertise and information on the aviation industry, helping them draft policies in an equitable manner. Korean Air's Chairman and CEO Cho Yang-ho has served as a member of the International Air Transport Association (IATA) since 1996 and has been involved in discussions on the development and issues of the global aviation industry. Our executives are members of four of the six IATA subcommittees and are actively involved in drafting policy with the International Civil Aviation Organization (ICAO).

No.1

IN-FLIGHT ALTITUDE

VALUE FOR EXCELLENCE

CUSTOMER SATISFACTION SURVEY BY EXTERNAL AGENCY

At the center of all business activities of Korean Air are customers. Korean Air promises to provide greater value through comfortable and safe flights.

Voice of Customer Index

4,812

In 2012, we received 65,439 customer comments in 10 languages via e-mails on our nine global websites. Of these, 4,812 were praises about the company, which is a 19 percent increase from a year earlier.

Customer Satisfaction Survey

National Customer Satisfaction Index

No.1

In 2012, Korean Air was ranked 1st in domestic and international airline categories in the National Customer Satisfaction Index (NCSI) by the Korea Productivity Center for two consecutive years.

No. of employees with access to customer information who received privacy protection education

7,566 out of 7,594 employees

99.5%

Korean Air provides privacy protection education twice a year to all domestic and foreign employees who have access to privacy information. All employees who deal with customers also receive privacy protection education via online or as needed.

Implementation of an integrated safety management system

SafeNet

Korean Air uses its web-based company-wide SMS IT system known as SafeNet to detect accidents, non-conformance issues and risks. These risks are analyzed and mitigation measures are developed according to the company's risk management principles.

Value for Excellence

Stakeholder Interview

"Safety and security are crucial due to the nature of the aviation industry. Korean Air makes a ceaseless effort to provide the best possible customer service and perfect safety by reinforcing its information security system and implementing strict standards for the protection of customer information. Korean Air will continue to endeavor to improve its corporate image as a flagship carrier of Korea by remaining faithful to the basics."

Lee Sang-hyeon
Staff, Cargo Review Team, Finance Division, Korean Air

DMA

Stakeholder issues identified from materiality test	Priorities of Key Issues
Increased demand for safe products and services	1
Diversified customer needs	2
Increased demand for customer information security	3
Growing number of consumers who value health, eco-friendliness and pro-social behavior	5
Easy access to corporate information (via Internet, SNS, etc.)	11
Health and safety of customers	14
Gap in access to digital information	16
Increased demand for and growing exports of high value-added products	19
Customer information protection	20
Products and services labeling (customer satisfaction)	23

● Trend (Impact on the organization) ● Impact (Impact on stakeholders and sustainable development)

Vision

Korean Air regards customer satisfaction and safety as its highest priority and seeks to grow with them.

Our Commitment

1 We do our best to provide the most excellent customer service possible so that passengers can enjoy safe and comfortable flights.
2 We provide our customers with convenient air transport service, which will lead to a service-oriented culture wherein customers around the world place their trust on us. Our Total Travel Service system will provide useful travel information and travel convenience to our passengers to satisfy their needs.
3 We operate the safest flights, from take-off to landing, with an established "safe flight system."
4 With respect to passenger rights, we treat everyone with respect regardless of their culture, customs, traditions or values.
5 By listening to customers, our Customer Service Center is able to offer solutions to any inconvenience instantly. In addition, the Real-Name Service program is enhancing the transparency and accountability of our customer service.
6 We continue to transparently disclose information to customers, while customer information that we access in the process of our customer service shall be protected confidentially, and not leaked or abused.

Performance Indicator

2012 Initiatives	2012 Achievements
Obtain Authorized Economic Operator (AEO) certification	Obtained certifications in airline, export and import operations on October 1, 2012
Upgrade the Amadeus Altea Customer Relationship Management Solution program that covers booking, ticketing and transport	Commenced a project in June 2011 with a special task force team (and a total investment of KRW100 million)
Enhance employee training	Revised privacy protection guidelines and added two courses on information security

"Korean Air puts customer satisfaction before anything else and strives to grow with them. We assure you that we will keep our customers' information securely for your safe flights while you enjoy a wide range of customized services from departure to arrival."

CUSTOMER SATISFACTION

Customer satisfaction is the most important value to Korean Air. Therefore, we do our utmost to provide comfortable and exciting flights to our customers.

Improvement of Customer Services

Korean Air listens to customers and reflects their opinions in its management. On one hand, we use our Voice of Customer channel to monitor customer services at contact points and on the other hand, we collect about 60,000 customer comments each year via e-mails to our nine global websites for Korea, the Americas, Southeast Asia, Oceania, China, Hong Kong, Japan, Europe/the Middle East/Africa and CIS where 10 languages - Korean, English, Chinese (Pekingese, Cantonese), Japanese, German, French, Russian, Spanish, Portuguese - are available. In 2012, we upgraded Voice of Customer menus on our corporate website to better receive customer requirements and provide optimal replies. Under the Aviation Act that went into effect on July 27, we stock ticketing desks and information desks at airports and within airplanes with damage relief papers in an effort to protect customer rights.

Service Management and Improvement Process

Service Forum

Korean Air classifies all communication with customers, including its replies to customer e-mail inquiries, into different types and manages the information through its integrated IT system. This information is used to understand changing customer needs. We disclose major customer complaints and suggestions regarding customer service on the company's bulletin board to help employees better understand the service levels offered by each business. In particular, we register recurring and repetitive complaints as issues requiring improvement tasks and then develop fundamental solutions through regular monitoring and analysis of causes. This process has been effective in remedying weak services while making practical improvements through inter-departmental collaboration at the head office level.

Company Webzine

Korean Air's monthly webzine Service Bulletin was first published in September 2006 and as of February 2013, the 123rd issue was published. The webzine covers case studies on customer complaints, employees with excellent service records on the Service Champion and Service Excellence pages, along with information on customer trends, service tips, business episodes and more.

VOC Flow Chart

Service Excellence Program

Korean Air runs the Service Excellence Program in which it selects and rewards employees with outstanding records in customer service. Every quarter, our Selection Committee reviews VOCs and posts the names of winners on the company's bulletin board. This information is shared as best practices, serving as a catalyst for encouraging well-intended competition among employees. In 2012, 23 employees were chosen as winners of Service Excellence.

Customer Satisfaction Survey

Korean Air topped the 2012 National Customer Satisfaction Index (NC-SI) of the Korea Productivity Center in both domestic and international airline categories for two consecutive years for the first time in the airline industry. This is the result of our high scores in the customer satisfaction category in recognition of the successful introduction of new aircraft such as the A380 and custom-tailored services. We also ranked at the top in the airline category in the Global Customer Satisfaction Competency Index (GCSI) by the Japan Management Association Consulting. GCSI is an index that assesses and certifies global businesses on customer satisfaction competitiveness, and Korean Air has maintained the top standing for eight consecutive years since 2005. In addition to these, Korean Air also ranked 1st in the airline industry in the Korea Standard - Service Quality Index (KS-SQI) by the Korea Standards Association. These achievements are a testament to Korean Air's excellence in customer service.

CUSTOMIZED SERVICES

Korean Air provides carefully designed custom-tailored services, from booking, purchasing and departure airport to in-flight service and destination, to meet diverse customer needs through all stages of flight.

❶ Booking/purchasing

SMS Service

We send SMS (Short Message Service) to notify customers of booking, ticket purchasing and boarding information as well as any changes made.

* SMS service scope: flight cancelation or delay, flight schedule changes, standby confirmation, ticket purchase deadline, failure to board a plane after purchasing a ticket for domestic flight

Real-time Help Service

Korean Air provides real-time help service, answering all inquires of customers, from flight schedule, departure and arrival to booking, schedule change and refund.

*** Help service via chatting**
- ▶ Available hours: 24 hours (05:00–22:00 for domestic flights)
- ▶ Customers served: All customers who use Korean Air's website

*** Text SMS service**
- ▶ Available hours: 5 AM to 10 PM
- ▶ Fee: SMS fee, data fee (KRW50)
- ▶ How to use: Customers can send inquires in text to #2001 and receive replies via SMS.

❷ Departure airport ⇒ Destination

Family Service

Korean Air offers special help to customers who are new to long-haul flights and minors traveling alone. Our Family Care Service is designed to help check-in through boarding for unaccompanied elderly passengers 70 years of age or older, female passengers with two or more infants or children under the age of 7, as well as transfer passengers who face language problems.

Unaccompanied Minor Service

The Unaccompanied Minor (UM Care) Service is for unaccompanied minors to help them travel safely from the moment they board until they join their guardians at the destination.

Physically Challenged Customers

Customers with visual or hearing impairments can receive help from our special staff who can use sign language, and when necessary, are allowed to board with guide dogs. For customers with walking difficulties, our staff helps them move from check-in counter until they are seated on the airplane. In-flight wheelchairs are also available.

❸ In-flight

Flying Mom Service

The Flying Mom Service ensures that the UM feels at home during the flight. Offered for long-haul international flights 5 hours or longer, Korean Air's flight attendants take care of the in-flight conditions of the UM and write a letter describing the food the child ate, how they slept, their overall health and other general conditions of the UM to the guardians or parents at the destination. The service won the top prize in the in-flight service category at the Mercury Awards in 2007.

Customized Catering Service

Upon prior request, Korean Air provides special in-flight meals to customers with allergies or other customers who cannot eat normal in-flight meals for religious or age reasons. Special in-flight meals include infant/toddler meals, kids' meals, vegetarian meals, dietary meals (diabetes, low-salt, low-fat), religious meals and other special meals. Customers with health issues are provided with a dietary meal that is prepared on the consultation of medical and nutrition experts. Religious meals are for Muslims, Hindus and Jews.

HEALTH AND SAFETY OF CUSTOMERS

Korean Air has meticulous hygiene control of in-flight meals made from carefully selected ingredients. Our in-flight first aid service and prevention of spread of contagious diseases allow customers to enjoy healthy and pleasant travel.

Hygiene Control of In-flight Meals

In-flight meals require special attention from preparing, loading, storing and serving. Korean Air's in-flight meal catering center in Incheon was the first Korean catering service to win the HACCP (Hazard Analysis Critical Control Points) from the Korea Food & Drug Administration. From the purchase of ingredients to cooking, storing, setting, loading and cleaning, the center's state-of-the-art computerized system and facilities check food ingredients from different sources, accepting only those that have passed domestic and international hygiene standards as well as the company's own hygiene criteria. In 2008, Korean Air opened the Food Safety Research Center at Inha University, where experts with degrees in various fields of food safety monitor the safety of the company's catering service and the safety control of suppliers. These same experts also give HACCP training and run macrobiotic analysis tests, ensuring the highest level of safety for our catering service. Recently, we have been increasing the number of items we serve on airplanes. After having signed a partnership with organic food producers in 2006, Korean Air has been offering organic food in its catering service to first class and business class passengers, while increasing the portion of organic food in economy class dishes as well.

In-flight First Aid Service

Korean Air's aircraft carries medicines and medical equipment to respond to emergencies and our cabin crew members are given first-aid training on a regular basis. On the ground, our Emergency Medical Call System (EMCS) runs around the clock, providing medical advice in the event of in-flight emergencies.

Management of Contagious Diseases

We constantly monitor the outbreak of contagious diseases and collaborate with domestic and international authorities and organizations in the event of an outbreak of an infectious disease to prevent its spread via air travel. Our aircrafts are equipped with preventive kits for infectious diseases

Medical kit name	How to use
Emergency Medical Kit	A medical kit that contains supplies and equipment with which a simple operation can be performed. Airlines are required to carry emergency medical kits under the Korean Aviation Act and the US Federal Aviation Administration Act.
Automated External Defibrillator	A medical device used to restore a heart in an abnormal rhythm like ventricular fibrillation
First Aid Kit	A medical kit readily available to treat injuries such as bone fracture and burn
Medicine Bag	A container of medicines always carried by crew members to treat indigestion, stomachache or headache that are frequently observed in-flight

PRIVACY PROTECTION SYSTEM

In an information era where all data are digitized, managing information securely is extremely important. For this reason, Korean Air mobilizes all human and educational resources to safely protect customer information.

Efforts to Protect Customer Information

All of us at Korean Air make a concerted effort to protect customer information. In 2002, we established a department to exclusively deal with customer privacy protection and we assign privacy protection officers to departments that have access to customer information. Every Korean Air employee working at customer contact points is required to receive online customer privacy protection education regularly or as needed. In addition, we run hacking simulations on a regular basis.

Our privacy protection training covers all stages of customer data management from collection to removal and we ensure that employees, both domestic and overseas, who deal with customers' personal information, receive education on information security and privacy protection twice a year. We also train our employees regarding what they should be careful while using personal computers to raise awareness of security among employees and to protect privacy data to the maximum.

Korean Air also relays useful information on protecting personal information to other companies, as it serves in the vice-chairman position of the Korean Council on the Protection of Personal Information (KCPPI), a private organization established in 2010 for privacy protection. In 2005, we received the Information Security Management System (ISMS) certification, issued by the Korea Internet Security Agency (KISA), which is still valid. In 2012, Korean Air was selected as a business with privacy protection excellence by the KCPPI and received the Presidential Prize.

Privacy protection training for employees who have access to privacy information over the past three years (Unit: persons)

ENHANCEMENT OF SERVICE AND SAFETY

Operating an integrated safety management system to prevent aircraft accidents, Korean Air also complies with the international safety standards and conducts necessary employee training and monitoring.

Safety Committee & Meeting

Introduction of Safety Management System (SMS)

Korean Air's Safety Management System is an integrated management system used to systematically identify potential risks related to aircraft accidents in advance and make necessary improvements according to predefined organizations, roles, policies and procedures.

Korean Air introduced the safety management system in 2008 and became the first company in Korea to receive government certification. We take pride in the fact that we have remained free of any fatal accidents for 13 years since 1999. The average annual accident occurrence remained at 7 cases in the 1990s, but this figure decreased to 5 in the 2000s and to almost 1 since 2010 thanks to SMS technology.

SMS IT System, SafeNet

In October 2009, we consolidated previously dispersed safety functions into a web-based company-wide SMS IT system called SafeNet. SafeNet allows us to classify accidents, non-conformance issues and risk factors and develop measures to mitigate safety risks on a continual basis, thereby facilitating preventive and predictable safety management.

Preventive Safety Program, FOQA

Flight Operations Quality Assurance (FOQA) is a preventive safety program Korean Air uses to analyze collected flight data and diagnose risk elements. We have implemented an array of cutting-edge systems featuring advanced statistics techniques and 3D animation features in order to increase the accuracy of data calculations and analyses. We apply mitigating measures to the findings judged to be risky to reinforce flight safety. Analysis of flight data has been greatly instrumental not only in monitoring flight safety but also in improving aircraft maintenance quality and fuel efficiency, thus contributing to cost savings.

Korean Air Safety Management System (SMS)

Safety Confidential Reporting System, SCRS

Since 2000, Korean Air has provided all employees with access to Safety Confidential Reporting System (SCRS) in an effort to improve preventive safety management. Designed to detect and mitigate potential safety hazards at workplaces, the SCRS is run through voluntary reporting of employees. We streamlined the reporting process in June 2013 to encourage participation by employees and to promote a safety-oriented culture within the organization.

Safety Confidential Reporting System

Publication of SkySafety21 Magazine and Education

Korean Air promotes safety awareness across the organization through the publication of a safety magazine. Initially published as Flight Safety in 1990 and renamed as SkySafety21 in 2000, our safety magazine is issued four times annually. Along with rigorous safety and security activities, Korean Air is also educating its employees to achieve the highest level of safety quality.

Domestic and International Safety Quality Assessments

Each operational division of Korean Air has its own quality assurance program developed from the company-wide quality assurance program. We also develop and carry out inspection plans every year to ensure safe flights. Our aircrafts meet all 900 international safety guidelines, including those of the IATA Operational Safety Audit (IOSA). As a result, Korean Air became the first airline company in Korea to receive an IOSA certification from the IATA in January 2005, and has maintained the same certification through the renewal in October 2012.

In April 2009, we participated in the IATA Safety Audit for Ground Operations (ISAGO) program to conduct quality audit on overseas ground operators. Also as a member of the ISAGO Pool Advisory Group under the IATA, we cooperate and share information with other airlines and agencies in standardizing global safety standards, thus contributing to enhanced safety and operational quality of ground operators around the world.

The US Department of Defense has a safety certification program called the Airlift Transportation Program, which classifies available airlines for its employees and military personnel for business trips. The Air Carrier Survey and Analysis Team under the Commercial Airlift Review Board (CARB) runs a paper screening process every six months and pays visits to airliners for due diligence every two years. Korean Air passed all safety criteria in due diligence in July 2013, reinforcing its status as a safe airline.

Prevention of Security Accidents

Korean Air has strengthened its preventive security activities to preemptively protect its passengers and aircrafts from any illegal actions. To this end, we analyze security information on our travel destinations every month and issue aviation security alert levels for each airport we use. In the event of any security issues such as a terrorist attack, we quickly take the appropriate measures in collaboration with authorities at local branches and national security departments.

By sharing information with national security authorities, we are able to quickly develop countermeasures. We also participate in several international security organizations to analyze global security trends and benchmark best practices of other companies. The study results are used in establishing necessary security measures and preventing security accidents in advance.

In order to raise security awareness and make security part of corporate behavior, we provide security training to our employees regularly or as needed. In addition to this, we also provide special training to all employees in case major national events are held or security threats become heightened.

Drills to Enhance Crisis Readiness

Korean Air conducts drills in conjunction with government authorities to improve our crisis readiness. For instance, we conduct simulated drills such as "drills to prevent and respond to hijacking," in preparation for terrorist attacks, "drills to respond to security risks" and "drills with armed security guards on board" for prompt and appropriate response to security threats. We are also working hard to ensure safe flight operations, including through increasing security training of cabin crew members and equipping aircrafts with security devices, and remain vigilant against security threats to flight.

BALANCING ALTITUDE

HARMONY FOR EXCELLENCE

NO. OF KOREAN AIR'S BUSINESS PARTNERS IN 2012

Co-prosperity through collaboration, co-existence through sharing
Korean Air travels together with all its business partners for a better tomorrow

CSR Expenses in 2012

KRW **148** billion

As a responsible corporate citizen, Korean Air aims to prosper with local communities through sharing and volunteering domestically and globally.

No. of Business Partners in 2012

714

Korean Air operates a number of programs in support of its business partners, including payment in cash, reflection of changes in raw material prices, sales & leaseback program for expensive equipment, profit sharing, technical support, educational support and other programs.

Volunteer Hours per Employee in 2012

2.8 hours

22 volunteer groups, including Gonihoe and Seungwoohoe, at Korean Air help teenage household heads and provide free meals to elderly people living alone. They also arrange cultural and artistic events for underprivileged children on a regular basis.

Reforestation Project in Kubuqi Desert, China

1.05 million trees

Korean Air planted 1.05 million trees on a 341-hectare land in the Kubuqi Desert in China. We expect that the Korean Air Green Ecological Zone built on this land will greatly help reduce yellow dust storms that plague Korea every spring while promoting friendly relationships between Korea and China.

ether with its business
-win partnership, while
social responsibilities as
s a reliable supporter in
nment, culture and sports,
hard to create a warm-
ur neighbors."

Harmony for Excellence

Stakeholder Interview

"Korean Air leads the mutual growth with its business partners. Instead of just outsourcing work to suppliers, the company is also intent on promoting win-win partnership through mutual communication and feedback. This kind of behavior is having a positive impact on the business partners. I think that such a collaborative relationship will substantially contribute to the growth of SMEs and eventually to the development of the nation as a whole."

Kim Hyeong-sun, CEO, New Green

"For Korean Air to live up to its social responsibilities, it needs to maintain ceaseless communication with its suppliers as well as make efforts to procure local products. The company will effectively satisfy customers' right to know by marking the places of origin regarding ingredients of in-flight meals and at the same time contribute to the development of local economies by procuring local food and local specialties. By sincerely listening to local residents, the company will also be able to minimize noise and damage to local residents and local scenery around airports."

Seon Sang-gyu, Chairman, Gangseo-Yangcheon Federation of Environmental Movement

DMA

Stakeholder issues identified from materiality test	Priorities of Key Issues
Increased demand for fair competition and mutual growth	21
Growing importance of securing and managing a stable supply chain	24
Provision of job creation opportunities	33

● Trend (Impact on the organization) ● Impact(Impactonstakeholdersandsustainable development)

Performance Indicator

2012 Initiatives	2012 Achievements
Reforestation in Mongolia	335 volunteers comprising new employees of Korean Air and students from Inha University, Korea Aerospace University and Inha Technical College under the Foundation run by the Hanjin Group participated in the project

Vision

Under our belief that companies should share their profits with society in which they operate, Korean Air endeavors to fulfill its corporate social responsibilities.

Our Commitment

1 Recognizing our suppliers as our business partners to work and live together for common benefits, we will do our best to pursue trust-based mutual growth.
2 We will sustain solid growth through the efficient operation of company resources and contribute to the sound development and promotion of welfare of local communities.
3 Respecting and complying with laws, regulations, ordinances, customs and values of all countries and regions in which we operate, we will endeavor to disseminate these values within society, thereby contributing to the creation of a sound culture.

"Korean Air grows together with its business partners through win-win partnership, while faithfully fulfilling its social responsibilities as a corporate citizen. As a reliable supporter in education, the environment, culture and sports, Korean Air will work hard to create a warm-hearted society for our neighbors."

MUTUAL GROWTH

Mutual growth between large firms and SMEs is a prerequisite to a sustainable development in the rapidly evolving global market. Korean Air is reinforcing partnerships with its business partners to promote mutual growth and create profits together.

Korean Air's Mutual Growth Policy

01 Effective communication

- Operation of a portal (ISP) for business partners
- Regular meetings and seminars
- Satisfaction survey

02 Systematic management

- Selection of business partners
- Reflection of CSR levels of business partners in the selection process according to the company's procurement guidelines
- Fostering competent business partners
- Evaluation system, satisfaction survey

03 Various support programs

- Cash payment in full
- Alignment of payment to material price movement
- Sales & leaseback of expensive equipment
- Profit sharing
- Technical support, technical training

Korean Air operates ERP for company-wide resource management as well as iSP (Internet Supplier Portal) for business partners.

Selection and Management of Business Partners

Korean Air ensures fair and transparent procedures in the selection of business partners under company bylaws and procurement guidelines. We opt for bidding in principle when a number of companies apply at the same time and select business partners based on the total cost of ownership (TCO) methodology. We also consider business ethics, financial stability, employee education programs, safety and health at work, human rights and compliance with labor laws, acquisition of certifications relating to the environment, safety, quality and technology before making final decisions. Once selected, business partners become subject to evaluation and evaluation results are taken into account in future contracts and development of competent business partners.

Business partner evaluation process

Major Programs and Achievements

As of 2012, Korean Air operated a number of programs aimed for facilitating mutual growth and fair trade for its 714 business partners, including payment in cash for the whole amount of invoice and reflection of changes in raw material prices or foreign exchange rates in supply prices under the raw material price pegging system. We also purchased expensive equipment and leased them to business partners who were unable to afford such expensive equipment under the sale & leaseback program and shared profits earned from joint technology localization projects under the profit sharing program. Furthermore, we offered financial and technical support and subsidized overseas technology training to help our business partners build their competencies.

Major Mutual Growth Programs

- Payment in cash: Making payments in cash instead of notes for the whole amount invoice to help business partners improve liquidity
- Raw material price pegging: Reflecting changes in raw material prices and foreign exchange rates in supply prices
- Sales & leaseback of expensive equipment: Purchasing expensive equipment and leasing back to business partners
- Profit sharing: Sharing with business partners profits earned from joint development and the resultant cost savings
- Technical and training support

Communication Channels

Along with the enterprise resource planning (ERP) system implemented in 2009, we operate the iSP (Internet Supplier Portal) for our business partners. The portal allows them to check orders, storage, and payment information on a real-time basis and also make inquiries or suggestions. Korean Air's staff from procurement and other divisions regularly communicate with business partners to identify current issues and offer solutions. Particularly for aerospace business where close technical cooperation with business partners is essential, we make sure to meet with them regularly (twice a year or monthly) to understand their difficulties and suggestions worthy of note for mutual growth.

Overseas Local Procurement Policy

Korean Air makes purchases according to procurement procedures defined for each item. Our internal procurement guidelines also contain overseas procurement procedures such as things that should be considered, roles and the steps to follow when purchasing from abroad.

SOCIAL CONTRIBUTION

from

Sharing starts with planting small seeds. Korean Air's social contribution starts with every one of its employees making a small contribution to society.

Cultural Sponsorship

- Korean language service at three major museums
- Korean On-Air program
- Flying Art Ambassador
- Korean traditional food in catering service

Education

- Inha Academic Institute: Inha University, Inha Technical College, Inha Middle and High Schools attached to Inha University College of Education
- Jeongseok Academic Institute: Korea Aerospace University, Jeongseok Aviation Technical High School, Jeongseok University
- Global industrial-academic cooperation

Green Management

- Korean Air Green Ecological Zone at Kubuqi Desert, China
- Korean Air Forest in Baganuur, Mongolia
- Participation in the eco city development project in Songdo New Town
- Distribution of saplings on Tree-Planting Day

Sharing

Volunteering

- Small Donation Campaign
- Sky Love Bazaar
- Habitat for Humanity Campaign
- Breast Cancer Prevention Campaign
- One Company-One Village sisterhood
- Marketplace for Sharing
- Volunteer groups within Korean Air

Relief Efforts

- Transportation of relief supplies
- Relief activities

Sports Sponsorship

- Sponsorship of international sporting events
- Sponsorship of sports players (Excellence Program)
- Korean Air Table Tennis Team
- Korean Air Jumbos Pro Volleyball Team
- Korea's first Men's Speed Skating Team

Excellence in Flight
Excellence in Community

to

Seeds grow roots and branch out. Each branch bears lots of fruits of prosperity and love. Now, sharing brings bigger hope to our hearts.

Global Volunteering

Korean Air's Major CSR Activities

Activity	Description	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12
Habitat for Humanity	In partnership with Habitat Korea, Korean Air's employees and their families participate in building houses for homeless families (providing KRW770 million in construction expenses and 42 international air tickets up until 2011)												
Small Donation Campaign	All employees of Korean Air voluntarily donate money below KRW1,000 from their monthly paychecks and the company makes its contribution that matches the amount, which is then added to the fund for social contribution.												
Pink Ribbon Breast Cancer Prevention Campaign	Promotion of the Pink Ribbon campaign to passengers in October, the month of breast cancer prevention, distributing breast cancer self-check test cards												
Reforestation in Mongolia	Korean Air is creating an eco park by planting trees in Baganuur, Mongolia in collaboration with an NGO called Green Asia												
One Company-One Village Sisterhood	Provision of medical services and helping farmers every summer through sisterhood ties with a village Myeongdong-ri												
Sponsorship of Korean language service in major museums overseas	Replacement with audio guide devices that offer Korean language service at the Louvre, the British Museum and the State Hermitage Museum												
Aviation Medical Center's medical services	Medical volunteer service by medical personnel from Korean Air's Aviation Medical Center												
Sky Love Bazaar	Cabin crew volunteer groups Gonihoe (female) and Seungwoohoe (male) hold a bazaar with souvenirs and specialties from around the world and donate all proceeds to charities												
Invitation of underprivileged children to Jeju Island	Since 2010, we have invited children from low-income families of local communities in the vicinity of airports to a three-day trip to Jeju Island and to Korean Air's head office												
One Company-One Troop	Since June 2012, we have sponsored the Capital Division (Tiger) through sisterhood ties												

SHARING

Under the late founder Cho Choong-hoon's philosophy that companies should share their profits with society in which they operate, Korean Air is engaged in a number of social contribution activities.

CSR Expenses (Unit: KRW)

Volunteer Hours per Employee

Sharing Management

To fulfill its corporate responsibilities toward society and to be reborn as a respected company, Korean Air created a Social Service Office in 2004. All employees donate below KRW1,000 from their paychecks that goes towards a fund for social causes, with the company contributing equal amount as matching grants. 22 volunteer groups, including Gonihoe and Seungwoohoe, at Korean Air help teenage household heads and provide free meals to elderly people living alone. They also arrange cultural and artistic events for underprivileged children on a regular basis. Since 2001, we have actively carried out Habitat for Humanity program, One Company-One Village Sisterhood and Marketplace for Sharing programs.

Transportation of Disaster Relief Supplies

As an airline, Korean Air has been involved in quickly carrying relief supplies free of charge to regions stricken by disasters, including the 2004 Indian Ocean earthquake and tsunami, the 2005 Sumatra earthquake, the 2007 Taean oil spill in Korea, the 2008 Sichuan earthquake and other earthquakes in New Zealand and Japan, and the flood in Thailand in 2011.

In 2007, we set up a Disaster Relief Support Team charged with supporting rescue of human lives, arranging special freighters or ships and transporting relief suppliers to disaster-stricken areas at home and abroad.

Global Volunteering

Medical services for child patients around the world: In 2007, we sponsored the medical operation of children with cardiac diseases around the world in collaboration with Good People. Since 2008, we have also provided flight tickets and transport service to 18 local child patients as part of the Iraq Relief & Reconstruction Project.

Global volunteering by Seungwoohoe: A group of volunteers comprising cabin and cockpit crews have been visiting jungle villages in Penang, Malaysia to improve residential conditions and provide medical services since 2006. Our Yonhap Shinwoohoe is currently providing volunteer services in Gopeng, Malaysia; Didimdol/Sanasa in Bicol, Philippines; Yesarang in Baganuur, Mongolia and Share Love in Kkambo, the Philippines.

Love Program in China: To help underprivileged Chinese children study and live healthily, our Love Program volunteers build Korean Air Dream Library and donate PCs.

EDUCATION

Under the philosophy that the most valuable business in life is fostering talent, Korean Air has steadily invested in educational programs to raise talents who will lead the nation for many years to come.

Korean Air's Education Programs

Korean Air spares no effort in sponsoring universities and academic institutes in Korea. Korean Air has Inha and Jeongseok Academic Institutes under the Hanjin Group and is involved in various scholarship and academic programs through the Ilwoo Foundation. Over the past 10 years, we have donated KRW20 billion annually to the Group's academic institutes and in 2003, opened a top-class e-library Jeongseok Information Center at Inha University to foster future logistics experts. The library provides access to 1 million books and 3,200 reading rooms, playing an important role in raising logistics experts.

Hanjin Group

Inha Academic Institute

Inha University / Inha Technical College

Inha Middle School attached to Inha University College of Education / Inha High School attached to Inha University College of Education

Ilwoo Foundation

Domestic scholarship programs / Global scholarship programs

Overseas training for journalists / Academic research support programs

Jeongseok Academic Institute

Jeongseok University / Korea Aerospace University / Jeongseok Aviation Science High School

Jeongseok Graduate School of Logistics

Implementation of System for Logistics Talent Development

As a logistics firm, Korean Air has been concentrating on global industrial-academic cooperation. Soon after we established the Jeongseok Academic Institute in 1979, we acquired National Aerospace University and Korea Aerospace University, which served as a steppingstone for the company to grow into Korea's only company with an institute specializing in aerospace. Since we established Korea's first in-house college Jeongseok University in 1988, we have been raising a number of capable students. In 2006, we opened Jeongseok Graduate School of Logistics chosen as an institute specializing in logistics by the Ministry of Land, Transport and Maritime Affairs for the first time in Korea. Moreover, our top-class e-library Jeongseok Information Center carrying 1 million books and 3,200 reading rooms is considered as the center of logistics knowledge, allowing users to easily search the huge amount of data. We have also been active in facilitating global industrial-academic collaboration initiatives. For instance, we sponsored the construction of the Pratt & Whitney Institute for Collaborative Engineering (PWICE) at the University of South California (USC) and we also successfully lured Inha University, Korea Aerospace University, USC and Airbus into a 4-party industrial-academic collaboration.

THE ENVIRONMENT

After declaring its environmental philosophy to enrich people's lives through the harmony of the aviation industry and the environment, Korean Air has established a company-wide framework for environmental management and is carrying out various green management efforts in order to leave behind a greener world for our future generations.

Global Reforestation

Korean Air plants trees in the deserts of Baganuur in Mongolia to halt desertification caused by global warming. From 2004 to 2012, we planted 67,000 trees on a 31-hectare land. We have also planted 1.05 million trees on a 341-hectare land of the Kubuqi Desert in China since 2007. The Korean Air Green Ecological Zone to be created in this desert is expected to play a big role in reducing yellow dust storms as well as promoting friendly relationship between Korea and China. Since 2009, we have been taking part in the global initiative to make the urban area of Los Angeles greener, donating a total of USD160,000 to the Million Trees LA Foundation over the past four years. Other green initiatives Korean Air is currently undertaking or involved include the Songdo Green Urbanization project, the nationwide effort to register the volcanic isles and lava caves of Jeju as one of UNESCO Natural World Heritage sites and introduction of next-generation eco-friendly airplanes.

Distribution of Saplings on Tree-Planting Day

As part of eco-friendly management, crew members of Korean Air have been distributing flower seeds, radish sprouts, broccoli sprouts and pine seedlings to citizens in front of the company's building ahead of the Tree-Planting Day and on April 5 have provided flower seeds, sprouts and seedlings to passengers of domestic flights at the check-in counters since 1998.

Win-win Partnership with Stock Farmers through Purchase of Cattle that Didn't Sell

The Jaedong Ranch run by the Hanjin Group accepted the request to purchase calves that do not sell at livestock markets to help stock farmers suffering from falling cattle prices. The ranch plans to directly breed those calves purchased and parcel them out when cattle is needed by stock farmers in Jeju. Cattle raised by the ranch are supplied to Korean Air firs class, five-star hotels and department stores under a trademark Jaedong Korean Beef. The Jaedong Ranch plans to continue to buy cattle from failed auctions until cattle prices recover above production cost.

CULTURE AND SPORTS

As a global carrier, Korean Air sponsors a variety of cultural programs around the world. As an advocate of the positive energy that sports brings to society, Korean Air has been contributing to the development of sports in Korea for many years.

Cultural Sponsorship

Korean Air sponsors Korean language service at three world famous museums: the Louvre in Paris, the British Museum in London, and the State Hermitage in St. Petersburg. Started in 2008 with the sponsorship for the replacement of PDAs with new ones, the service has contributed to raising national pride and promoting Korean culture to the world. In recognition of this contribution, the Minister of Culture and Sports conferred an appreciation award on Korean Air. In March 2008, our flight attendants began providing a special introduction to world famous art galleries and museums during flights to Paris. Currently, special guide flight attendants trained for six months provide this service on routes to Paris, London, Amsterdam, and Madrid. Our flights bound to Incheon are also introducing Korea's famous attractions, such as the National Museum of Korea and the National Museum of Contemporary Art, Deoksugung to international passengers. We plan to expand this service to other global museums where Korean language service is not available while sponsoring additional cultural events. Meanwhile, we have also sponsored a number of international art exhibitions in Korea such as Van Gogh, Monet, Musee d'Orsay and Louvre and cultural festivals such as the 11th Bucheon Fantastic Film Festival.

Sports Sponsorship

Korean Air is contributing to boosting the nation's image and further developing Korean sports by officially sponsoring international sporting events such as the 2002 World Cup and other Olympic Games and Asian Games. In 2011, everyone at Korean Air made a concerted effort to win the bid to host the Winter Olympics in Korea. More recently, Korean Air signed an official sponsorship agreement for the 2014 Incheon Asian Games, which we expect to be an opportunity to further contribute to the promotion of sports in Asia and the stimulation of local economies.

Korean Air operates the Excellence Program, providing airline tickets to sports stars that have boosted national prestige. Paying attention to less popular sports such as table tennis and volleyball, we operate professional teams and spare no effort to help them get good performance at international games. Korean Air is also taking part in sponsorship programs in less developed countries to raise future sports stars. Korean Air will make continued efforts to bring the world together through sports sponsorship.

APPENDIX

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UN GLOBAL COMPACT

UN Global Compact

The UN Global Compact is a strategic policy initiative for businesses that are committed to aligning their operations and strategies through 10 principles related to the areas of human rights, labor, environment and anti-corruption. Korean Air joined the UN Global Compact in July 2007, believing that the core values of the Compact are in line with the company's commitment to business ethics, transparent management and corporate social responsibilities. Korean Air will continue to embrace and support the 10 universally accepted principles of the UN Global Compact, as listed below.

Principles

Human Rights

Principle 1: We support and respect the protection of internationally proclaimed human rights.
Principle 2: We make sure that we are not complicit in human rights abuse.

Labor

Principle 3: We uphold the freedom of association and the effective recognition of the right to collective bargaining.
Principle 4: We uphold the elimination of all forms of forced and compulsory labor.
Principle 5: We uphold the effective abolition of child labor.
Principle 6: We uphold the elimination of discrimination in respect of employment and occupation

Environment

Principle 7: We support a precautionary approach to environmental challenges.
Principle 8: We undertake initiatives to promote greater environmental responsibility.
Principle 9: We encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

Principle 10: We work against corruption in all its forms, including extortion and bribery.

Compliance with the UN Global Compact at Korean Air

Area	Principle	Related Activity	Reported Page
Human Rights	1 We support and respect the protection of internationally proclaimed human rights. 2 We make sure that we are not complicit in human rights abuse.	• Compliance with the UN Global Compact's 10 principles and International Labor Organization Conventions • Training on business ethics and sexual harassment prevention	28-29 12-13
Labor	3 We uphold the freedom of association and the effective recognition of the right to collective bargaining. 4 We uphold the elimination of all forms of forced and compulsory labor. 5 We uphold the effective abolition of child labor. 6 We uphold the elimination of discrimination in respect of employment and occupation	• Upholding the freedom of association and collective bargaining rights • No forced labor or child labor under stipulations as provided in the Korean Labor Standards Act and the ILO conventions. No case of violations. • Expanding female and disability employment • Hiring international talent without discrimination based on nationality, culture, or religion	28-33
Environment	7 We support a precautionary approach to environmental challenges. 8 We undertake initiatives to promote greater environmental responsibility. 9 We encourage the development and diffusion of environmentally friendly technologies.	• Strict compliance with GHG emissions regulations at all our business premises • Company-wide ISO 14001 certification • GHG Inventory System & GHG emissions reduction initiatives • Adopting cutting-edge, eco-friendly aircrafts and engines with higher fuel efficiency and less noise	42-58
Anti-Corruption	10 We work against corruption in all its forms, including extortion and bribery.	• Announcement of the Ethics Charter and compliance with the 10 principles of the UN Global Compact • Anti-corruption education • Whistleblowing program • Fair trade voluntary compliance program • Implementing compliance support program	12-13 38-39 68-69 72-73

AWARDS AND ASSOCIATIONS

2012 Awards

Category	Awards	Date
Economy	2012 The most trusted brand chosen by consumers	2012.01.17
	2012 Best brand chosen by consumers	2012.01.30
	2012 K-BPI – Ranked 1st in K-BPI in the airline category by the Korea Management Association (KMA)	2012.03.13
	2012 Korea's Top Brand Star in the airline category	2012.03.19
	Grand prize in the marketing category at the 2nd Global Marketing Awards	2012.03.22
	Topped the National Customer Satisfaction Index (NCSI) in the domestic and international airline categories	2012.04.03
	2012 National Brand Award	2012.04.04
	2012 Ranked 1st in the airline category at the Korea Best Brand Awards	2012.04.19
	2012 Service Marketing Awards	2012.04.27
	2012 The Most Beloved Brands in Korea	2012.05.17
	2012 National Competitiveness Awards	2012.05.31
	2012 Ranked 1st in the Global Customer Satisfaction Index in the air transport service category	2012.06.28
	Ranked 1ST in the Korean Standard-Service Quality Index (KS-SQI) in the airline category	2012.10.23
Society	2011 Special award in privacy protection	2012.02.16
	2012 Grand prize in the service category at the Plus Happiness CSR Awards	2012.03.07
	2012 Best HRD Award	2012.03.14
	2012 Named as the Most Respected Company in Korea	2012.05.11
	Korea's Great Work Place	2012.08.21
	Presidential award in recognition of contribution to the successful holding of the World Athletics Championship in Daegu	2012.08.31
	2012 Chosen among KOREA's top 30 CSR companies	2012.10.16
	Awarded the Best CSR Practice by Labor Union by the Ministry of Employment and Labor	2012.12.31
Environment	2012 Best Green Company	2012.10.26
	Green Reputation Awards for successful luring of the Green Climate Fund to Korea	2012.11.15

Associations and Memberships

Category	Association
Aviation	International Air Transport Association (IATA), Association of Asia Pacific Airlines (AAPA), SkyTeam, Korea Civil Aviation Development Association, Federation of Korea Aeronautics, Korea Aeronautical Engineers Association, Korean Society for Aeronautical & Space Sciences, Korean Association of Air and Space Law, Aviation Management Society of Korea
Economy	Korea Business Council for Sustainable Development, Business Institute for Sustainable Development of Korea Chamber of Commerce and Industry (KCCI), The Federation for Korean Industries, Korea Economic Research Institute, Korea Employers Federation, Korea Chamber of Commerce and Industry, The Federation of Economic Organizations, Korea-Japan Economic Association, Korea Listed Companies Association, Korea Exchange, Korea Customs Logistics Association, International Management Institute, Gangseo-gu Branch of KCCI, Korea International Trade Association, Pacific Economic Council (PBEC), Korea-U.S. Economic Council
Environment	Green Company, Business Council for Green Growth, Gangseo Business Group for Environmental Practices, Voluntary Agreement of the Aviation Industry on GHG Reductions
Society	Nanum Korea, Koran Council on the Protection of Personal Information, Gangseo-gu Scholarship Foundation, Gangseo Integrated Defense Conference, Korea Forum for Progress, Asia Society Korea Center, Korea-Mongolia Forum, Visit USA Committee Korea, Seoul International Forum, New Asia Research Institute, The Corps of Honorary Consuls in Korea, Korean Business Council for the Arts, Korea Management Association, Takamadonomiya Memorial Foundation, Tumen River Area Development Plan (GTI) BAC, Korea Support Committee for the International Vaccine Institute

GRI INDEX

● Full Reporting ◐ Partial Reporting ○ Not Reported ◯ N/A

Description			Category	Page	Reporting Level	Remarks
Strategy and Analysis	1.1	Statement from the most senior decision-maker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy	C	3	●	
	1.2	Description of key impacts, risks, and opportunities	B	3, 18-19, 22, 48-49	●	
Organizational Profile	2.1	Name of the organization	C	4	●	
	2.2	Primary brands, products, and/or services	C	4-6	●	
	2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures	C	4-6	●	
	2.4	Location of organization's headquarters	C	4-6	●	
	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	C	4-6	●	
	2.6	Nature of ownership and legal form	C	4-6	●	
	2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries)	C	4-6	●	
	2.8	Scale of the reporting organization	C	4-6	●	
	2.9	Significant changes during the reporting period regarding size, structure, or ownership	C	4-6	●	
	2.10	Awards received in the reporting period	C		●	
Report Parameters	3.1	Reporting period (e.g., fiscal/calendar year) for information provided	C	82	●	
	3.2	Date of most recent previous report (if any)	C	0	●	
	3.3	Reporting cycle (annual, biennial, etc.)	C	0	●	
	3.4	Contact point for questions regarding the report or its contents	C	0	●	
	3.5	Process for defining report content	C	0	●	
	3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers)	C	14-15	●	
	3.7	State any specific limitations on the scope or boundary of the report	C	0	●	
	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	C	0	◯	We have no subsidiaries that significantly affect comparability between organizations
	3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report	B		●	
	3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement	C	0, 18, 42-43	●	
	3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	C	0	●	
	3.12	Table identifying the location of the Standard Disclosures in the report	C	83-87	●	
	3.13	Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).	B	88-89	●	

● Full Reporting ◐ Partial Reporting ○ Not Reported ⊘ N/A

Description			Category	Page	Reporting Level	Remarks
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	C	10-11	●	
	4.2	Indicate whether the Chair of the highest governance body is also an executive officer	C	10	●	
	4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members	C	10-11	●	
	4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	C	11	●	
	4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance)	B	10-11	●	
	4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided	B	11	●	
	4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity	B	10-11	●	
	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	B	8-9, 12-13, 17, 27, 41, 61, 71,	●	
	4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles	B	10-11	●	
	4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance	B	10-11	●	
	4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization	B	20-21	●	
	4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	B	80	●	
	4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations	B	82	●	
	4.14	List of stakeholder groups engaged by the organization	C	14-15, 59	●	
	4.15	Basis for identification and selection of stakeholders with whom to engage	C	14-15	●	
	4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	B	14-15	●	
	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	B	14-15, 17, 27, 41, 61, 71	●	
Disclosure on Management Approach - Economic	EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	O	18-49	●	
	EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	O	48-49	●	
	EC3	Coverage of the organization's defined benefit plan obligations	O	28, 35	●	
	EC4	Significant financial assistance received from government	O		⊘	None
	EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation	X	34	●	
	EC6	Policy, practices, and proportion of spending on locally based suppliers at significant locations of operation	O	73	●	
	EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation	O	29	●	
	EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement	O	70-79	●	
	EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts	X	25	●	

● Full Reporting ◐ Partial Reporting ○ Not Reported ⊘ N/A

Description			Category	Page	Reporting Level	Remarks
Disclosure on Management Approach - Environment	EN1	Materials used by weight or volume	O	42	●	
	EN2	Percentage of materials used that are recycled input materials	O	42	●	
	EN3	Direct energy consumption by primary energy source	O	42	●	
	EN4	Indirect energy consumption by primary source	O	42	●	
	EN5	Energy saved due to conservation and efficiency improvements	X	57	●	
	EN6	Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives	X	50-53	●	
	EN7	Initiatives to reduce indirect energy consumption and reductions achieved	X	57	●	
	EN8	Total water withdrawal by source		42	●	
	EN9	Water sources significantly affected by withdrawal of water	X		⊘	We have no water sources significantly affected by withdrawal of water
	EN10	Percentage and total volume of water recycled and reused	X	42	●	
	EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	O		⊘	N/A
	EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	O		⊘	N/A
	EN13	Habitats protected or restored	X		⊘	N/A
	EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	X	46	⊘	N/A
	EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	X		⊘	N/A
	EN16	Total direct and indirect greenhouse gas emissions by weight	O	43	●	
	EN17	Other relevant indirect greenhouse gas emissions by weight	O	43	●	
	EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	X	50-53	●	
	EN19	Emissions of ozone-depleting substances by weight	O	43	●	
	EN20	NOx, SOx, and other significant air emissions by type and weight	O	43, 56	●	
	EN21	Total water discharge by quality and destination	O	43	●	
	EN22	Total weight of waste by type and disposal method	O	43, 57	●	
	EN23	Total number and volume of significant spills	O		⊘	We had no significant spills in the reporting period
	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	X		⊘	N/A
	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	X	58	●	
	EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	O	51-57	●	
	EN27	Percentage of products sold and their packaging materials that are reclaimed by category	O		⊘	We plan to start tracking this area beginning in 2015
	EN28	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations	O		⊘	None
	EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce	X		●	
	EN30	Total environmental protection expenditures and investments by type	X	46	●	

● Full Reporting ◐ Partial Reporting ○ Not Reported ◎ N/A

Description			Category	Page	Reporting Level	Remarks
Disclosure on Management Approach - Labor Practices and Decent Work	LA1	Total workforce by employment type, employment contract, and region	O	28-31	●	
	LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region	O	28-31	●	
	LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operations	X	28	●	
	LA4	Percentage of employees covered by collective bargaining agreements	O	38	●	
	LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements	O	38	●	
	LA6	Percentage of total workforce represented in formal joint management–worker health and safety committees	X	36	●	
	LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities, by region and by gender	O	36	●	
	LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	O	36-37	●	
	LA9	Health and safety topics covered in formal agreements with trade unions	X	36	●	
	LA10	Average hours of training per year per employee by gender, and by employee category	O	32	●	
	LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	X	32	●	
	LA12	Percentage of employees receiving regular performance and career development reviews, by gender	X	34	●	
	LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	O	30-31	●	
	LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	O	30	●	
	LA15	Return to work and retention rates after parental leave		30	●	
Disclosure on Management Approach – Human Rights	HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening	O		●	We plan to start managing this area beginning in 2015
	HR2	Percentage of significant suppliers and contractors that have undergone human rights screening	O		●	We plan to start managing this area beginning in 2015
	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	O	13	●	
	HR4	Total number of incidents of discrimination and corrective actions taken	O	28	●	
	HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights	O	38	●	
	HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	O	28	●	
	HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	O	28	●	
	HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations	X	12	●	
	HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	X		○	
	HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessment	O		●	We plan to start managing this area beginning in 2015
	HR11	Number of grievances related to human rights filed, addressed, and resolved through formal grievance mechanism	O		●	Of the four cases filed with the National Human Rights Commission of Korea, two cases were dismissed and two were resolved

● Full Reporting ◐ Partial Reporting ○ Not Reported ◎ N/A

Description			Category	Page	Reporting Level	Remarks
Disclosure on Management Approach – Society	SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities	O		◐	When we operate flights on new routes, we forecast demand for the routes and analyze their impact on local communities
	SO2	Percentage and total number of business units analyzed for risks related to corruption	O		●	Not managed currently. We plan to include this area in the future.
	SO3	Percentage of employees trained in organization's anticorruption policies and procedures	O	13	●	None
	SO4	Actions taken in response to incidents of corruption	O		◎	
	SO5	Public policy positions and participation in public policy development and lobbying	O	59	●	
	SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country	X		◎	Political contributions are prohibited under the Korean law
	SO7	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes	X		●	None
	SO8	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations	O		●	None
	SO9	Operations with significant potential or actual negative impacts on local communities	O	75, 78	●	We assess environmental impacts each year and take preventive actions with regard to risks facing each operation of business. There is no operation with significant negative impacts on local communities.
	SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities	O		●	
Disclosure on Management Approach – Product Responsibility	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	O		●	
	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	X		●	
	PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	O		●	We plan to start managing this area beginning in 2015
	PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	X		●	None
	PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	X	62-65	●	
	PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	O		●	Any promotional event or advertising for customers should receive prior advice by the department in charge under our internal fair trade voluntary compliance regulations
	PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship	X		●	None
	PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	X		○	
	PR9	Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services	O		●	None

Third-Party Assurance Statement

Introduction

The Korean Standards Association (KSA, the 'assurance provider' hereafter) was commissioned by Korean Air to perform an independent assurance engagement of the '2013 Korean Air Sustainability Report' (the 'Report' hereafter). KSA reviewed the evidence and validity of the data and achievements outlined in the Report as well as relevant systems in order to present independent assurance opinions. The responsibility for gathering, analyzing and organizing information used to prepare the Report as well as all the statements contained herein solely lies in Korean Air.

Independence

As an independent assurance provider, KSA does not have any interest in the entire business conduct of Korean Air other than performing this third-party assurance engagement of the Report. Furthermore, KSA is not related with Korean Air in a way to hamper its independence or pursue profit-making.

Assurance Standards and Level

KSA used the AA1000 Assurance Standard (2008) in addition to the GRI G3.1 guidelines and ISO 26000 to perform this assurance engagement. While adhering to the principles of inclusivity, materiality and responsiveness as requested by AA1000AS (2008), KSA conducted a 'moderate level' assurance engagement of reliability of the information contained in the Report.

Assurance Type and Scope

KSA conducted a Type II assurance engagement in accordance with AA1000AS (2008). This means that KSA examined the accuracy and quality of the statements made by Korean Air as well as the sustainability performance information contained in the Report in conformity with the AA1000AS (2008)'s principles. The scope of this assurance engagement spans from January 1 of 2012 to December 31 of 2012 and also includes a portion of information pertaining to the 1st half of 2013. As an assurance provider, KSA primarily focused on such systems and initiatives as sustainability management policies & goals, operations, standards and achievements of Korean Air during the reporting period. While KSA reviewed Korean Air's financial data concerning widely-defined economic performance as well as its environmental and social data, KSA's involvement in stakeholder engagement as an assurance provider was limited to the examination of Korean Air's materiality test process.

Assurance Methodology

KSA used the following methods to gather necessary information, materials and evidence relative to the assurance scope and to perform this assurance engagement.

- ▶ Investigation and analyses of media reports made in relation to Korean Air's sustainability management over the past four years
- ▶ Research of issues reported by relevant companies selected through the consultation with Korean Air
- ▶ On-site inspections of the Korean Air headquarters and interviews with Korean Air employees in charge of sustainability management and managers responsible for respective issues
- ▶ Review of the management systems and processes used to improve sustainability management performance and to prepare the Report
- ▶ Review of the consistency between Korean Air's financial performance data and the audit report as well as disclosure documents pertaining to the company's 2012 financial statements
- ▶ Follow-up review of internal documents and basic materials

Conclusions and Opinions [Assurance Principle/Process Perspective]

KSA reviewed the report draft and presented its feedback while the Report was modified if deemed necessary. KSA is not aware of any significant errors or inappropriate descriptions in this Report as a result of its assurance engagement. KSA also confirms that the Report satisfied GRI Application Level A+ requirements. KSA presents its findings concerning the 2013 Korean Air Sustainability Report as follows.

Inclusivity

• Has Korean Air included stakeholders in strategically responding to sustainability issues?

KSA believes that Korean Air is committed to engaging its key stakeholders in advancing sustainability management. Specifically, it is highly notable that the company disclosed its stakeholder-specific communication channels while conducting internal/external environmental analyses and online surveys to identify practical issues that interest its stakeholders. Nevertheless, the Report does not describe the process undertaken by the company to define and prioritize its stakeholder groups while the relatively smaller number of survey respondents (181 persons) compared to the total number of employees makes it difficult to ensure that the survey outcomes constitute a balanced representation of diverse opinions of the entire Korean Air staff. Therefore, KSA recommends that the company would categorize its stakeholders into key, strategic and environmental stakeholder groups and prioritize them as a way to gather their feedback and build trust consistently.

Materiality

• Has Korean Air included material information in the Report to assist stakeholders in making informed decisions?

KSA is not aware of any significant omissions or exclusions of information that is material to Korean Air stakeholders. Furthermore, KSA confirms that the company conducted relevance test of major stakeholder issues identified through such internal/external environmental analyses of media analyses, analyses of issues addressed by relevant companies and in-depth stakeholder interviews while reporting major information in accordance with materiality test results. Specifically, the company identified major issues in consideration of various internal/external environmental factors as well as through a systemized issue identification process while organizing the table of contents of this Report with an emphasis on those identified issues so as to stay focused on key issues in preparing this Report. KSA recommends that Korean Air establish a system to increase the share of issues that reflect the distinctive characteristics of the airline industry in the issue identification process and to ensure long-term management and reporting of highly material issues.

Responsiveness

• Has Korean Air appropriately responded to stakeholders' requirements and interest in this Report?

KSA believes that Korean Air is committed to integrating stakeholders' feedback into the Report so as to respond to their requirements and concerns. Specifically, the company operates systemized management systems concerning safety, which constitutes the top priority of its stakeholders, and such safety issues are addressed with utmost importance, which is demonstrated through the company's organizational structure and the significant role assumed by responsible departments. In spite of the outstanding safety performance, the Report fails to fully highlight these issues or to pinpoint the company's achievements regarding safety such as decreasing rates of safety accidents or accident-free operation over the past 13 years. Therefore, KSA recommends that Korean Air outline its philosophy, vision and policies concerning safety in its sustainability reports as a way to disclose its safety-related operation to stakeholders and ensure appropriate response to safety issues from the materiality perspective.

Part-specific Findings and Recommendations [Performance/Issue Perspective]

Korean Air may consider the following recommendations to lay the basis to develop company-wide sustainability management strategies and to ensure continued response to sustainability issues.

Economy

In the face of growing uncertainties over the company's profitability and financial stability due to continued economic slowdown in the freight transportation segment, it is highly appreciated that the company disclosed its organizational-wide strategic plans to respond to such concerns, which include the introduction of new aircraft models and the development of new routes and freight business opportunities. While Korean Air described a highly detailed risk management system through the Report, which classified risks into financial and non-financial risks, it is recommended that the company would also disclose concrete initiatives undertaken and achievements made in its future reports.

Environment

Climate change is a major global environmental issue while energy constitutes a highly material issue to airline companies such as Korean Air, along with cost risks. As such, it is noteworthy that the company considers climate change as its top priority and presents various achievements while describing its environmental management goals and related attainments. To further improve on its environmental performance, however, KSA recommends that Korean Air undertake 'quantitative indicator management' and 'QA/QC initiatives required for data management'.

Society

Korean Air's 'Voice of Customer' service, which enables its CEO to directly review and address customers' feedback, demonstrates that customer services are considered as a highly material issue at the company while the UN (unaccompanied minor) Care Service and the Flying Mom Service are highly remarkable social contribution initiatives as they were launched in the company's distinctive business area. KSA believes that the company will benefit from focusing on major social-giving accomplishments during the reporting period rather than outlining all of its social contribution initiatives in a simple chronological manner so as to present a detailed picture of its social contribution endeavors and improve the reliability of such achievements.

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Licensed Assurance Provider
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Chang Ryong Kim

Aug. 9, 2013

Chang-Ryong Kim Chairman and CEO, Korean Standards Association

The Korean Standards Association (KSA), established as a special corporation in accordance with the Law for Industrial Standardization in 1962, is serving as a knowledge service provider who distributes and disseminates such services as industrial standardization, quality management, sustainability management, KS certification and ISO certification. KSA is committed to the sustainable development of Korean society as an ISO 26000 national secretary, recognized GRI training partner, AA1000 assurance provider, KSI(Korea Sustainability Index) operator, UN CDM DOE(development operational entity), and assurance provider of the Korean government's greenhouse gas energy target management system.