

Significance of Korea's Aviation Organization Development

KIM Je-chul, PARK Jin-seo,
SHIM Ga Ram, and YOO Hanjun



Korea's Best Practices in the Transport Sector

**Significance of Korea's Aviation
Organization Development**

KOTI Knowledge Sharing Report: Korea's Best Practices in the Transport Sector

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KOTI Knowledge Sharing Report

Korea's Best Practices in the Transport Sector

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Preface

Korea has achieved phenomenal growth over the past 40 years based on its consistent construction of transport infrastructure such as roads, railways, airports, and ports. The nation has continued to expand transport infrastructure while implementing its Five-Year Economic Development Plans. It even introduced a special account designed to facilitate the installation and maintenance of transport facilities. Such a development scheme, which made it possible for Korea to attain the status of a developed country, is now being closely watched by the world.

Korea has turned itself into an aid donor after being a recipient of international aid until the 1990s. This has not only promoted Koreans' self-esteem but enhanced the nation's image in the global community, particularly among developing countries. Korea is now providing aid to countries in Africa, the Middle East, and South America as well as within Asia. The scope of support is also expanding to cover economic development planning and various other areas such as planned city construction, infrastructure expansion, and policy consultation.

Recently, numerous developing countries are showing a keen interest in the development of transportation in Korea. Equipped with the world's highest level of information and communications technology, Korea continues to build up its intelligent transportation systems. It has also reformed its public transport system including bus rapid transit, a convenient transfer scheme, and transit cards that provide nationwide multimodal compatibility. Other prominent achievements include the development of domestic technologies for high-speed rail systems and the operation of a world renowned international airport. As such, Korea is considered to be a

role model by a growing number of developing countries.

Meanwhile, the development of air transport in Korea has been made through unremitting efforts by the government, aviation authorities, and airlines. As a result of continuous effort, the nation's air transport industry became sixth in the world and enjoyed five consecutive advances to become an ICAO Part III member. This book covers comprehensive administrative organizational structure changes within the air transport industry in Korea.

This publication represents our determination to share Korea's precious experience and know-how with numerous countries, thereby laying the foundation for creating new values in the global era.

LEE Chang Woon
President
The Korea Transport Institute

Introduction



Chapter

01

Global aviation trends towards liberalization, deregulation and privatization are causing increasingly fierce competition within the international air transport industry. To tide over the relevant difficulties, every nation is trying to improve the competitiveness of their aviation industries and airports. Korea is no exception. The nation has implemented various aviation policies, which led to changes in the structure of the administrative organization of aviation.

The aviation-related administrative system in Korea is based on division of roles between the central government and specialized agency. The government has kept reducing its functions while maintaining its role in presenting major policies and directions. Policy execution and the implementation of regulatory measures have been carried out by dedicated organizations affiliated with the government. In particular, the government has established a separate organization devoted to safety regulations in order to ensure efficient implementation of pertinent regulatory measures that require professional expertise. Additionally, it is reinforcing the functions of agencies related to international affairs in an effort to facilitate cooperation with other countries in the field of aviation. Pushing for deregulation and

privatization, the government is shifting its focus from direct regulations to oversight designed to ensure fair transactions.

This study reviews Korea's administrative and organizational systems related to airports, aviation safety and security, and air transportation. It also examines the possibility of pursuing appropriate organizational reform in response to changes in the aviation environment.

First, this study reviews the history of the nation's aviation-related administrative and organizational structures from 1946 up to the present. It can be summed up as follows; After Korea's liberation from Japanese colonial rule in 1945, administrative control over aviation was initially under the jurisdiction of the U.S. Army. It was turned over to the Ministry of Transport that was launched with the establishment of the Republic of Korea in 1948. In 1994, the ministry merged with the Ministry of Construction to become the Ministry of Construction and Transportation. The government carried out the merger, citing the need for a small government as well as for resolution of traffic problems. In 2008, the ministry was reorganized into the Ministry of Land, Transport, and Maritime Affairs (MLTM), being charged with additional missions for managing national land and maritime resources as well as the nation's economic infrastructure. In 2013, the ministry was restructured to become the Ministry of Land, Infrastructure and Transport (MOLIT), with its maritime affairs-related functions turned over to the Ministry of Oceans and Fisheries.

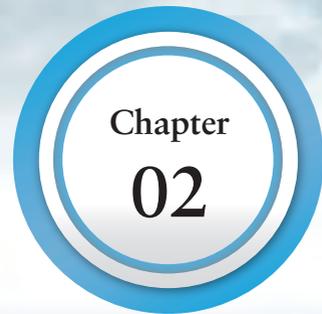
Second, this study examines the organizational changes made since the 1980s in relation to airport construction and operation systems. For some years after national liberation, most of the nation's airfields were under the control of the U.S. Army and the Air Force. Administrative jurisdiction over the airfields was turned over to the Ministry of Transport in 1948 upon the establishment of the Republic of Korea. Later, the International Airport Authority was founded for effective operation of international airports. Eventually, it was restructured into two organizations – the Korea Airports Corporation and the Incheon International Airport Corporation. These two corporations are in charge of the management and operation of the nation's

airports (excluding military airports). In the 1980s, the nation saw a sharp rise in air traffic demand and rapid expansion of the aviation industry. These developments prompted the government to implement airport development projects. Consequently, Incheon International Airport has established itself as a major hub airport in Northeast Asia. Its success has been based on its excellent geographical location, advanced infrastructure, and extensive government support. The airport has achieved stellar performance, which earned it the honor of being rated the world's best for nine years in a row in a global assessment of airport service quality.

Third, this study reviews the changes made in the organizational structure since 2000 with respect to aviation security. Accident and emergency countermeasures had been the focus of Korea's aviation safety policies until the nation underwent the ICAO aviation safety and security audit in the 2000s. The audit provided an opportunity for Korea to overhaul its aviation safety policies. The government thoroughly prepared for the audit, revising the pertinent laws such that they met international standards, establishing an independent aviation safety organization, and ensuring organic cooperation among the relevant government ministries. As a result, Korea achieved near-perfect scores in terms of implementing international standards, in the second ICAO aviation safety audit.

Fourth, this study reviews the organizational changes made in relation to the operation of air transportation since 1988. In the 1980s, the nation saw a rapid rise in air traffic demand, following the liberalization of overseas travel and the hosting of the 1988 Olympics. In an effort to meet the growing demand for air travel, the government gradually lifted restrictions imposed on the domestic aviation industry. To ease entry restrictions in the aviation industry, the government changed the air transportation licensing system, and overhauled the airfare structure and the traffic rights allocation scheme. It also increased its support for low-cost airlines.

Development of the Korea's Aviation Organization



Section 1

Inception and Early Growth (Ministry of Transport: 1948-1993)

The history of aviation administration in Korea dates back to 1946 when the Transport Department was established under the U.S. Government, which was ruling the southern half of the Korean Peninsula after Korea's liberation from Japanese occupation. On Nov. 4, 1948, the department was reorganized into the Aviation Division within the Ministry of Transport's Facilities Bureau under the first Republic of the Korea government.

In April 1963, the ministry established the Aviation Bureau, citing the need to cope with civil aviation expansion and operational complexity involving military and civil aviation.

In 1972, new divisions – aviation policy, air navigation, facility, communications, and electronics – were established within the Aviation Bureau. Responding to the growing importance of international affairs, the ministry set up the International Affairs Division in 1979.

Mature Growth, a Leap Forward and Rapid Changes (Ministry of Construction and Transportation: 1994-2007)

The government revised the Government Organization Act in December 1994, merging the Construction Ministry and the Transport Ministry to inaugurate the Ministry of Construction and Transport. The merger was designed to realize a small government, tackle traffic problems, and ensure effective infrastructure investment and operation. In 1995, the ministry dissolved the Airspace Division at the Seoul Regional Aviation Administration, and increased the number of air traffic controllers.

In the ministry's 1998 organizational reshuffle, six divisions were established within the Aviation Bureau: aviation policy, aviation safety, air traffic management, aviation technology, aviation facility, and international aviation. The restructuring led to the creation of 17 divisions at the Regional Aviation Administration: general affairs, accounting, security, air navigation, air traffic management, flight communications operation, airworthiness, inspection 1, inspection 2, civil engineering, architecture and equipment, electronics, electricity, management, facility, air traffic management, and oversight. The divisions within the Area Control Center were realigned into five categories: management, communications electronics, airspace, air traffic control, and aviation information.

In 1999, the ministry realigned the functions of some divisions and affiliated organizations, and changed their names. Within the ministry, the Aviation Technology Division and the Aviation Facilities Division were renamed the Air Navigation Technology Division and the Airport Facilities Division, respectively. The Air Traffic Control, Aviation Inspection, and Aviation Facilities Bureaus of the Seoul Regional Aviation Administration were also renamed Air Traffic Communications, Aviation Safety, and Airport Facilities Bureaus, respectively. Branch offices were established at regional airports (Sokcho, Gangneung, Wonju, Gunsan, Cheongju, Jeju, Yeosu, Ulsan, Mokpo, Daegu, Yecheon, Pohang, Gwangju and Sacheon).

In 2001, the ministry carried out an organizational reshuffle aimed at intensifying its functions related to aircraft safety. The restructuring led to the dissolution of the Aviation Safety and Navigation Technology divisions under the Aviation Bureau, and the creation of new divisions: Air Navigation, Airworthiness, Certification Management, and Accident Investigation.

With the enforcement of the “Aviation Safety and Security Act” in 2002, the ministry’s Aviation Bureau took charge of affairs related to aviation safety and relevant technologies. In August 2002, the ministry established the Aviation Safety Headquarters, which was charged with the mission of preventing illegal activities within airports, navigation safety facilities, and airplanes, and ensuring the safety and security of civil aviation, in accordance with international conventions like the Convention on International Civil Aviation. The ministry placed regional aviation administrations under the control of the headquarters, thereby realigning the aviation-related organizational and administrative system.

In June 2006, the government merged the Aviation Accident Investigation Board with the Railway Accident Investigation Board, launching the Aviation and Railway Accident Investigation Board.

Stable Growth

(Ministry of Land, Transport and Maritime Affairs: 2008-2012)

In February 2008, the Ministry of Construction and Transport was replaced with the newly created Ministry of Land, Transport and Maritime Affairs (MLTM). This move was designed to more effectively implement national development projects by combining land/marine resources, development, and economic infrastructure support functions. The new ministry was established through integration of the Ministry of Construction and Transport with some segments of other ministries: the Ministry of Maritime Affairs and Fisheries (that handles maritime affairs, port construction, marine logistics, marine environment, and maritime police) and the Ministry of Public Administration and Autonomy (in charge of cadastral management and real estate information management).

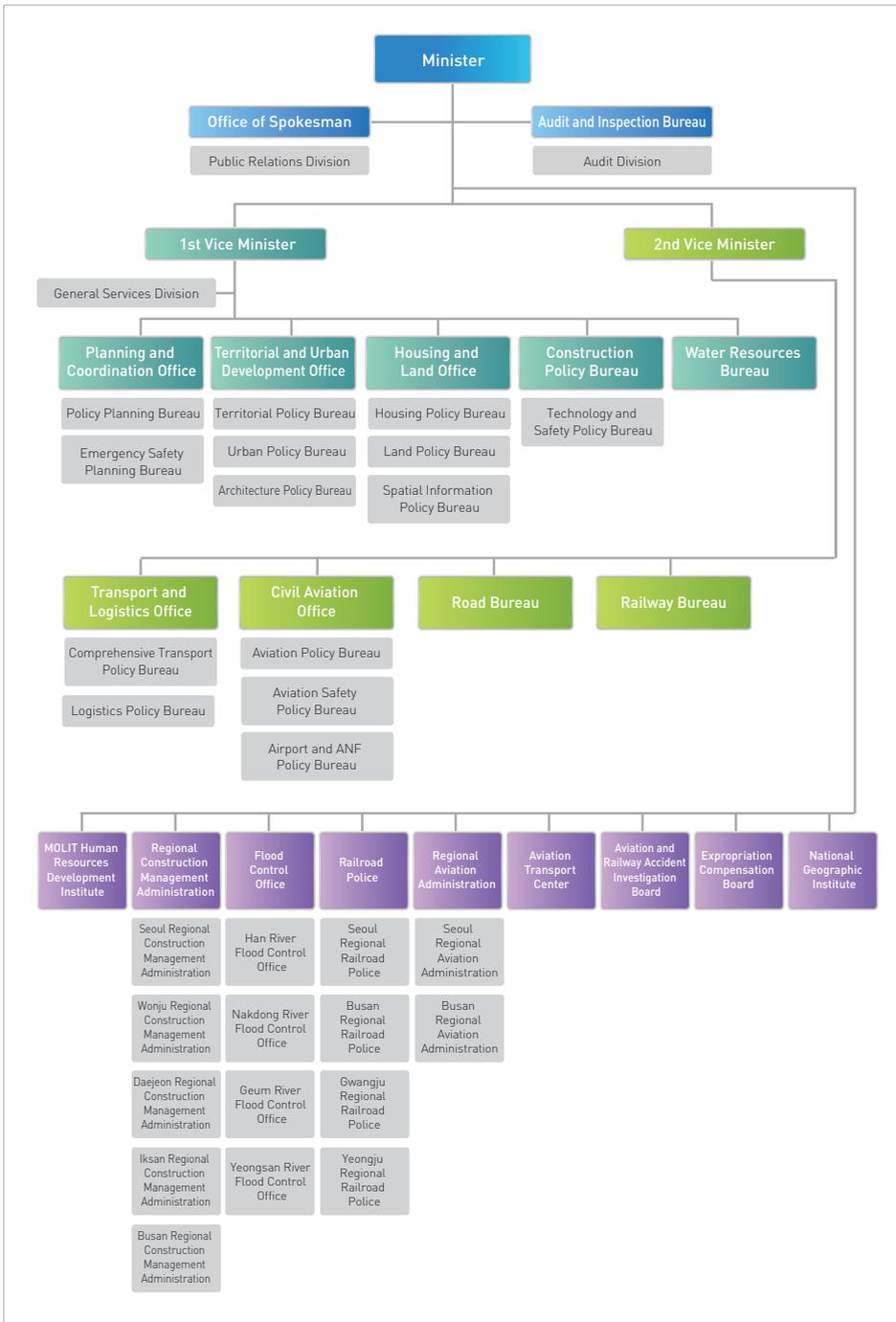
In May 2009, MLTM realigned its organizational structure for effective execution of national policy tasks, creating the Aviation Policy Office. The Aviation Safety Headquarters was abolished, with its main functions transferred to the Aviation Policy Office.

Section 4

A Second Leap Forward **(Ministry of Land, Infrastructure and Transport: 2013-Present)**

In March 2013, MLTM was reorganized into the Ministry of Land, Infrastructure, and Transport (MOLIT). MLTM's ocean-related functions (except for those related to marine logistics, ports, and marine environment) were transferred to the Ministry of Oceans and Fisheries (formerly called the Ministry of Maritime Affairs and Fisheries). MOLIT was given the mission of ensuring future-oriented management of national land resources and building safe and convenient infrastructure and transport networks. It is composed of five offices, four bureaus, 16 sub-bureaus, and 80 divisions under the control of the minister and two vice ministers (with a total of 956 staff members).

Figure 2.1 MOLIT organization



Construction of Airports and Changes in their Operation Structure



Section 1

Overview of Airports

Korea has the following 15 airports: Incheon International Airport, which is the nation's biggest hub airport; five regional hubs in Gimpo, Jeju, Gimhae, Daegu and Cheongju; and, nine regional airports.

Domestic flights are concentrated on routes to Gimpo and Jeju, while international services are handled mostly at Incheon International Airport and the regional hub airports. Currently, international air services are available at eight airports: Incheon, Gimpo, Jeju, Gimhae, Cheongju, Daegu, Yangyang, and Muan. The other seven airports – Gwangju, Gunsan, Yeosu, Pohang, Sacheon, Ulsan, and Wonju – are purely for domestic flights.

Overall, Korea's airports are maintaining operational profits. In order to ensure the operation of airports as public utilities, deficits of some airports are covered by the transfer of revenue from other airports in order to maintain profits.

Air traffic demand at regional airports serving inland routes has decreased due to the opening of the high-speed railway system and the advances of other modes of transport. In contrast, demand for international flight services has kept expanding due to growth in people's income, increase in leisure activities, and development of globalization policy.

Figure 3.1 An aerial photo of Incheon International Airport



Figure 3.2 Gimpo Airport



Section 2

Airport Development Process

1. Inception Stage (1950s-1970s)

After Korea was liberated from Japanese colonial rule, most of its airfields were placed under the administrative and operational control of the U.S. Military and Air Force. Jurisdiction over the airfields was turned over to the Ministry of Transport in 1948, when the Republic of Korea's government was established. In 1958, the functions of Yeouido International Airport were transferred to the newly opened Gimpo International Airport. Three years later, jurisdiction over Yeouido Airport was handed over from the Air Force to the Ministry of Transport.

2. Growth Stage (1980s-1990s)

In the 1980s, with sharp increases in air traffic demand and the rapid expansion of the aviation industry, it became necessary to operate international airports in a specialized manner. This led to discussion on airport privatization and the enactment of the International Airport Authority

Act.

Pursuant to the law, the International Airport Authority was launched in May 1980, charged with the mission of ensuring effective management and operation of airport facilities as well as facilitating air transport. Upon its inauguration, the International Airport Authority took over the operation of Gimpo International Airport. It then took the operational control of Gimhae International Airport and Jeju International Airport in 1983 and 1985, respectively.

In June 1990, the authority, which was renamed the Korea Airports Authority, assumed operational control of regional airports.

Domestic air travel opportunities were expanded as Gunsan Airport began to provide civil aviation services in 1992. Wonju Airport and Cheongju International Airport followed suit in 1997.

Expansion of the Korean economy following the 1988 Seoul Olympics resulted in a significant rise in international passenger air traffic. Aware that Gimpo International Airport could not meet the growing demand, the government started a project to build a large ultra-modern international airport on Yeongjong Island in Incheon.

3. Stage for a Leap Forward (2000-)

Pursuant to the Incheon International Airport Corporation Act enacted in 1999, the Metropolitan New Airport Construction Authority was renamed the Incheon International Airport Corporation. The airport opened in March 2001, after more than 10 years of construction work that began with basic design planning in November 1990.

Pursuant to the Korea Airports Corporation Act enacted in 2002, the Korea Airports Authority was renamed the Korea Airports Corporation. Currently, the corporation is in charge of the operation of 14 airports, the Airway Facilities Department, the Civil Aviation Training Center, and 10 aeronautical radio navigation service stations.

Airport Policy and Organizational Structure

Until the 1970s, the management and operation of airports was under the control of the Regional Aviation Management Bureau under the Transport Ministry.

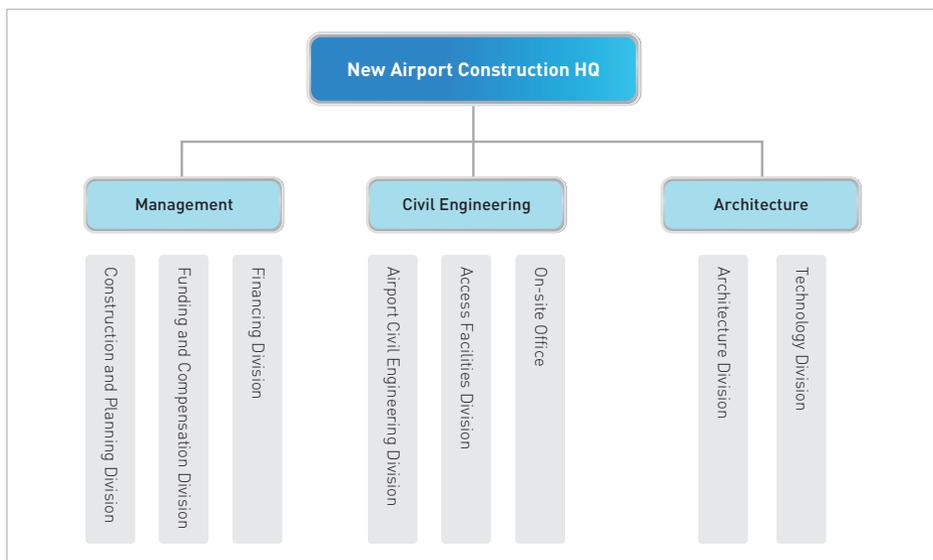
Korea's domestic airline network began to be expanded through the privatization of the Korean Airline Corporation in 1969. Consequently, the need arose for the establishment of a new airport operation system in the mid-1970s.

In the 1980s, the government launched the International Airport Authority to oversee the management and operation of Gimpo International Airport.

With the nation's economic growth, air travel demand began to rise sharply. In response, in 1984 the government started a project to build an international passenger terminal (presently the second international passenger terminal) and expand the apron at Gimpo International Airport. Later on, the International Airport Authority took over regional airports and it was renamed the Korea Airports Authority.

Korea successfully staged the 1988 Seoul Olympics and lifted restrictions on overseas travel in 1989. Combined with the nation's continued economic growth, these developments led to a significant rise in demand for air traffic. It was predicted that the capacity at Gimpo International Airport would

Figure 3.3 New airport construction HQ organizational chart



Source: Korea Airports Corporation, 2005.

soon reach its limits. In order to expand the nation's overall airport capacity, the Korea Airports Authority established the New Airport Construction Headquarters¹ in 1992 and started phase one of construction work for the new airport. Since the establishment of the Aviation Division under the Ministry of Transport in 1948, the state has been in charge of the construction and operation of airports - a crucial component of the nation's infrastructure facilities. Still, MOLIT is in charge of airport construction, except for the case of Incheon International Airport.

1. Airport Development Projects

To cope with changing aviation environments and growing demand for air traffic, the government began to pursue new airport development policy.

1) In 1990, the New International Airport Construction Task Force was launched at the Ministry of Transport. In 1991, the Korea Airports Authority was selected as the chief organization responsible for new airport construction, through amendment of the Korea Airports Authority Act.

Table 3.1 Airport development process

Phase	Execution Procedures	Contents
Phase 1	Formulation/public notice of an airport development plan (MOLIT)	(All airports) Establish a basic mid to long-term airport development plan through consultations with relevant central government agencies (Article 89 of the Aviation Act), and publish it in the government gazette (Article 91 of the Aviation Act) (Individual airports) Establish an airport development basic plan through consultations with relevant central government agencies (Articles 89 and 90 of the Aviation Act), and publish it in the government gazette (Article 91 of the Aviation Act)
Phase 2	Formulation/change/public notice of the execution plan (regional aviation administration)	Formulate/change/publish the airport development execution plan through consultations with heads of pertinent administrative organizations (Article 95 of the Aviation Act)
Phase 3	Land and obstacle compensation (regional aviation administration)	Implemented pursuant to the Act on Appropriation of and Compensation for Land for Public Projects, mostly by local governments to which the pertinent authority is delegated
Phase 4	Project supervision covering the process of order placement, contract signing and construction completion (regional aviation administration)	Public Procurement Service contracts worth 3 billion won or more are subject to supervision, pursuant to the law regarding contracts involving the government (Procurement Projects Act)
Phase 5	Airport opening following publication of public notice regarding its use (regional aviation administration)	Issued pursuant to Article 77 of the Aviation Act

Source: Board of Audit and Inspection, *A Report on the Status of Airport Expansion Projects*, 2004.

On April 19, 1994, the Ministry of Transport announced the first framework plan for developing the nation's airports. Based on the Aviation Act, the plan was designed to provide guidelines for devising financing schemes and specific action programs for individual airports.

The plan, called the 1st Basic Plan for Mid- to Long-Term Airport Development, represented the completion of the nation's framework scheme for developing its airports. The government came up with the plan in an effort to support the domestic air transport industry which was making progress at a remarkable pace.

The 2nd Basic Plan for Mid- to Long-Term Airport Development was announced in December 2000, when the nation was actively executing airport expansion and development projects. The government suffered difficulties related to the projects, due to changes in aviation-related environments at home and abroad.

In November 2006, the government released the third airport

development plan, with a revised title of “Comprehensive Plan for Mid- to Long-Term Airport Development.” During the third plan period, the expansion projects for most of the regional airports were completed. However, development programs for some airports were cancelled.

The 4th Comprehensive Plan for Mid- to Long-Term Airport Development was announced in January 2011. By then, the nation had secured sufficient airport facilities through the implementation of the three previous airport development plans. So, it was focused on ensuring systematic and operational efficiency of airports.

The central government has ownership of airports, which are state properties, while airport corporations are entrusted with the authority to take control of airport investments and operation.

2. Airport Administrative System within MOLIT

MOLIT has the following airport-related divisions under the Airport and ANF Policy Bureau of the Civil Aviation Office.

Airport Policy Division

- Formulation of airport policies and airport management plans
- Management of the third-phase of the Incheon International Airport Project and the Gimpo Airport construction project

Airport Safety Environment Division

- Airport safety, airport noise, height restrictions around airports, and facility management
- Enactment and amendment of laws to support areas affected by airport noise, and improvement of relevant systems
- Airport safety environment
- Airport certification inspection

Air Navigation Facilities Division

- Policies on air traffic safety facility installation and operation, and air navigation-related R&D

3. Airport Operators

Originally, Seoul and Busan regional aviation administrations were in charge of the operation of airports. They were responsible for the following affairs: airport expansion, repair and maintenance, management of aircraft movement areas, parking lot management, navigation safety control, airport security control, and state property management. Eventually, the right to

Figure 3.4 Seoul Regional Aviation Administration organizational chart

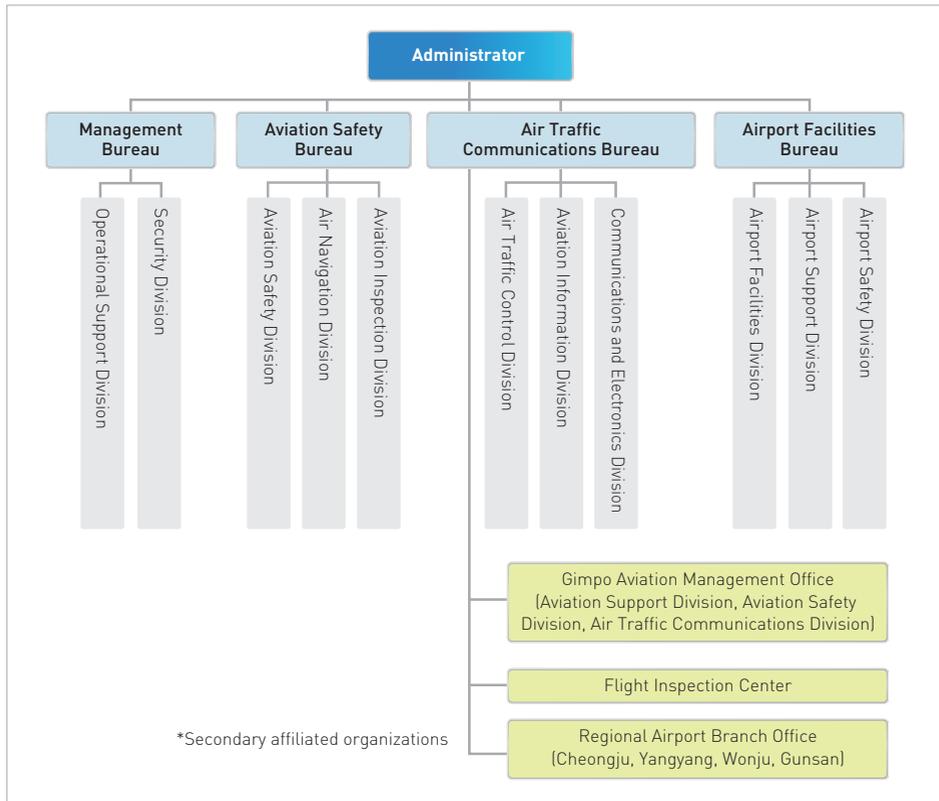


Figure 3.5 Busan Regional Aviation Administration organizational chart

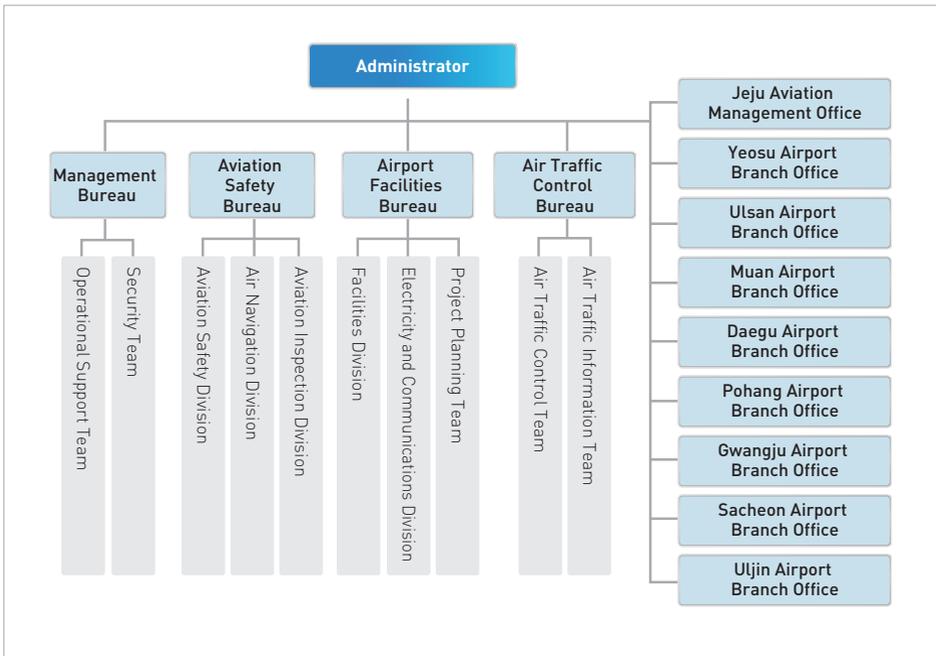
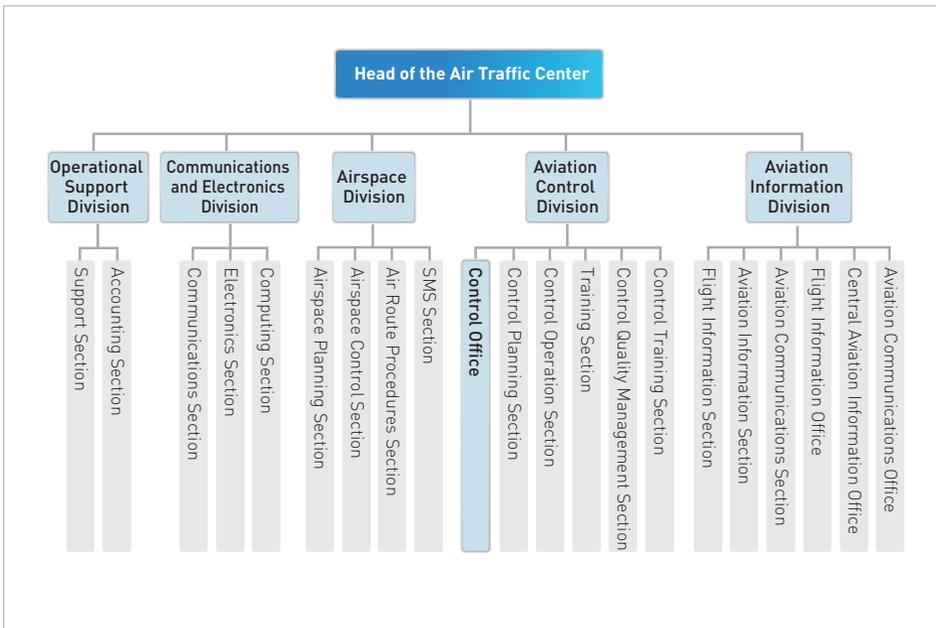


Figure 3.6 Air Traffic Center organizational chart



operate the airports was handed over to the Korea Airports Corporation.

The Korea Airports Corporation has since been in charge of the following affairs: repair/maintenance of airport facilities, expansion of facilities based on approval of the MOLIT minister, management/operation of navigation facilities, management/operation of aviation lighting facilities, management/operation of marker beacon facilities, passenger services, and noise management.

Table 3.2 Airport operation by year

Year	Operational organization	Airport
1948	Aviation Division under the Transport Ministry's Facilities Bureau	Each domestic airport
1961	Seoul Regional Aviation Management Bureau (Present Seoul Regional Aviation Administration)	Gimpo, Sokcho, Gangneung airports (in areas north of Daejeon)
	Busan Regional Aviation Management Bureau (Present Busan Regional Aviation Administration)	Gimhae, Jeju, Gwangju, Daegu, Yeosu, Sacheon, Pohang, Ulsan, Yecheon airports (in areas south of Daejeon)
1980	International Airport Authority	Gimpo International Airport's operational right handed over to the authority (July 1980) Gimhae International Airport's operational right handed over to the authority (May 1983) Jeju International Airport's operational right handed over to the authority (September 1985)
1990	Korea Airports Authority	Gwangju, Daegu, Yeosu, Sokcho, Gangneung, Sacheon, Pohang, Ulsan, Yecheon airports
1999	Incheon International Airport Corporation	Incheon International Airport
2002	Korea Airports Corporation (Previously International Airport Authority)	Gimpo, Jeju, Yangyang, Muan, Gimhae, Daegu, Cheongju, Ulsan, Yeosu, Gwangju, Sacheon, Pohang, Gunsan, Wonju airports

Source : MLTM, *Research for Formulation of the 2nd Basic Plan for Mid- to Long-Term Airport*, 1999.

Table 3.3 Airport operators

Operators		International airports	Domestic airports	Total
Incheon International Airport Corporation		Incheon	-	1
Korea Airports Corporation	Civilian airports	Gimpo, Jeju, Yangyang, Muan	Ulsan, Yeosu	6
	Military airports	Gimhae, Daegu, Cheongju	Gwangju, Sacheon, Pohang, Gunsan, Wonju	8

Source: Korea Civil Aviation Development Association, *Aviation Yearbook*, 2010.

In 2002, the Korea Airports Authority was renamed the Korea Airports

Figure 3.7 Korea Airports Corporation organizational chart

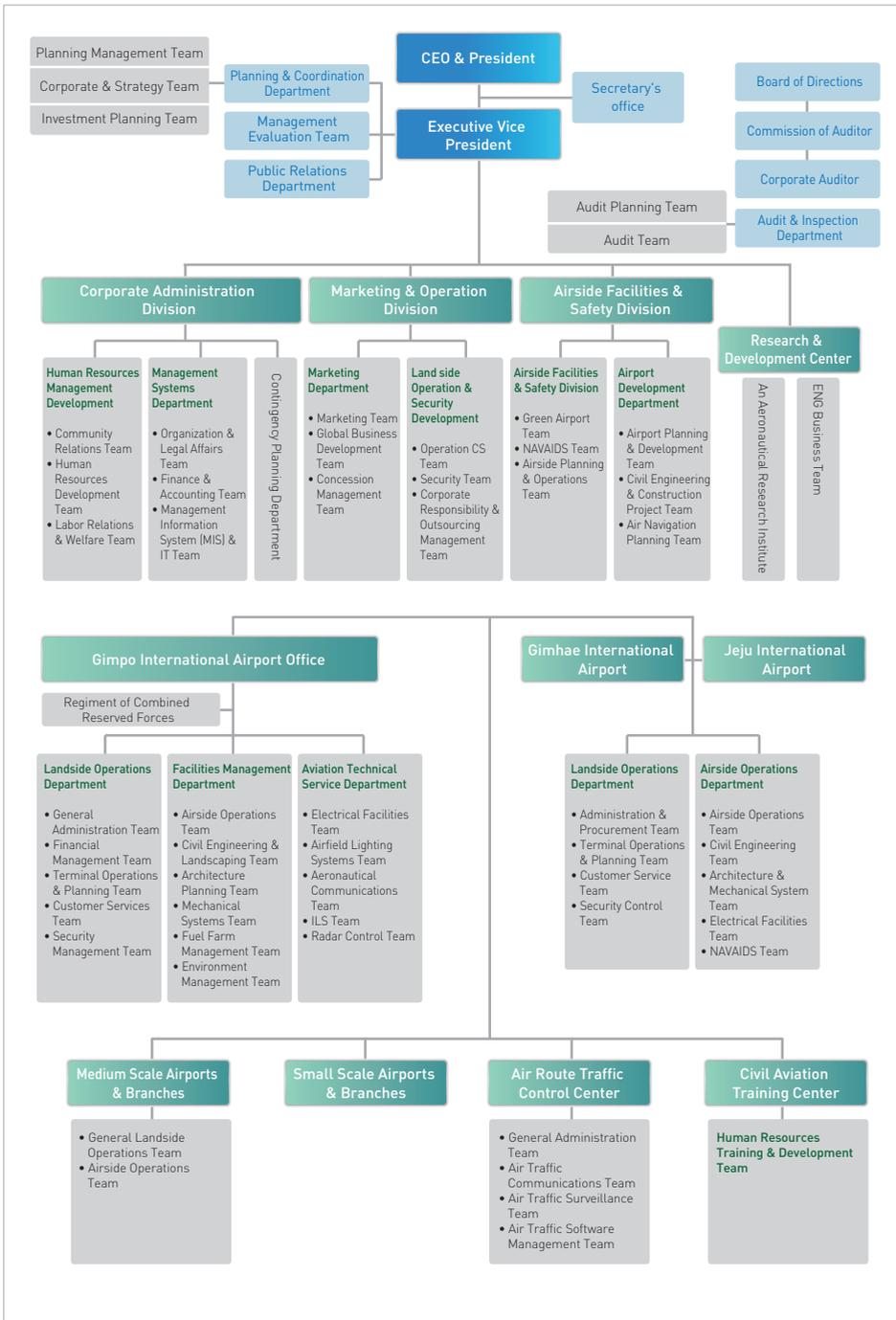
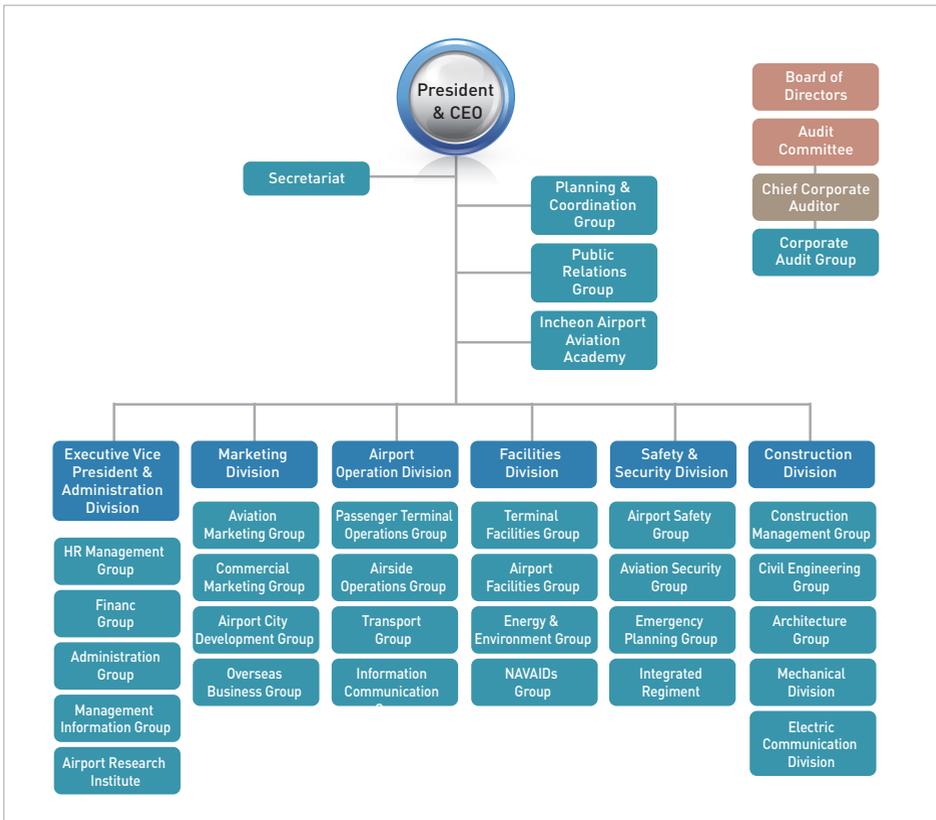


Figure 3.8 Incheon International Airport Corporation organizational chart



Corporation as it turned into a government-invested enterprise.

The New Airport Construction Headquarters established within the Korea Airports Authority became the Metropolitan New Airport Construction Authority in 1994. It was renamed Incheon International Airport Corporation in 1999.

Incheon International Airport opened in 2001. Its second-phase construction plan was announced in the same year, and the actual work was completed in 2008. The next year, the third-phase construction plan was released. Construction for the third and final project, which started in 2011, is slated to be completed in 2017.

4. Boosting Hub Status

Since its opening, Incheon International Airport has made efforts to establish itself as a global hub airport. The following are its endeavors and achievements:

① Ranked 1st in Global Airport Service Quality Evaluation for 10 Years in a Row

Despite various factors that negatively affected air transport demand, Incheon International Airport achieved remarkable performance in 2012. It handled 2.46 million tons of international cargo, thus being ranked second among the global airports in this category. In terms of passenger air traffic, it ranks at ninth place, serving about 41 million international passengers.

It was also rated the “world’s best” in the annual airport service quality evaluation conducted by the Airport International Council (AIC), a consultative body that does work pertaining to about 1,700 airports worldwide.

For the first time in the world’s airport history, Incheon International Airport has received a top rank for ten consecutive years (2005-2012) in the global airport service quality evaluation.

■ Success Factors

At Incheon International Airport, departure and entry takes just 18 minutes and 14 minutes, respectively, much shorter than the 60 minutes and 45 minutes recommended by ICAO. Departure and entry time reflects the extent of an airport’s advancement, and represents the level of airport service quality directly experienced by customers. In 2007, the airport launched a cultural and artistic advisory board composed of experts from the fields of cultural analysis, performance, and exhibition. Based on advice from these experts, the airport developed cultural content that can be shown to visitors through performances, hands-on experiences, and exhibitions. Its unique marketing strategy, based on cultural services, has helped foreign visitors better

understand Korean culture. The airport has achieved its success by acting effectively as both a means for transit and a medium for cultural diplomacy.

② Securing Hub Status

An airport's hub status is dependent on the following factors: geographical conditions, domestic demand, airport facilities, policy support for services and operation, and the competitiveness of national flag-carrying airlines.

Incheon International Airport is located in a strategic point in Northeast Asia, connecting Asia and the Americas. It is situated in an economically vibrant area close to China's northeastern regions with high levels of latent demand for air travel in areas that can be reached within three hours from Incheon. With these excellent geographical conditions, Incheon International Airport has been able to achieve its hub status.

■ Success Factors

The construction of Incheon International Airport represented the realization of a huge state project that had been pursued for 20 years. It reflects the national desire to build an airport that can serve as a logistics hub in Northeast Asia as well as an important driver for the nation's economic growth.

Assistance rendered by government ministries and agencies (related to legal issues, customs, and quarantine affairs) played a crucial role in ensuring the successful operation of the airport. Effective use of outsourcing is also cited as one of the key success factors. In particular, the airport could improve the quality of its services through the implementation of their SLA (service level agreement) system,² thereby securing its competitiveness as a hub airport.

2) A kind of smartsourcing, it is based on the concept of quantifying minimum service quality acceptable by users.

Conclusion

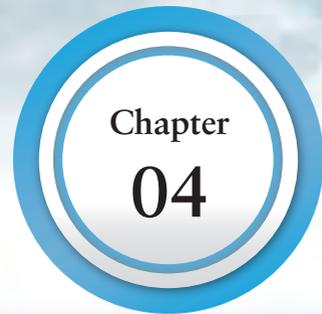
In order to establish an effective airport system, the government consistently implemented airport development projects based on comprehensive short- and long-term plans.

Incheon International Airport has been ranked first for nine years in a row (2005-2013) in the annual airport service quality evaluation conducted by the Airport Council International (ACI). This is an achievement no other airport has attained. Compared with the Singapore Changi Airport, ranked second, Incheon Airport shows particular strengths in the categories of flight information supply, customs screening, and kindness shown during security checks. Based on its impressive brand power, Incheon International Airport has exported its software and technologies to airports in a number of countries, including Iraq, Russia, the Philippines, Nepal, Cambodia, and Indonesia. Thus, it is increasing its presence in global markets which were once dominated by the airports of major advanced countries.

The government's dedication can be cited as the most important factor that has helped Incheon Airport achieve such phenomenal success. Infrastructure facilities of the airport were built without a hitch thanks to close cooperation among all the relevant ministries. The government laid

the legal groundwork for implementing the airport project, and exerted all-out effort to help Incheon Airport establish itself as an international hub. The airport has been found to be competitive in most of the factors required of hub airports, except for domestic demand for air traffic. It was shown to be particularly strong in services and operations. It also has an edge over its rivals in Japan and China in that the Korean government is pursuing policy to reinforce aviation networks through concentrating on international routes.

Development of the Aviation Safety and Security Operation System



Section 1

Overview of Aviation Safety and Security

Global air transport industries and passengers alike are increasingly interested in aviation policies that impact the safety of air travel. International passengers are transported across borders. Given this, it is necessary to formulate universally applicable standards regarding aviation safety.

Figure 4.1 Accidents and fatal accidents in the Asian region

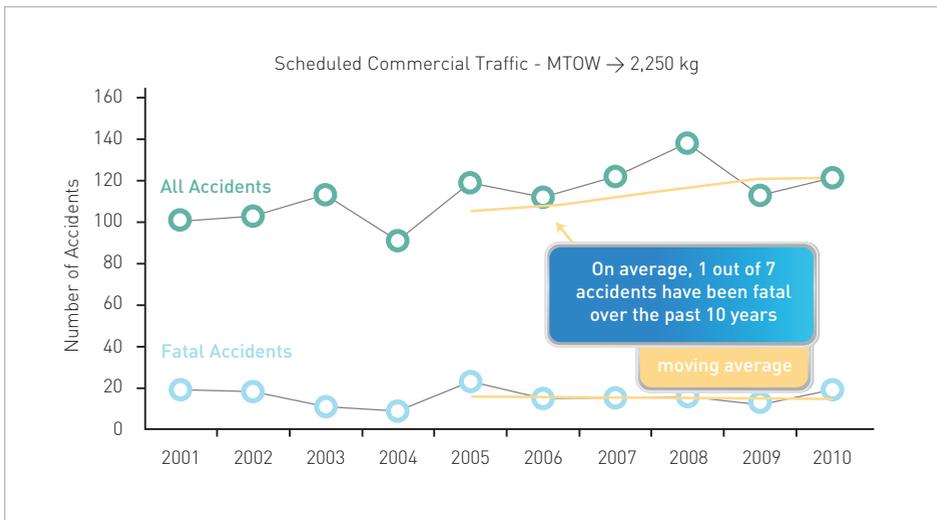


Figure 4.2 Fatalities trends (Asia-Pacific region and global)

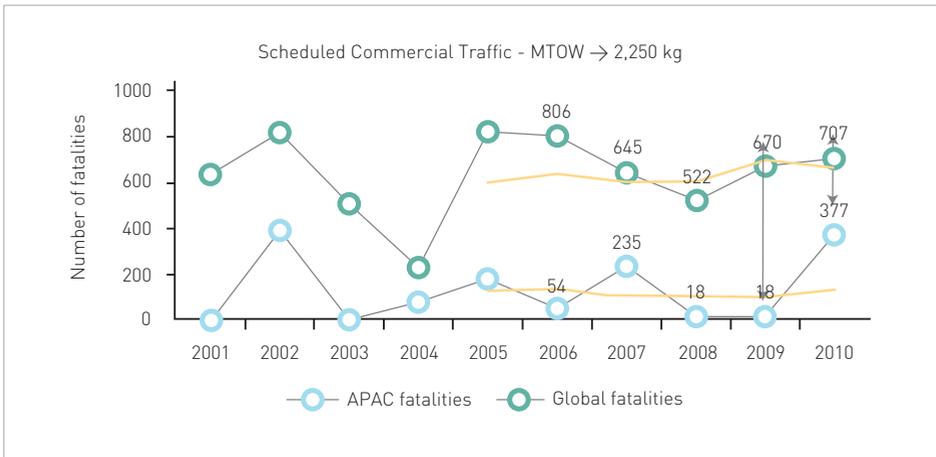
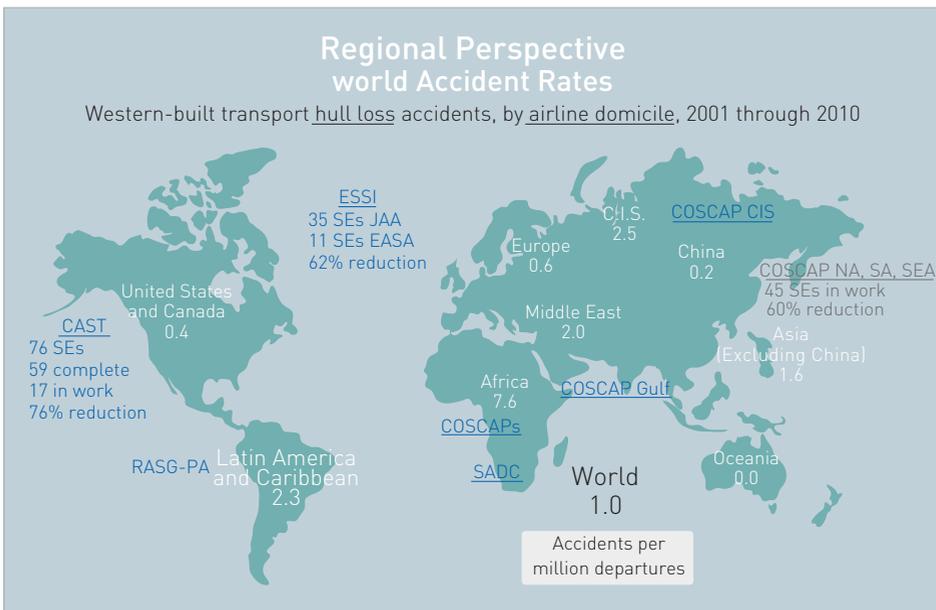


Figure 4.3 Global aviation accident rates



Globally, the number of fatalities caused by aviation accidents is on the rise. In particular, there is a possibility of air fatalities sharply rising in the Asia-Pacific region.

Aviation-related international organizations (ICAO, IATA, etc.) and

regional consultative bodies (RASG³ being promoted by ICAO) are intensifying efforts to improve the aviation safety standards. ICAO has taken steps to establish the Regional Aviation Safety Plan (RASP⁴) based on its Global Aviation Safety Plan (GASP). It is also planning to ensure that the national aviation safety plans include the RASP. In its 37th Assembly session, ICAO decided to include its GASP new safety enhancement policies, designed to ensure the sharing and transparency of aviation safety information as well as SSP/SMS implementation.

Table 4.1 Main contents of the global aviation safety plan (GASP)

Policies and standards	Safety monitoring and analysis	Implementation of safety enhancement policies
<ul style="list-style-type: none"> • Working with the Aviation Community (Global Aviation Safety Plan) • Working with the input of Safety Management • Realizing synergies between GASP and GANP 	<ul style="list-style-type: none"> • Continuous Monitoring • Facilitating the collection, sharing, and use of safety intelligence • Generating new sources of safety data 	<ul style="list-style-type: none"> • Coordinated community responses • Addressing the main causes of fatality • Addressing regional differences

3) RASG(Regional Aviation Safety Group)

4) RASP(Regional Aviation Safety Plan)

Aviation Safety and Security Policies and the Operational Organization Structure

Until the 1990s, Korea's aviation safety policy was focused on establishing a pertinent legal framework.

Korea's Aviation Act went into effect on June 7, 1961. It was then partially amended 12 times before December of 1991, when it was wholly revised to accommodate aviation-related changes at home and abroad, such as changes in relevant international treaties, intensified competition in the air transport industry, advances in aviation technology, and growth in air traffic demand. In accordance with the standards and methods stipulated in the Convention on International Civil Aviation, the Act was revised in a way that can enhance the safety of aircraft navigation, facilitate the installation and management of airport facilities, and help to establish order in the air transport industry.

In the 1990s, international standards began to have significant impacts on the amendment of the Aviation Act in Korea. The following may be cited as the most prominent examples of such standards: ICAO instructions in the 1990s concerning the establishment of the Safety Oversight Program (SOP) and the related Standards and Recommended Practices (SARPs); and the U.S. Federal Aviation Administration's International Aviation Safety Assessments

(IASA) program, which was established in 1992 to appreciate a country's ability to adhere to standards and recommended practices for aircraft operations and maintenance.

In 1974, the government enacted the Aircraft Operations Safety Act, pursuant to the Tokyo Convention. The act was wholly revised in 2002, under the new title, "Aviation Safety and Security Act." The law includes provisions based on SARPs of ICAO Annex17 (aviation security).

The government has since established the following aviation safety policies:

- Establishment and execution of the "Comprehensive Aviation Safety Measures (Dec. 30, 1997)" following the 1997 Guam crash;
- Establishment and execution of the "Aviation Safety Reinforcement Measures (July 6, 1999) following the 1999 crashes in Pohang and Shanghai;
- Establishment and execution of the "Emergency Measures to Ensure Aviation Safety (Jan. 12, 2000)" following the 1999 accident at London Airport;
- Establishment and execution of the "Comprehensive Plan for Mid- to Long-Term Aviation Safety" in 2010 based on the "Basic Aviation Policy Plan" formulated the previous year;
- Establishment and execution of the "Comprehensive Plan for Aviation Safety" through the Aviation Safety Board following the 2013 San Francisco crash.

The major aviation security policies established by the government are as follows:

- Establishment of the national airport safety contingency plan in 2003 to cope with illegal activities or threats designed to obstruct the operation of airport facilities or civilian aircraft;
- Establishment of a contingency plan for airport safety in 2005 based on five-stage classification of terrorist threats, and the publication of a working-level manual for coping with aviation terrorism by situation;
- Revision and execution of the national aviation security plan, which

was comparable to the previous aviation safety operation guidelines, in 2010.

1. Aviation Safety Oversight

In 1999, the government introduced the “aviation safety inspector” system. Implemented as one of the aviation safety reinforcement measures, it was aimed at ensuring on-site confirmation of safety conditions for aviation projects.

Following personnel reinforcement, safety oversight began to be performed, focusing on matters related to navigation and aircraft maintenance. In 2002, the inspector system was expanded to cover a broader range of matters, including regional airport management, navigation control, and cabin safety.

After issuing the air operator certificate and the approved maintenance organization certificate, the aviation safety headquarters (regional aviation administrations) should constantly perform oversight to confirm whether the air transport operators continuously abide by the safe navigation standards. In-depth inspection must be implemented for matters that need to be investigated extensively and in a concentrated manner.

In Korea, there are following standards on aviation safety oversight: Article 115-2-6 and Article 153 of the Aviation Act, Article 326 of the Enforcement Decree of the Aviation Act, airworthiness standards, regulations on aviation safety inspectors, and aviation safety inspection guidelines. Pertinent international standards include ICAO Annex 6 Part 1 Chapter 4 and ICAO Doc 9734, 9735 (Safety Oversight Manual/Audit Manual).

The following administrative organizations are in charge of aviation safety oversight:

Safety oversight of scheduled air transport operators is performed by the Aviation Safety Division under MOLIT’s Aviation Policy Bureau, while oversight of non-scheduled air transport operators and airports is executed

Table 4.2 Overview safety management of air transport operators

Stage	Tasks	Contents						
Before operation	Issuance of the air operator certificate (AOC)	(Operator certificate) The certificate may be called the safety license in air transportation. It is issued along with operation guidelines after inspections on airline organization, staff, flight management, maintenance control, and employee training programs. (Process) Application→Preliminary screening→Document screening→on-site inspection→Issuance of certificate (Processing period)Forming a protocol for 313 inspection items; The process takes 90 days.						
		(List of regulations) general navigation manual, aircraft operation manual, minimum equipment list and external appearance changes list, training manual, aircraft performance manual, route guide, emergency escape procedure manual, hazardous materials manual, accident procedures manual, security affairs manual, aircraft installation and precess manual, cabin crew business manual, flight manual, maintenance rules, maintenance program, maintenance reliability program (Special procedures) RWSM, ETOPS, PBN, Change in safe navigation system (Change in operation standards) Inspection of changes in safe navigation system (Processing period) 15 days on average, 56.3 inspections per inspector (as of 2011)						
During operation	Oversight performance (common/intensive/latent danger)	(Continuous oversight) After issuance of the air operator certificate, periodic and non-periodic oversight is performed to check whether the operator continuously abide by aviation laws and safe navigation systems						
		<table border="1"> <tr> <td>Common check</td> <td>Monthly checks conducted by the inspector based on checklists prepared by area</td> </tr> <tr> <td>Intensive check</td> <td>Checks on matters repeatedly pointed out during constant checks, or problems that need to be examined intensively for fundamental solution</td> </tr> <tr> <td>Latent danger check</td> <td>Implemented when the status of airline operation and safety management needs to be analyzed due to frequent breakdowns and incidents</td> </tr> </table>	Common check	Monthly checks conducted by the inspector based on checklists prepared by area	Intensive check	Checks on matters repeatedly pointed out during constant checks, or problems that need to be examined intensively for fundamental solution	Latent danger check	Implemented when the status of airline operation and safety management needs to be analyzed due to frequent breakdowns and incidents
		Common check	Monthly checks conducted by the inspector based on checklists prepared by area					
		Intensive check	Checks on matters repeatedly pointed out during constant checks, or problems that need to be examined intensively for fundamental solution					
Latent danger check	Implemented when the status of airline operation and safety management needs to be analyzed due to frequent breakdowns and incidents							
(Processing period) There are 76 checklists for usual checks. Each check takes 4-16 hours. 166 checks per inspector (as of 2011)								
Measures for abnormal situations	(Investigation of abnormal conditions) When accidents, incident or flight safety hindrances occur, investigation is carried out to find out violations of regulations and determine the need for emergency safety measures (Process) Issuance of instructions for the airline to take improvement measures; The process for administrative sanctions gets underway in case damages caused by accidents or rule violations by the airline or employees are serious enough to slap fines as stipulated in the Aviation Act (Processing period) 20 days on average; An inspector implements such an investigation 2.4 times on average (as of 2011)							
Safety enhancement activities	Sharing data and holding seminars with ICAO, FAA, etc.							

by the Air Navigation, Aviation Inspection, and Aviation Safety divisions of regional aviation administrations.

The Aviation Policy Division is responsible for safety oversight

of the following matters: air traffic, aviation information, instrument flight procedures, aviation guidance, aeronautical mobile and fixed telecommunications.

Table 4.3 Aviation safety oversight program formulation/execution process

Phase	Implementation procedures	Contents
1 st phase	Establishment of oversight plans	The yearly and monthly oversight plans for the next year are formulated based on analysis of oversight results of the past year
2 nd phase	Inspection performance (flight inspection table, airworthiness inspection table)	Inspections are implemented using checklist manuals and guidelines for aviation safety inspectors. In case safety-undermining elements are detected, correction orders/revision recommendations are issued.
3 rd phase	Analysis of inspection data	Appropriate corrective measures are formulated through consultations with the organization that has undergone inspections, after review of relevant domestic and foreign standards.
4 th phase	Determination and implementation of appropriate corrective measures	Orders and recommendations are issued for the correction and revision of safety-undermining elements detected through inspection checks. Then, plans and measures taken for compliance with such instructions are reviewed to confirm their appropriateness.
5 th phase	Correction confirmation	Re-correction orders are issued if the correction measures are found to have been carried out improperly. The case is closed if the desired corrective measures are found to have been completed.

Source : MOLIT (www.molit.go.kr)

2. Aviation Accident Investigation

Until 2000, the Korean government’s aviation safety policy was focused on coping with crashes and ensuring crisis management, due to frequent aircraft accidents involving Korean flag carriers. The government concentrated on analyzing the types and causes of aviation accidents and developing countermeasures. Airline companies involved in accidents were subject to intensified punitive measures such as fines and restrictions on the allocation of air routes.

Afterwards, the government reinforced the investigative functions aimed at identifying the causes of accidents through information collection and analysis as a means of preventing accidents as well as issuing safety

recommendations.

Aviation accidents have been investigated by the following organizations:

In June 1990, the Aviation Technology Division within the Transport Ministry’s Aviation Bureau was given the authority to investigate aviation accidents. In February 1998, the Aviation Bureau took control of air accident investigation;

In 2002, the “Act Concerning Aviation and Railway Accident Investigation” was enacted in order to ensure objective investigation of aviation accidents as well as accident prevention. Pursuant to the act, the Aviation Accident Investigation Board was established at the Ministry of Construction and Transport in August 2002;

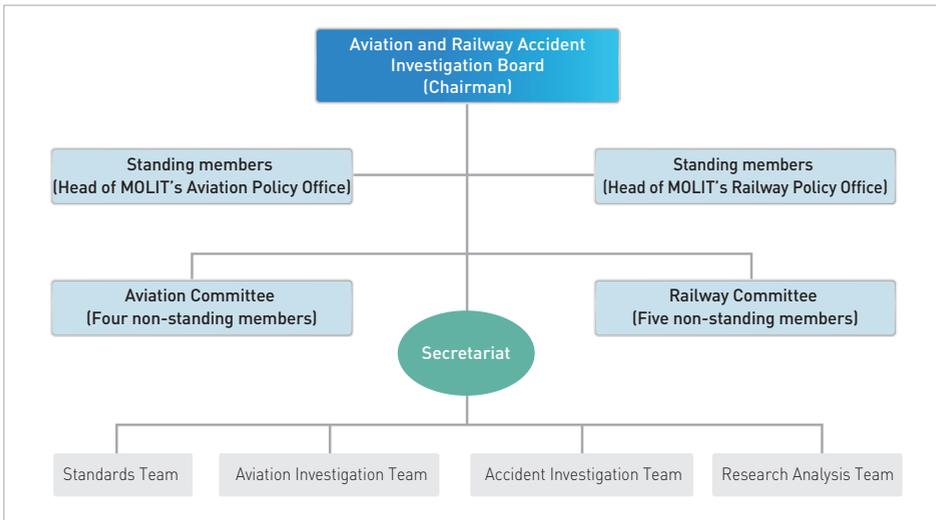
In July 2006, the ministry merged the aviation and railway sectors,

Table 4.4 Aviation accident investigation procedures

Phase	Execution procedures	Contents
1 st phase	An accident reported by the chief pilot or the aircraft owner	
2 nd phase	Acceptance of accident report	Accident notification to the aircraft registration, operation, design and manufacturing countries as well as ICAO
3 rd phase	Initiation of accident investigation	Forming an accident investigation team
4 th phase	On-site probe	Scene of accident preservation, and collection of relevant information and data
5 th phase	Sending an initial probe report	Submitted to related countries and ICAO within 30 days of accident
6 th phase	Tests and analysis [ARAIB analysis team and relevant expert organizations]	
7 th phase	Writing a report on facts and information	
8 th phase	Public hearing	Verification of facts and information; Making up for defects, if necessary; Ensuring objectivity, fairness and reliability of the investigation
9 th phase	Writing the final report	The report should include accident causes and safety recommendations
10 th phase	Accommodation of views from countries related to the accident	For 60 days
11 th phase	Board deliberation and decision	
12 th phase	Release of final investigative results and the final investigation report	Release of the report via the news media and its distribution to relevant countries and ICAO [aircraft with weighs 5,700kg or more]

Source: Aviation and Railway Accident Investigation Board (www.araib.go.kr)

Figure 4.4 Aviation and Railway Accident Investigation Board organizational chart



launching the Aviation and Railway Accident Investigation Board. The board, currently under MOLIT, is responsible for identifying the causes of accidents through investigation, and giving recommendations for improving safety measures;

The scope of investigation covers the civil aviation accidents and incidents taking place within the nation, and the accidents and incidents involving national flag carriers occurring on the high seas.

Domestically, the criteria on aviation accident investigation are based on the Act Concerning Aviation and Railway Accident Investigation. Pertinent international standards are based on ICAO Annex 13 (aviation accident investigation).

3. Airport Operation Certification and Safety Oversight

Pursuant to the 4th amendment of the ICAO Annex 14 (airports), ICAO issued instructions in November 2001, making it mandatory for all the signatories to implement the “Airport Operation Certificate” system beginning on Nov.

27, 2003.

Complying with the instructions, the Korean government amended the Aviation Act in 2003, preparing the legal basis for the implementation of the system. Through the 2010 amendment of the Enforcement Decree for the Act, it revised the “airport safety operation standards,” introducing the “airport operation rating system” that calls for the differentiated application of the certificate system based on airport characteristics and air traffic volumes.

The airport operation rating system refers to a scheme designed to issue airport operation certificates appropriate for the ratings awarded based on airport characteristics and the scope of aircraft operations. Safety operation standards are applied to airports in a differentiated manner in accordance with the ratings. Since the occurrence of a succession of accidents involving national flag carriers in the late 1990s, and the U.S. FAA’s classification of Korea as category 2 in 2001, Korea has exerted a lot of efforts to enhance its aviation safety level. As a result, it was found to have achieved the world’s highest international standards implementation rate (98.89%), in the 2008 ICAO aviation safety audit. However, the safety standards were applied to the nation’s airports in an excessively rigorous and inflexible manner, causing small regional airports to suffer from efficiency problems such as unreasonably high operating costs. The airport operation rating system was introduced to address these problems.

Domestic standards related to airport operation certification are stipulated in Article 111-2 of the Aviation Act, Article 277-3 of the Act’s Enforcement

Table 4.5 Airport operation ratings

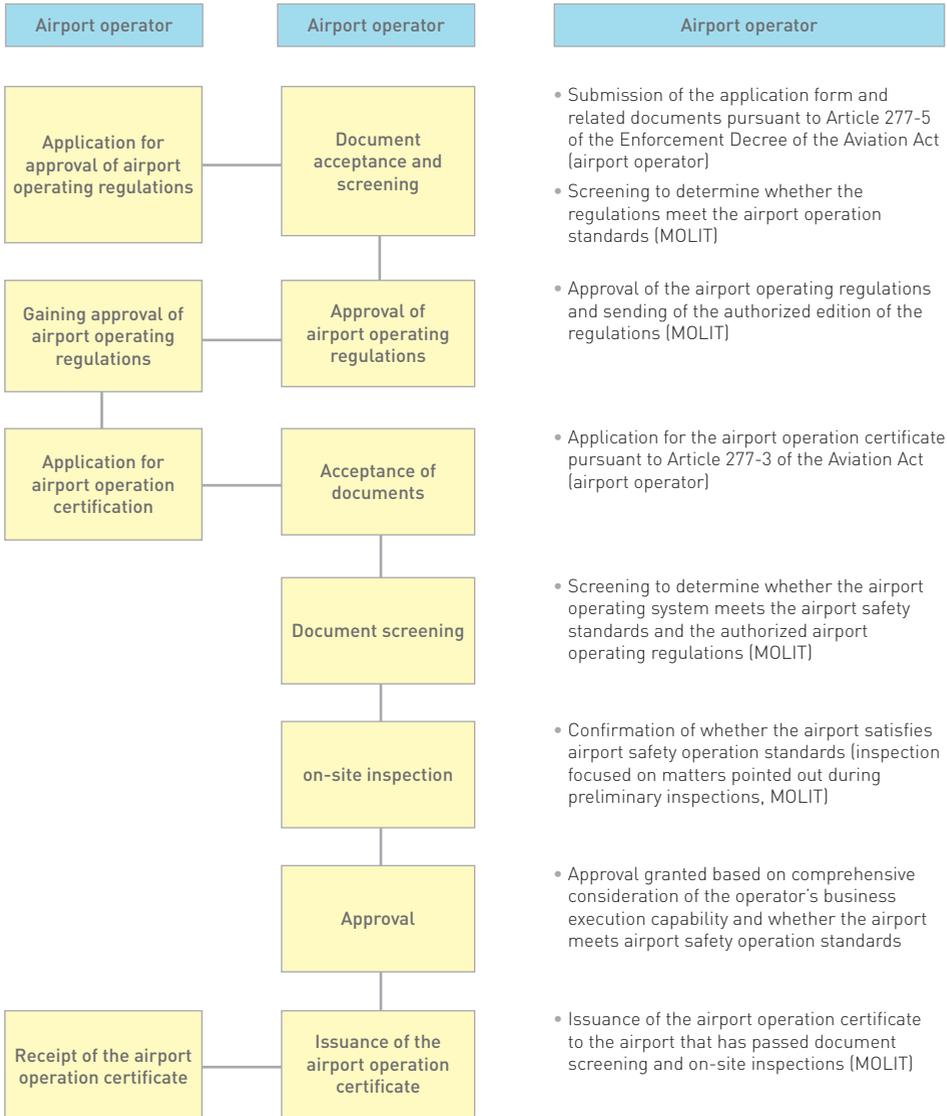
Airport categories	Classification standards	Airports expected for each category
Class I	Airports that are used both domestic and international flights, and served 30,000 or more flights a year on average during the most recent five years	Incheon, Gimpo, Jeju, Gimhae
Class II	Airports that are used both domestic and international flights, and served less than 30,000 flights a year on average during the most recent five years	Daegu, Cheongju, Muan, Yangyang
Class III	Airports serving only domestic flights	Gwangju, Yeosu
Class IV	Airports that are used for other types of air transport (unscheduled flights or small aircraft operations)	

Decree, and the Airport Operation Certification Business Manual.

Affairs related to airport operation certification are handled by the Airport Safety Environment Division under MOLIT's Aviation Policy Office.

Airport safety oversight refers to the implementation of regular inspections to confirm whether the airport operator continually maintains

Table 4.6 Airport operation certification procedures



the airport safety operating system after being granted airport operation certification, pursuant to Article 111-4 of the Aviation Act. The airport safety operating system refers to the following matters: airport data, regulations management, qualifications management, safety control, repair and maintenance, airport facilities, operating system, and fire rescue systems.

Domestically, the airport safety operating standards and the authorized airport operating regulations serve as the criteria for airport safety oversight.

Airport safety oversight is performed by the following organizations:

Airport safety inspections are implemented by airport safety inspectors, targeting the airports that have been granted the airport operation certificate, pursuant to Article 111-4 of the Aviation Act. Management inspections for airfields are conducted by inspectors under the control of regional aviation administrations, targeting airfields and aviation lighting facilities, pursuant to Article 80 of the Aviation Act;

Everyday safety inspections for airport movement areas and support facilities are conducted by airport safety inspectors that belong to regional aviation administrations;

Of the 10 airports that have been awarded operation certificates, four (Incheon, Gimpo, Gimhae and Jeju) are subject to safety oversight by the ministry. Of the remaining six, two (Yangyang and Cheongju) are managed by the Seoul Regional Aviation Administration, and four (Muan, Gwangju, Yeosu and Daegu) are under the control of the Busan Regional Aviation Administration;

For the unauthorized five airports (Sacheon, Ulsan, Pohang, Gunsan and Wonju), airfield management inspections are conducted according to Article 80-2 of the Aviation Act.

Table 4.7 Airport safety inspection execution procedures

Phase	Execution procedures	Contents
1 st phase	Execution of oversight activities	Correction and improvement requirements are issued by MOLIT based on inspection results
2 nd phase	Correction measures	Airport operators (airports corporations) submit correction and improvement plans to MOLIT

4. Aviation Safety- and Security-Related Administrative System Within MOLIT

The “Aviation Safety Headquarters” was dissolved during the 2009 government organization restructuring, with its main functions transferred to the Civil Aviation Office at MOLIT.

Under the Civil Aviation Office is the Aviation Safety Policy Bureau, which is composed of the following divisions:

■ Flight Standards Division

- Enactment/amendment of aviation safety-related laws and removal of restrictions; Formulation/implementation of mid- to long-term comprehensive aviation safety plans
- Implementation of national aviation safety programs, an aviation safety report system, and ultralight/light aircraft safety management
- Response to ICAO aviation safety continuous monitoring approach (CMA)
- Distribution of aviation safety-related IT system to developing countries and implementation of relevant training programs; Promoting IT technology cooperation projects between Korea and ICAO

■ Aviation Safety Division

- Supervision of air safety inspectors’ business by area

■ Airworthiness Division

- Enactment/amendment of laws related to the maintenance of aircraft safety
- Affairs related to aircraft production, such as aircraft certification, airworthiness certification and aircraft registration
- Climate change response in the field of aviation technology

■ Air Traffic Management Division

- Affairs related to airspace, flight procedures and flight information
- (affairs related to air traffic control) Oversight of conversion to performance-based navigation; Instrument flight procedures approval and affairs related to future air transport (ASBU); Enactment/revision of operational regulations related to air traffic control; Building an air traffic flow management system; Surveillance of everyday air traffic control business (NOSS)
- (affairs related to aviation information) Bilateral international affairs (operation of Korea-China, Korea-Japan air traffic control cooperation meetings); Building/operating a simulator for mock air traffic control; Performance management (BSC)/security/documents; Processing of air traffic control statistics and cooperation with cooperation for safety inspection (reports on safety obstacles)

■ Aviation Licensing Division

- Enactment/enforcement of laws and administrative regulations related to the qualifications of aviation staff
- Formulation of aviation training policies
- Designation and management control of specialized aviation training institutes
- Screening pilots regarding navigational qualifications

5. Comprehensive Plan for Aviation Safety

In 2009, the government established the Basic Plan for Aviation Policy, pursuant to the Aviation Act. It is a statutory plan that includes measures to cope with changes in the aviation environment, policy goals and execution plans by area, and financing schemes. In order to promote preventive safety management, the plan set the following three directions: “Attaining the advancement of the aviation safety system,” “Promoting technology

development and the construction of the next-generation navigation system,” and “Increasing the efficiency of the air transport management system.” The “Comprehensive Plan for Mid- to Long-Term Aviation Safety,” which was formulated by the government in 2010 based on the Basic Plan for Aviation Policy, includes comprehensive plans related to aviation safety.

Table 4.8 Aviation-related plans in Korea

Basic Plan for National Traffic Safety	Basic Plan for Aviation Policy	Comprehensive Plan for Mid- to Long-Term Aviation Safety
<ul style="list-style-type: none"> • Goal for the air transport sector <ul style="list-style-type: none"> - 30% reduction in the rate of fatal crashes per 100 million scheduled flights • Main tasks <ul style="list-style-type: none"> - Improving the safety control capabilities of people working for the aviation industry - Ensuring systematic safety management of air transportation - Developing/modernizing airports and flight safety facilities - Improving air traffic management systems - Improving safety management and the nation's recognition level abroad through international cooperation 	<ul style="list-style-type: none"> • Aviation safety policy directions <ul style="list-style-type: none"> - Switch in policy focus from introduction of advanced foreign systems to development of practical/differentiated policies • Major directions for the aviation safety sector <ul style="list-style-type: none"> - Ensuring advancement of the aviation safety system - Integrated and organic SMS operation - Developing safety control system based on airline autonomy - Laying the groundwork for implementing world-class aviation safety policies 	<ul style="list-style-type: none"> • Mid/long-term safety goals <ul style="list-style-type: none"> - World's best safety management and air transport system • 7 execution strategies <ul style="list-style-type: none"> - Enhancement of national aviation safety level through reinforcement of system safety control - Improving aircraft safety and securing core technologies - Intensifying human factors management for accident prevention - Realizing objective and transparent inspection and oversight administration - Strengthening safety measures in accident-prone industrial areas - Building a future-oriented air traffic control system featuring high levels of safety and efficiency - Strengthening civil knowledge networks and international cooperation for aviation safety

Table 4.9 Timeline of Korea's aviation safety regulations

Classification	Major aviation safety regulations	Explanations (aviation accidents and changes in international standards)
1950s	<ul style="list-style-type: none"> • 1952: Korea's joining ICAO 	
1960s	<ul style="list-style-type: none"> • 1961: Proclamation of the Aviation Act 	
1970s	<ul style="list-style-type: none"> • 1971: Enactment of the Air Transport Business Promotion Act 	<ul style="list-style-type: none"> • 1971: Korean Air plane crash at Sokcho airfield
	<ul style="list-style-type: none"> • 1972: Introduction of a mandatory aircraft spare parts inspection system 	
	<ul style="list-style-type: none"> • 1977: Establishment of the aviation workforce plan 	
1980s	<ul style="list-style-type: none"> • 1987: Provisions newly established on the following matters: Suspension of the effectiveness of the airworthiness certificate in case it becomes difficult to ensure aircraft safety; Permission for commercial flights by foreign aircraft; Flight approval for ultralight flying machines 	

1990s	<ul style="list-style-type: none"> • 1991: Upward adjustment of fines related to maximum working hours on board the aircraft 	
	<ul style="list-style-type: none"> • 1993: Provisions created on installation of radio beacon apparatus for emergency position information, and on aviation accident investigation 	<ul style="list-style-type: none"> • 1993: Asiana Airlines B-737 crash on Mt. Ungeo near Mokpo Airport
	<ul style="list-style-type: none"> • 1998: Screening procedures strengthened regarding airplane captain's operational qualifications related air routes; Introduction of requirements for installation of midair collision prevention equipment on aircraft 	<ul style="list-style-type: none"> • 1997: Korean Air B-747 crash at Guam airport
	<ul style="list-style-type: none"> • 1999: Introduction of the incident report system; Implementation of the aviation safety inspector system; Employment of professional inspectors 	<ul style="list-style-type: none"> • 1998: At 32nd ICAO Assembly, resolutions adopted on mandatory inspection of aviation safety management status and the duty to correct deficiencies identified during inspections
2000s	<ul style="list-style-type: none"> • 2001: Introduction of the air transport operator certificate and the approved maintenance organization certificate systems; Enactment of regulations for airworthiness standards publication and the duty to comply, as well as for imposition of fines on violations of flight certification and airworthiness standards 	<ul style="list-style-type: none"> • 2001: Korea classified as category 2 in FAA aviation safety assessment
	<ul style="list-style-type: none"> • 2005: Enactment of regulations for verifying spoken aviation English capability 	<ul style="list-style-type: none"> • 2003: ICAO regulations strengthened on international business of wireless communications workers
	<ul style="list-style-type: none"> • 2007: Enactment of regulations for establishing and operating aviation safety management systems 	<ul style="list-style-type: none"> • 2006: A recommendation on aviation safety management systems adopted at world aviation director generals' conference
	<ul style="list-style-type: none"> • 2009: Regulations enacted on aviation safety autonomous report; Overhaul of air transportation licensing standards 	<ul style="list-style-type: none"> • Acceptance of ICAO Annex 13 recommendations

6. Establishment of the World-Class Aviation Safety and Security System

In order to enhance its global status in the field of aviation safety and security, Korea has exerted a diversity of efforts. These include the following activities:

① ICAO Universal Safety Oversight Audit Program (USOAP)

ICAO has been conducting aviation safety audits since the early 1990s for balanced promotion of global aviation safety. The audit system is designed to assess states' possession of aviation safety oversight systems in accordance with international standards.

In the first ICAO audit conducted in 2000 for all of its member states, Korea received a relatively poor grade of 79.79%, being ranked 53rd out of the 162 nations. In the late 1990s, the nation saw a succession of air crashes involving its national flag carriers. Subsequently, it was classified as category 2 in the U.S. FAA safety assessment conducted in August 2001. As a result, Korea suffered a damage in its international reputation. The national flag carriers were subject to code sharing restrictions and could not increase its U.S. routes. Further, the U.S. government prohibited its soldiers and public officials from using Korea's national flag carriers.

These unfavorable developments prompted the Korean government to exert all-out efforts to be thoroughly prepared for the ICAO safety audit.

■ Reorganization of the Relevant Legal Framework Based on International Standards

The ICAO audit places the top priority on identifying a state's ability to implement aviation safety oversight in accordance with relevant international standards. Given this, it was essential for Korea to resolve deficiencies in its Aviation Act and its subordinate regulations.

■ Promotion of Close Cooperation Among Relevant Agencies

The ICAO audit is aimed at assessing a nation's entire aviation safety oversight functions. Therefore, it was very important to ensure a cooperative system involving agencies in charge of aviation weather forecasts and rescue operations. It was also essential to enlist the help of the Ministry of Defense that oversees air traffic control and facility management at military airports serving both military and commercial flights.

■ Mock Audits Held to Resolve Deficiencies Related to Execution of International Standards

By inviting relevant international experts, the government implemented mock audits several times based on the 976 audit items used by ICAO inspectors. Measures were taken immediately to resolve the deficiencies pointed out by

the experts.

In the 2009 ICAO aviation safety audit, Korea's implementation rate regarding ICAO standards and recommended practices was estimated to have reached 98.89%.

■ Success Factors

Following the U.S. FAA's classification of Korea as category 2 regarding aviation safety, the Ministry of Construction and Transport established an independent aviation safety organization named "Aviation Safety Headquarters" in August 2002 on the recommendation of ICAO. The headquarters was given the authority to deal exclusively with affairs related to aviation safety and relevant technologies, pursuant to the "Aviation Safety and Security Act." The ministry then reshuffled the aviation-related organizational structure by placing regional aviation administrations under the control of the headquarters. Air traffic control centers and flight inspection offices were also placed under the jurisdiction of the headquarters. The government made preparations for the ICAO aviation safety audit for two years. During the last three months after it was notified of the names

Figure 4.5 Seminar on preparation for aviation safety evaluation



Figure 4.6 ICAO CMA system



of auditors, it checked the progress of action plans every week. Based on the analysis of other countries' evaluation results, the Ministry of Land, Transport and Maritime Affairs actively enlisted the help of relevant organizations [particularly, the Ministry of Defense (Air Force), the Coast Guard, the National Emergency Management Agency, and the Korea Aviation Meteorological Agency].

② Comprehensive Measures to Respond to CMA Audit

At its October 2010 Assembly, ICAO decided to switch its aviation safety evaluation method to the continuous monitoring approach (CMA) beginning in 2013. The new scheme was based on online acceptance of audit replies and verification documents.

CMA is designed to ensure continuous monitoring based on documents submitted by states in relation to implementation of international standards, industrial trends⁵, accident rates, international evaluation data⁶, and ICAO information requests.

⁵) Trends related to air traffic, airlines, the number of registered aircraft, etc.

⁶) EU safety assessment of foreign aircraft, U.S. FAA international aviation safety assessment, IATA aviation safety evaluation, ACI airport service quality evaluation, etc.

Table 4.10 Comparison of old and new audit systems

Category	Previous evaluation system (CSA)	Continuous monitoring system (CMA)
Evaluation cycle/ Technique	<ul style="list-style-type: none"> • 6-year cycle, targeting all member states • Snap-shop approach • Notice provision to the state to be audited 12 days prior to the start of audit 	<ul style="list-style-type: none"> • Indefinite, continuous monitoring • Continuous update of aviation safety audit rating scores and information on fragile states • Notice provision to the state to be audited 120 days prior to the start of audit
Audit focus	<ul style="list-style-type: none"> • Implementation of international standards, and establishment of an effective safety oversight system (8 elements*) 	<ul style="list-style-type: none"> • CSA focus+actual safety performance
Fragile country classification standards	<ul style="list-style-type: none"> • Aviation safety audit rating scores +Information confirmed through on-site inspections 	<ul style="list-style-type: none"> • Use of comprehensive information collection and risk profiles
Information supply	<ul style="list-style-type: none"> • Audit reports shared by all contracting states 	<ul style="list-style-type: none"> • Sharing of the audit report and all audit-related information by all contracting states (online DB management)

Note : * primary legislation, regulations, organization/safety oversight, qualified personnel, technological guidelines, license/certification system, continuous oversight system, safety-related deficiency resolution procedures
 Source : YOO Kyoung-soo, "ICAO Continuous Monitoring Approach and Korea's Countermeasures," *KOTI Aviation Policy Brief*, November 2012.

Figure 4.7 Continuous monitoring process

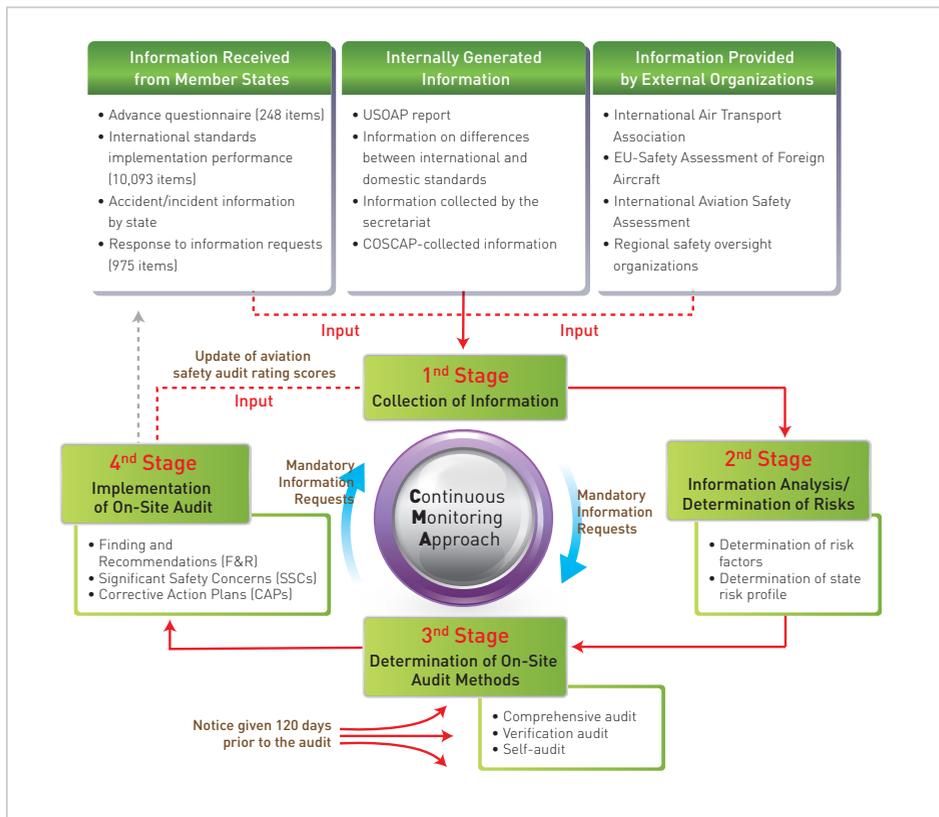
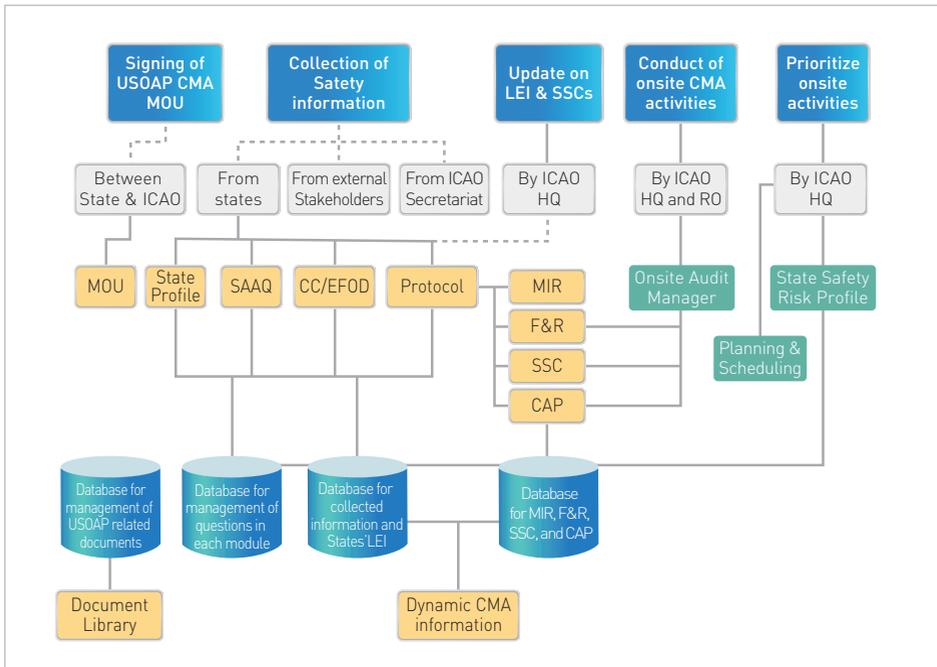


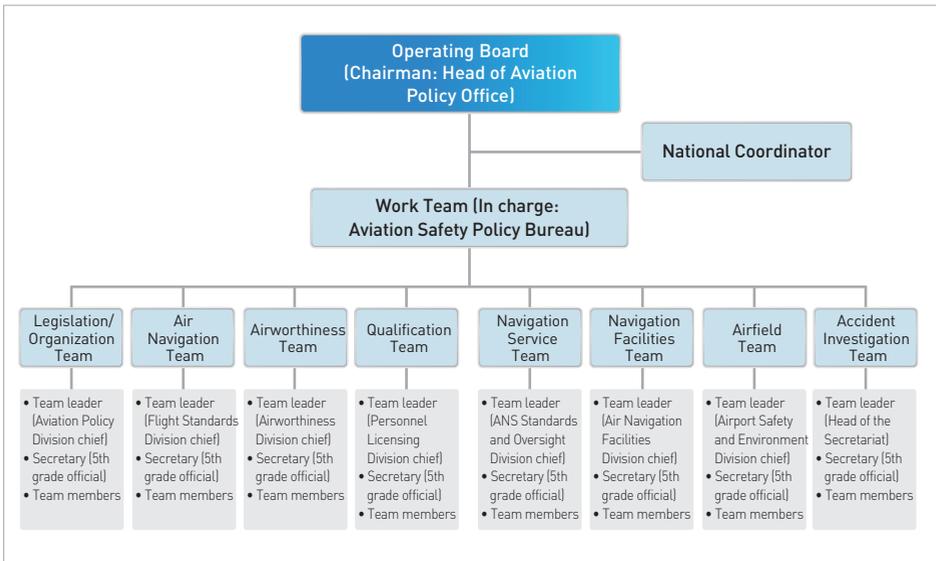
Figure 4.8 Composition of ICAO continuous monitoring electronics system



■ **Pan-Government Action Programs Related to Continuous Monitoring**

In Korea, MOLIT’s Aviation Policy Office serves as the nation’s civil aviation authority. It sets policies and standards and implements safety oversight functions in all aviation areas such as personnel qualification, aircraft operation, airworthiness, air traffic control, and airports. There are also other government organizations exercising their delegated authority regarding aviation affairs related to airports and navigation services. They are the Ministry of Defense (military airfields, military air traffic control centers), the Korea Meteorological Administration (aviation weather), the National Emergency Management Agency, and the Korea Coast Guard (search and rescue). Aviation accident investigation is conducted by the Aviation and Railway Accident Investigation Board, which is an independent organization separated from other aviation-related ministries and organizations. The nation’s aviation structure is based on organic connections among these six government organizations, with MOLIT at the center.

Figure 4.9 Continuous monitoring response team’s organization chart



Source: MLTM, *USOAP-CMA Response Handbook*, 2012.

In January 2012, the Aviation Policy Division under the Aviation Office kicked off full-fledged preparations for the IAEA aviation safety audit. It devised “comprehensive measures to respond to safety audit based on continuous monitoring.” Relevant pan-government action programs were formulated through national policy coordination meetings presided over by the Prime Minister. The division is continuously working to identify deficiencies and address safety concerns through the implementation of these programs. The “comprehensive measures” are aimed at building and operating a continuous monitoring response system. They include the following tasks: establishment of a joint task force, determination of the international standards implementation status, overhaul of relevant regulations, thorough preparation of responses to information requests, establishment of a relevant verification system, and reinforcement of aviation safety technology research and the supportive organizational infrastructure.

To support ICAO CMA, the Korea Transport Institute conducted joint research with ICAO on the SMART (SARPs Management and Reporting

Figure 4.10 SMIS and SOMS



Source : KOTI, *Achievements and implications of traffic regulations and related systems in Korea*, 2013.

Tools) system and TOMS (Total Oversight Management System) from 2011 through 2013.

③ Korea Rated the World’s Best in ICAO Aviation Security Audit

In 2001, the world witnessed the 9/11 incident in which a commercial plane abducted mid air was used as a means of terrorist attack. Afterwards, based on the outcome of the 33rd ICAO Assembly and the high-level officials’ conference, the ICAO Board of Directors adopted the “ICAO Aviation Security Plan of Action” at its 166th meeting in June 2006. In accordance with the plan, ICAO implemented the first USAP (Universal Security Audit Programme) audit for its contracting states from November 2002 through 2007. Its second audit was conducted from 2008 through 2013.

As for Korea, the government and Incheon International Airport underwent the audit conducted by ICAO aviation security auditors in November 2004. It was conducted on the 66 standard items (483 detailed items) stipulated in the Convention on International Civil Aviation Annex17. They included the following matters: the government organization related to aviation security, legislation, airport facilities and equipment, airport security search and security, and aircraft security. After the audit, ICAO commented that Korea’s aviation security system and the operational status were better

than those of many other contracting states in terms of their compliance with international standards. It, however, presented 13 safety recommendations that it said needed to be addressed for enhancing the level of Korea's aviation security. One of the recommendations suggested that the amendment procedures for the "national/airport security operating regulations" be clearly established. In 2005, the Korean government completely implemented the recommended practices. The next year, ICAP conducted a follow-up audit, and confirmed the implementation of the 13 recommended practices.

In its 36th Assembly, ICAO adopted a resolution for the continuation of the aviation security audit beyond 2007. It then determined that the second audit should focus on the states' oversight functions regarding airport security activities. Additionally, it decided to expand the scope of the audit to cover the security-related aspects of the Annex 9 (facilitation of entry and exit procedures) to the Convention on International Civil Aviation.

ICAO's second aviation security audit of Korea was conducted for eight days in August 2011, in accordance with the agreement reached in January 2001 when the two sides signed a memorandum of understanding on aviation security assessment. After the second audit, ICAO recognized Korea's international standards implementation rate, which reached 98.57%, as the world's highest.

■ Success Factors

In order to ensure systematic and effective response to ICAO audit, the Ministry of Land, Transport and Maritime Affairs established a "comprehensive plan to cope with ICAO USAP audit" in September 2009. The plan included programs related to the composition and operation of the preparatory group, protocol analysis/correction of deficiencies, execution plans by area, and detailed schedules for tasks. In accordance with the plan, the "committee on countermeasures for aviation safety audit" was inaugurated in November 2009. Fully supported by the government, the public/private committee was given the authority to make important decisions, check preparations for the audit, and discuss the provision of

various supportive measures.

Table 4.11 Composition and mission of the Committee on Countermeasures for Audit

Classification	Composition	Mission
Committee on Countermeasures for Audit	<ul style="list-style-type: none"> • Chairman (Aviation Policy Director) • Deputy chairman (Aviation Security Division chief) • Members (Relevant division chiefs at agencies that participate in aviation safety consultation meetings, regional aviation administrations' management directors, executives of Korea Airports Corporation, executives of national flag carriers) • Secretary (5th-grade official at the Aviation Security Division) 	<ul style="list-style-type: none"> • Policy decisions; discussion of basic directions for preparing for audit; examination of relevant domestic laws, systems, standards and procedures; confirmation of preparations and deficiency identification; mediation between ministries or agencies to narrow differences • The committee meeting was convened six times to discuss preparations for the audit. At the meetings presided over the Aviation Policy Director, the committee handled the following matters: protocol analysis for relevant organizations such as the Justice Ministry, the Korea Customs Service, and the Foreign Ministry; confirmation of the implementation of deficiency correction measures; enactment of guidelines for facilitating national air transport entry and exit procedures; correction of deficiencies related to the issuance of aircrew identification cards and the in-flight security officers system. The committee also hammered out differences on major issues through mediation among the relevant agencies.
	<ul style="list-style-type: none"> • Work team (comprised of experts from the public and private sectors, divided into four sections: legal system/security control/ education and training/ level management) 	<ul style="list-style-type: none"> • Systematic handling of the following matters: analysis of international standards, including 11th and 12th amendments made to Annex 17, and confirming whether they had been reflected in domestic standards; confirming the implementation of aviation safety level management as well as corrective measures; confirming and preparing relevant verification documents; analysis of ICAO advance questionnaire and protocol; identifying relevant deficiencies. • Amendment of the "Aviation Safety and Security Act" (September 2010) and the "National Aviation Security Plan" (May 2011)

Source: MLTM, *Advanced Republic of Korea with Land of Hope and Oceans of Opportunities*, 2013.

The government made thorough preparations for on-site audit by conducting on-site checks (May 2011) and implementing a mock evaluation (June 2011) using the ICAO audit method. The Ministry of Land, Transport and Maritime Affairs convened a Aviation Safety Consultation Committee meeting (June 23, 2011) for final checks on the implementation of matters proposed by the audit countermeasures committee as well as preparations by relevant agencies. Presided over by the head of the ministry's Aviation Policy Office, the meeting was participated in by director general-level officials of 15 organizations. In addition, the Prime Minister presided over the 89th national policy coordination meeting (July 29, 2011), receiving briefings

on the importance of the ICAO audit and the countermeasures. Through the meeting, the government renewed its determination to implement the preparatory measures in a coherent manner, promising to render active assistance.

ICAO is slated to employ the Continuous Monitoring Approach (CMA)⁷ as its new aviation security audit method after 2013.

7) Continuous monitoring approach (CMA) refers to a new safety audit method designed to monitor the contracting states' level of safety in real time based on a variety of safety information and materials. For states judged to be weak in their safety management, on-site inspections are conducted by using the traditional method (USOAP).

Section 3

Conclusion

In the ICAO USOAP audit, Korea was found to have achieved the overall implementation rate of 98.8% for international standards (covering all the audit areas of legislation, organization, qualification, airworthiness, navigation, flight operations, airport, and accident investigation). The achievement was attained through the government’s dedicated efforts to enhance the nation’s aviation safety level. First of all, the government formulated framework plans based on the Aviation Act in order to establish aviation safety management systems: the “Basic Plan for Aviation Policy” and its follow-up master plan, the “Comprehensive Plan for Mid- to Long-Term Aviation Safety.” Following the FAA’s classification of Korea as category 2, the government established a dedicated organization for aviation safety. It also set up an aviation accident investigation board under MOLIT, ensuring that aviation safety management can be implemented in an independent and professional manner. The government exerted systematic and coordinated efforts to secure aviation safety, together with airlines, airport corporations, and relevant research institutes. In an effort to establish an aviation safety culture, the government implemented a “comprehensive aviation safety information supply system” for all the relevant organizations, including

airlines, airports and public agencies. This system is aimed at ensuring safety through promotion of the public right to obtain safety-related information as well as market functions.

In the 2008 ICAO audit, Korea was rated the world's best. The government established various audit countermeasures, aiming to maintain the nation's top status in the ICAO CMA audit slated to be implemented beginning in 2013.

In the USAP audit, Korea was shown to have achieved the implementation rate of 98.57% for international standards in all the audit areas (66 items of the Convention on International Civil Aviation Annex 17 standards covering the areas of government organization, legislation, airport facilities and equipment, airport security search and other security standards, and aircraft security). In order to build an aviation security management system, the government established a comprehensive plan for implementation of ICAO audit countermeasures. It also fully supported the inauguration of an audit countermeasures committee that was participated in by experts from both the public and private sectors. Close cooperation among the government organizations and private-sector companies subject to audit resulted in the excellent rating for Korea. The relevant organizations and companies included the following: MOLIT, the Ministry of Foreign Affairs and Trade, the Ministry of Justice, the Korea Customs Service, Incheon International Airport Corporation, Korea Airports Corporation, the International Mail Distribution Center, and Korean Air.

Korea also built a comprehensive system designed to cope with the shift in the ICAO audit scheme to the Continuous Monitoring Approach after 2013.

Korea's successful establishment of a world-class safety/security system is attributable to the following factors: formulation of a thorough audit strategy, thorough resolution of deficiencies identified through self-inspections in each sector, and faithful implementation of follow-up measures and post-management. Korea has been able to establish and maintain its safety/security system by reorganizing its legal framework based on international standards, building a pan-governmental cooperation system, and identifying and resolving deficiencies through mock evaluations.

Deregulation in the Air Transport Industry and Changes in the Operating System



Chapter

05



Section 1

Overview of Air Transportation

In 2012, Korea was ranked 15th in the world in passenger air traffic, and third in air cargo traffic. Overall, the nation was placed sixth in the world. As of the end of 2013, Korea had air services agreements in place with 93 countries. Its flag carriers were serving 132 cities in 46 countries, operating 1,953 flights a week on 195 routes.

Figure 5.1 Trends in Korea's domestic/international passenger air traffic

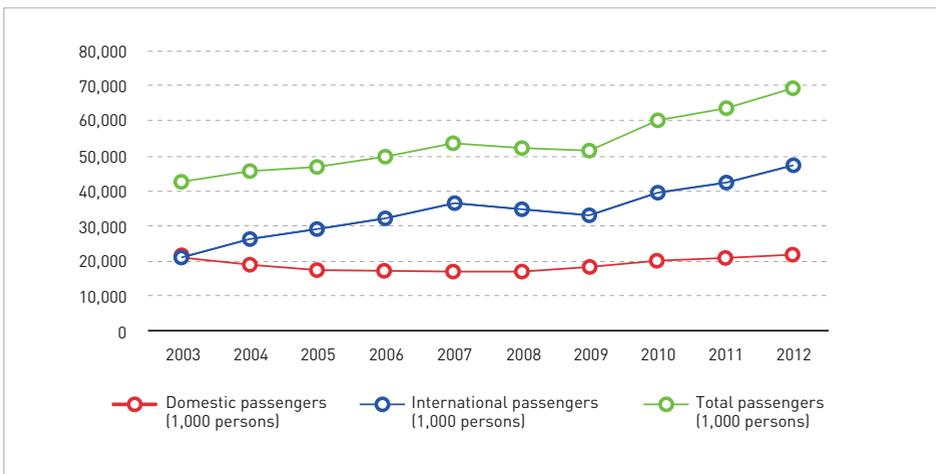
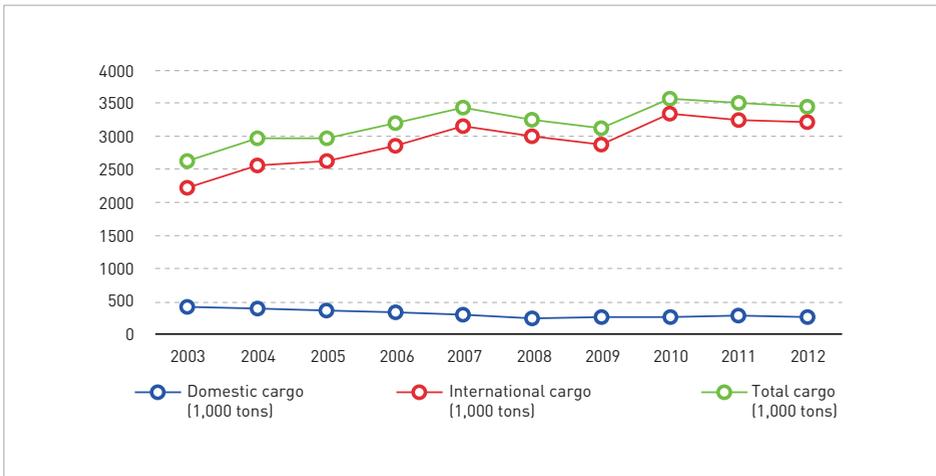


Figure 5.2 Trends in Korea's domestic/international air cargo traffic



Between 2003 and 2012, Korea's passenger air traffic expanded by 5.49% a year on average. Its air cargo traffic rose by an yearly average of 3.14% during the same period. In 2012, the nation's air traffic amounted to 69.3 million passengers and 3.47 million tons of cargo.

Deregulation Process in the Air Transportation

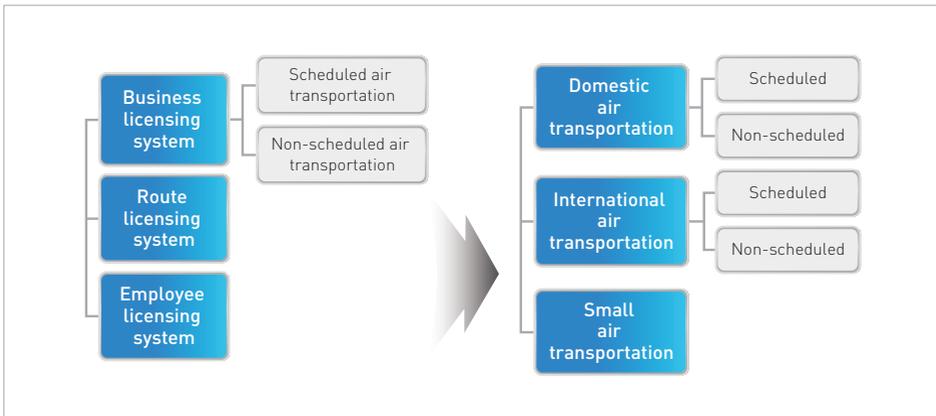
Korean Air, which entered the aviation market in 1969, had a monopoly on the nation's air transportation until 1987. During this period, the government enacted the Aviation Act, laying the basis for the development of the air transport industry.

In the 1970s, the air transport industry achieved high growth as a result of the nation's industrialization and export-oriented economic policies based on five-year economic development plans.

In 1988, the government allowed market participation by Asiana Airlines in a move to enhance the competitiveness and vitality of the domestic air transport industry. Thus, the nation's aviation sector turned into an oligopolistic market, which was dependent on the two airlines for the supply of air transport services. The two airlines maintained their firm grip on the market till 2005.

In 1989, the government liberalized overseas travel for the people. This resulted in a sharp rise in air traffic demand. Related developments led to a change in the price setting scheme for domestic flights: airlines were allowed to set the fares on condition that they would report them to the pertinent government authorities.

Figure 5.3 Reform of the air transport business licensing system



Market entry restrictions in the air transport sector were eased consecutively beginning in the 1990s, along with the enactment of pertinent laws. In April 1999, the government loosened restrictions on the business of operating non-scheduled flights. It removed the license requirement for the business, replacing it with a registration system. This move was designed to enhance the competitiveness of air transportation. In 2009, the government changed the air transport licensing system, issuing licenses based on the classification of three categories: domestic, international, and small transportation. Previously, the licensing had been based on the categories of scheduled/non-scheduled flights. The government also drastically eased the licensing standards.

Table 5.1 Timeline of Korea's aviation policies and regulatory practices

Categories	1969-1987	1988-1997	1998-2003	2004-2007	2008-Present
Period classification	Quickening period	Period of continued growth and internationalization	Period of stable growth and preparation for advancement	Period of advancement and rapid change	Period of stability and second advancement
Regulation system	<ul style="list-style-type: none"> Market monopoly Airline privatization (Korean Air Corporation-Korean Air, Feb.1969) Emergence of full-fledged aviation market in Korea 	<ul style="list-style-type: none"> Era of multiple airlines based on competition system Price report system for domestic flights (1992) 	<ul style="list-style-type: none"> Easing non-scheduled air transport operation requirements: licensing system→ registration system (1999) Upgrade requirement (50-seat aircraft→ 80-seat aircraft) (2003) Introduction of constant oversight function for airlines and airports 	<ul style="list-style-type: none"> System reform for provision of air services suitable for domestic conditions (LCC market participation) Promotion of airport liberalization 	<ul style="list-style-type: none"> Further deregulation on market entry of air transport operators Laying the basis for diversified air transport industries such as small aircraft business
Aviation policy	<ul style="list-style-type: none"> Period of initial growth achieved through industrialization and export-driven economic policies based on five-year economic development plans Enactment of the Aviation Act, laying the basis for development of the air transport industry 	<ul style="list-style-type: none"> Expanding international routes Facility improvement at domestic airports in preparation for internationalization (Formulation of the basic plan for airport development, 1991) Sharp rise in air traffic demand as a result of travel liberalization 	<ul style="list-style-type: none"> Signing of aviation accords at a rapid pace Separation of aviation safety and aviation policy functions Formulation of aviation safety policies based on international standards 	<ul style="list-style-type: none"> Strategy to develop Incheon International Airport into an international hub Decrease in air traffic demand due to alternative means of transport and business slowdown 	<ul style="list-style-type: none"> Kickoff of 3rd-phase construction of Incheon Airport for strengthening its competitiveness Promoting the use of Gimpo Airport for short-haul international flights Implementation of air transport user protection system
Specifics	<ul style="list-style-type: none"> Appearance of large jets (B707, B747) U.S. Airline Deregulation Act and Air Transport Competition Act 	<ul style="list-style-type: none"> Open Skies Agreement (U.S.-Netherlands, 1992) and 'New International Airport Policy'(1995) Europe's promotion of phased aviation liberalization (3-phase liberalization in '88, '90, '93; complete liberalization within EU in April 1997) 	<ul style="list-style-type: none"> Opening of Incheon International Airport Abrupt changes in global aviation market environments (9/11, SARS, oil price hikes) Aviation Safety Category II and reinforcement of aviation safety policies Korea elected as a member of ICAO board of directors 	<ul style="list-style-type: none"> Discussion on promoting integrated air transport market involving Korea, China and Japan Opening of the high-speed railway system Air traffic decline at regional airports A380 inauguration (June 2011) 	<ul style="list-style-type: none"> Decline in airline profitability due to oil price hikes Increase in LCC share in domestic air flights

Source: KOTI, *Achievements and Implications of Traffic Regulations and Related Systems in Korea*, 2013.

Policy on Air Transport Business and the Operation Structure

1. Air Transport Licensing System

In 1999, the government eased entry restrictions in the domestic airline market in order to promote non-scheduled flight operations and enhance the overall competitiveness of the domestic air transport industry. Specifically, it replaced the licensing system for non-scheduled flight operators with a registration system. In 2009, the government classified the air transport operations into three categories of international, domestic and small businesses. By so doing, it enabled air transport operators to diversify their aviation business, ultimately helping to enhance the competitiveness of the nation's air transport industry.

Licensing System for Domestic and International Air Transport Businesses

Any person who desires to run a domestic or international air transportation should obtain a pertinent license from the Minister of Land, Infrastructure and transport, after submitting a business plan to the minister. Those who have received a license for an international air transportation are deemed to have been granted a license for a domestic air transport business. Regulations

and procedures for obtaining a license for a domestic or international air transportation are provided for in Article 112 of the Aviation Act and Article 278 of its Enforcement Decree.

Air transport licensing affairs are handled by the Aviation Industry and International Air Transport divisions under the MOLIT Office of Civil Aviation. Technical assistance related to the licensing affairs are provided by the Aviation Policy, Aviation Safety, and Airworthiness divisions under the same office, as well as the regional aviation administrations.

Table 5.2 Domestic/international air transport business license issuance procedures

Stage	Procedures	Contents
1 st stage	Application stage	
2 nd stage	Document screening stage	Determination of handling policy
3 rd stage	Technology review stage	Technology review requests sent to officials in charge of relevant areas/Receipt of review results
4 th stage	License issuance stage	License issuance and notification to relevant divisions and organizations

Source: Enforcement Decree of the Aviation Act, Appendix No. 101

Registration System for Small Air Transport Businesses

Any person who desires to manage a small air transportation should submit a registration application to the head of a pertinent regional aviation administration. Regulations and procedures for registering a small air transportation are provided for in Article 132 of the Aviation Act and Article 298 of its Enforcement Decree.

Small air transportation registration affairs are handled by the regional aviation administrations under MOLIT.

Table 5.3 Small air transport business registration procedures

Stage	Procedures	Contents
1 st stage	Application stage	
2 nd stage	Document screening stage	Determination of handling policy
3 rd stage	Contents review stage	
4 th stage	Registration notification stage	

Source: Enforcement Decree of the Aviation Act, Appendix No. 131

Scheduled and Non-Scheduled Flights Approval system

When a person granted a license to run a domestic or international air transportation desires to operate scheduled flights, he/she should obtain, by route, permission from the Minister of Land, Infrastructure and Transport. When a person granted a license to run a domestic or international air transportation desires to operate non-scheduled flights, he/she should obtain permission from the Minister of Land, Infrastructure and Transport. When any person who has registered a small air transportation desires to operate scheduled and non-scheduled flights, he/she should submit an application for registration to the head of the pertinent regional aviation administration.

Regulations related to approval for scheduled and non-scheduled flights are provided for in Article 112 and Article 132 of the Aviation Act, and Articles 278 and 298 of the Enforcement Decree of the Act.

Affairs related to the approval of scheduled flight routes and non-scheduled flights of domestic, international and small air transportation are handled by the Aviation Industry and International Aviation divisions under the MOLIT's Office of Aviation Policy, and the navigation-related divisions at regional aviation administrations. Assistance for technical review is rendered by the Aviation Safety and Airworthiness divisions under the MOLIT's Office of Civil Aviation.

Table 5.4 Procedures for issuing scheduled flight route permits and non-scheduled flight permits

Stage	Procedures	Contents
1 st stage	Application stage	
2 nd stage	Document screening stage	Determination of handling policy
3 rd stage	Technology review stage	Technology review requests sent to officials in charge of relevant areas/Receipt of review results
4 th stage	Approval notification stage	

Source: Enforcement Decree of the Aviation Act, Appendix No.104

2. Foreign International Air Transportation

A foreign international air transportation refers to a business carried on by a person who falls under subparagraphs of Article 6 (1) of the Aviation Act⁸ to transport passengers or freight commercially in compliance with the demand of others by making a navigation falling under any subparagraph of Article 144 (1) of the Aviation Act.⁹ When permitting such business, the Minister of Land, Infrastructure and Transport may restrict the frequency of navigation and the type of aircraft to be used so that it would not cause any impediment in the development of international aviation of domestic air transportation operators.

Domestic regulations concerning foreign international air transportation are provided for in Articles 144 through 149 of the Aviation Act and Articles 315 through 321 of the Enforcement Decree of the Act. Relevant international standards are stipulated in the Convention on International Civil Aviation.

Affairs regarding foreign international air transportation are handled by the International Air Transport Division under the MOLIT Civil Aviation Office. Relevant assistance is provided by the Aviation Safety Division under the office.

The following procedures are necessary for the operation of a foreign international air transportation:

- Permission for a foreign international air transportation;

8) 1. A person who is not a national of the Republic of Korea;
2. A foreign government or foreign public organization;
3. A foreign legal entity or foreign organization;
4. A legal entity, not less than 50 percent of the shares or the stakes of which is owned by any person falling under any of the above subparagraphs 1 through 3 or which is virtually controlled by such a person;
5. A legal entity in whose corporate register the representative is a foreigner, or in whose corporate register half or more of its executive officers are foreigners.

9) 1. Taking off outside and land inside the Republic of Korea;
2. Taking off inside and landing outside the Republic of Korea;
3. Taking off and landing outside the Republic of Korea, after transit through the Republic of Korea without landing.

Table 5.5 Permission procedures for foreign international air transport business

Stage	Procedures	Contents
1 st stage	Application stage	
2 nd stage	Document screening stage	Determination of handling policy
3 rd stage	Safety review stage	Safety review requests delivered to the MOLIT Aviation Safety Division; Permission determined depending on the review results
4 th stage	Permission stage	Notification of permission

Source: Enforcement Decree of the Aviation Act, Appendix No. 144

- Permission for flight operation of foreign aircraft;
- Permission for commercial operation of foreign aircraft;
- Permission for fares and fees of a foreign international air transportation; and,
- Permission for domestic use of foreign aircraft (in the event of domestic use of foreign aircraft).

3. Traffic Right Allocation System

The government devised the “guidance and nurturing guidelines for regular air transport operators” in 1990 and the “guidelines for strengthening the competitiveness of national flag carriers.” Based on the 1990 guidelines, the government placed regional flight restrictions on the newly launched Asiana Airlines, while giving priority to Asian in the allocation of traffic rights in regions the carrier was allowed to fly to. Under the 1994 guidelines, the government lifted the regional restrictions on Asiana, allowing equal distribution of new air routes between Korean Air and Asiana.

It was not until 1999 that Korea established provisions in the Aviation Act concerning traffic rights and rights to passage through foreign airspace. Traffic rights had previously been allocated among the air transport operators without solid legal grounds.

Korea had pursued gradual liberalization of the aviation market, placing

the utmost importance on protecting and nurturing the national flag-carrying airlines. Since 2000, however, it has actively promoted aviation agreements under the objective of ensuring the growth of national flag carriers through global network expansion and exploration of overseas markets. As of 2013, Korea had air services agreements in place with 93 countries. Eighty-five of the agreements provide for the designation of multiple airlines, while the remaining eight is based a single carrier designation system.

Table 5.6 Korea-China/Korea-Japan air transport liberalization accords

Classification		Contents
Korea - China	2006	<ul style="list-style-type: none"> Agreed to implement full bilateral air transport liberalization beginning in 2010, open new routes and increase flights Expansion of fifth freedom, Relaxation of the one route-one airline principle
	2009	<ul style="list-style-type: none"> Agreed to operate periodic charter flights between Gimpo and Beijing, open two new routes, and increase the supply capacity of the existing routes Agreed to allow merger of routes on a case-by-case basis, as for international freight
Korea - Japan	2007	<ul style="list-style-type: none"> conclusion of bilateral aviation agreement (except for the Tokyo area; frequency of flights to Tokyo restricted to 73 operations a week due to capacity limitations at Narita Airport)
	2010	<ul style="list-style-type: none"> Agreed on bilateral air transport liberalization (increasing the number of Korea-Narita flights to 14 operations a week beginning in March 2011; Flight frequency restrictions to be removed in March 2013) Gimpo Airport was excluded from liberalization

Table 5.7 Status of Korea's conclusion of aviation liberalization agreements

Categories	Countries
Passenger and Cargo (26)	Maldives, U.S., Sri Lanka, Chile, Peru, Thailand, Kenya, Vietnam, China, Cambodia, Myanmar, Ukraine, Azerbaijan, Malaysia, Japan, Macao, Mexico, Canada, Tunisia, Belarus, Brazil, Spain, Laos, Ecuador, Paraguay, Panama
Passenger (1)	Hong Kong
Cargo (13)	India, Austria, Australia, 3 Northern European countries, Germany, Finland, Greece, South African Republic, Uzbekistan, Pakistan, Paraguay

Note: Three Northern European countries are Sweden, Norway and Denmark
Source: MOLIT International Air Transport Division, December 2013

Differences Between Bilateral Air Services Agreement and Air Transport Liberalization Agreement

To sign a bilateral air services accord, it is necessary for the relevant two governments to reach agreement on the following matters: route structure, exchange of traffic rights, frequency of flight operations and supply capacity,

and the multiple or single designation of carriers. A bilateral air transport liberalization agreement allows unlimited air services between the two countries involved; There is no need to sign other accords on such matters as route structure, exchange of traffic rights, flight frequency, and supply capacity.

Allocation of Traffic Rights and Rights of Passage Through Foreign Airspace

Allocation of traffic rights refers to an administrative act of allocating the rights to the operation of aircraft (flight destinations of passenger and cargo routes, type of aircraft, flight frequency, etc.), which have been obtained through aviation conferences with foreign governments, in accordance with specific standards upon the request of a country's national flag-carrying airlines. Allocation of rights of passage through foreign airspace means an administrative act of allocating the rights to fly through foreign airspace upon the request of flag-carrying airlines, within the limits of the frequency of flights which has been obtained through aviation talks with foreign governments. The domestic criteria related to the allocation of these rights are provided for in Articles 118 and 118-2 of the Aviation Act, and relevant administrative rules.

Affairs related to the allocation of traffic rights and rights of passage through foreign airspace are handled by the International Air Transport Division under the MOLIT Office of Civil Aviation.

Table 5.8 Traffic rights allocation procedures

Stage	Procedures	Contents
1 st stage	Application stage	
2 nd stage	Review stage	Allocation of new traffic rights and increased traffic rights, etc.
3 rd stage	Allocation stage	Traffic rights allocation notification

4. Air Operator Certificate (AOC) System

The air operator certificate is an official letter of authorization granted by

the national aviation authority (MOLIT) to an airline (air transportation operator) after confirming that the carrier has various elements in place to ensure the safety of its aircraft operations.

The domestic criteria related to the air operator certificate are provided for in Articles 115-2, 112, 132 and 134 of the Aviation Act, Articles 280 and 280-3 of the Enforcement Decree of the Act, Chapter 9 of the Airworthiness Guide, and the Air Transport Business Operation Certificate Manual. The international standards are stipulated in ICAO Annex 6 Part I Chapter 4. 4.2., Part III SecII Chapter 2. 2.2., ICAO Doc 8335, FAA Regulation 14 CFR Part 121, and ICAO Doc 8400.

An air transport operator can apply for the AOC only after obtaining the business license or completing relevant registrations. Its procedures are as follows:

Table 5.9 AOC issuance procedures

Stage	Procedures	Contents
1 st stage	Application stage	<ul style="list-style-type: none"> • Submission of certificate application after a preliminary meeting for obtaining prior knowledge and information • Documents to be submitted [Article 280 of the Enforcement Decree of the Aviation Act, Addendum 30-4]: 17 items, including the air transportation license (certificate of registration), purchase and contract documents related to aircraft, facilities and equipment, personnel training curriculum operation plan, 15 manuals, including the navigation manual, and the emergency escape plan.
2 nd stage	Preliminary screening stage	<ul style="list-style-type: none"> • Examining the propriety of the submitted documents through inspections implemented by inspectors by area • Request for addressing minor omissions or errors; Documents to be returned in the event of serious mistakes
3 rd stage	Document screening stage	<ul style="list-style-type: none"> • Within 10 days after submission of the application, the applicant is notified of the on-site inspection schedule determined through deliberations based on the documents and the inspection plan submitted by the applicant
4 th stage	On-site inspection stage	<ul style="list-style-type: none"> • [Article 280-2 of the Enforcement Decree of the Aviation Act, Addendum 30-5] By category, inspectors conduct document inspections (17 items) for navigation and maintenance regulations as well as on-site inspections (12 items) for aircraft operation, flight control, and maintenance equipment. • Depending on the results of inspections, the applicant may be asked to address or correct deficiencies
5 th stage	Certificate issuance stage	<ul style="list-style-type: none"> • Issuance of AOC and Operations Specifications
6 th stage	Safety oversight stage	<ul style="list-style-type: none"> • Implementation of periodic aviation safety inspections

Source : A Guide on AOC Application-related Procedures

5. Air Fare System

The international air transportation operator should set the fares for international flights in accordance with the criteria prescribed by aviation accords. The fares should be reported to and approved by the Minister of Land, Infrastructure and Transport. The domestic air transportation operator should publish the fares for domestic flights in advance for not less than 20 days.

The fare system for domestic air services has undergone the following changes: Until June 1992, the fares were subject to government authorization. Under the government's rigorous price curb policy, any moves to raise or alter air rates had to be reviewed by airlines, the aviation authority, and the Ministry of Finance and Economy. In July 1992, the government introduced a new system, allowing airlines to file a report on fares with the relevant government authorities, instead of obtaining authorization. Initially, the fares were decided based on a distance-based scheme. In May 1993, the fares began to be determined on the basis of minimum fares (fixed cost) plus distance-based ones (changing cost). Introduced based on analysis of airlines' cost structure, this new fare scheme contributed to facilitating the growth of the air transport industry. In February 1999, the government lifted restrictions on fares for domestic air services. The airlines introduced weekend fares and flexible rates. They were required to give public notice of fare changes at least 20 days prior to the implementation.

Table 5.10 Changes in Korea's domestic airfare system

Classification	Scheme	Contents
Until June 1992	Authorization system	<ul style="list-style-type: none"> Review through airline → aviation authority → Ministry of Finance and Economy
July 1992	Reporting scheme	<ul style="list-style-type: none"> Application of a distance-based scheme, as part of a policy to ease restrictions on domestic airfares
May 1993	Reporting scheme	<ul style="list-style-type: none"> Minimum fare (fixed cost) + distance-based fare (changing cost) Introduction of a fare scheme that reflected the airlines' cost structure
February 1999	20 days' advance notice	<ul style="list-style-type: none"> Fare liberalization led to introduction of weekend fares and flexible rates

International air service fares should be determined in accordance to relevant aviation agreements. The fares ought to be reported to and authorized by the Minister of Land, Infrastructure and Transport. Domestic regulations on filing reports on airfares and gaining relevant authorization are provided for in Article 117-1 of the Aviation Act and Articles 284 and 302-1 of the Enforcement Decree of the Act.

Affairs related to the reporting and authorization of airfares are handled by the Air Transport Division under the MOLIT Office of Civil Aviation.

Table 5.11 International airfare authorization and report filing procedures

	Procedures	Contents
1 st stage	Application stage	
2 nd stage	Document screening stage	
3 rd stage	Review stage	
4 th stage	Authorization stage	Notification of results

Source: Enforcement Decree of the Aviation Act, Appendix No. 120

6. Air Transport Business-Related Administrative System Within MOLIT

Affairs related to air transportation are handled by the following divisions under the Aviation Policy Bureau of the MOLIT Civil Aviation Office:

Aviation Policy Division

- Formulation of major aviation policies and mid- to long-term development plans
- Matters related to domestic air transportation licensing and operations
- Research on aviation-related laws and systems
- Aviation statistics and research/surveys for financial improvement of air transportation
- Evaluation of the performance of Korea Airports Corporation, and matters related to the exercise of stakeholders' rights

- Evaluation of the performance of Incheon International Airport Corporation, and matters related to the exercise of stakeholders' rights
- Matters related to the promotion of aviation-related organizations

International Air Transport Division

- Formulation and execution of international aviation policies
- Signing/amending aviation accords, and matters related to the exploration of international aviation routes
- Matters related to international air transportation
- Matters related to international air transport fares/fees
- Matters related to cooperation with air transport-related international organizations
- Collection, analysis and management of data and information related to air transport operations abroad

Aviation Industry Division

- Formulation and execution of aircraft technology R&D plans for the aviation industry (aircraft manufacturing, etc.)
- Formulation and execution of policies to promote the aviation maintenance (MRO) industry
- Affairs related to aviation business-related laws
- Formulation and execution of aviation informatization plans
- Formulation of mid- to long-term air transport development plans, basic plans (for the air transport industry), and aviation logistics policies

Aviation Security Division

- Enactment of aviation security laws, establishment of airport security plans, and approval of airport operators' self-security plans
- Formulation of aviation security inspection plans, and operation of the airport security inspector system
- International cooperation on review/enactment/revision of ICAO international standards

- Preparation for aviation security evaluation by ICAO
- Airport security training and operation of airport security equipment

ANS Standards and Oversight Division

- Formulation of air navigation safety policies
- Implementation of ICAO Annex4, 5, 11 and 15, and air navigation safety standards
- Performance of safety oversight regarding flight procedures and aeronautical charts
- Formulation/execution of safety inspection plans in the field of air traffic control

7. Success of Low-Cost Airlines

Deregulation led to the entry of low-cost airlines in the air transport market. As a result, the scope of air transport services expanded, eventually contributing to the growth of domestic air traffic demand and the increase in user benefits.

In 2005, Hansung Air entered the aviation market as the nation’s first low-cost airliner. Other budget carriers followed suit, building a recognizable

Table 5.12 Status of market entry and exit of flag-carrying airlines

Classification		2005	2006	2007	2008	2009	2010	2013	Number of companies	
International and domestic air transport operators	FSC	Korean Air, Asiana Airlines							2	
	LCC	Entry	Hansung Air	Jeju Air	Yeongnam Air	Jin Air, Air Busan	Eastar Jet	T'way Airlines (formerly called Hansung Air resumes operation)	Air Incheon	6
		Exit	-	-	-	Hansung Air (suspension of operation)	Yeongnam Air	-	-	

Table 5.13 Operational status of low-cost carriers

Airlines	Date of commencement of operations	Domestic /Int'l	Number of routes -Domestic -Int'l	Number of aircraft	Number of employees
T'way Airlines	Aug. 31, 2005	Domestic Int'l	1 5	6	354
Jeju Air	June 5, 2006	Domestic Int'l	3 11	14	605
Jin Air	July 17, 2008	Domestic Int'l	1 13	11	372
Air Busan	Oct. 27, 2008	Domestic Int'l	3 11	11	410
Eastar Jet	Jan. 7, 2009	Domestic Int'l	3 5	9	383
Air Incheon	March 5, 2013	Int'l	3	2	37

Source: KOTI's internal data, December 2013.

presence in the air transport market by 2008. As of 2014, Korea has six low-cost carriers in operation - Jeju Air, Jin Air, Air Busan, Eastar Jet, T'way Airlines, and Air Incheon.

The appearance of budget carriers helped increase consumer benefits by bringing about a change in the market structure that had been dominated by two airlines, expanding the scope of user choice, and generating fare reduction effects. To help ensure sustainable growth of low-cost carriers, the government has implemented the following measures:

Increasing the Share of Low-Cost Airlines in International Route Operations

In order to encourage fair competition among domestic airlines and to improve their competitiveness in short-haul international routes in Northeast and Southeast Asia, the government implemented aviation policy measures designed to expand the market share of low-cost carriers and increase the number of international routes allocated to them.

Intensifying Safety Oversight for Low-Cost Carriers

Aviation safety oversight for low-cost airlines is implemented by the government through surveillance of their business directly related to the safety of flight operations. The oversight can be broadly classified into three

categories: air transport operator certification (AOC), approved maintenance organization (AMO) certification, and continuous monitoring. When undergoing inspections for the issuance of the air operator certificate, Korea's budget carriers were thoroughly examined regarding their capabilities to ensure the safety of their aircraft operations, based on AOC evaluation protocol (1,309 items). Even after they start business, the low-cost airlines are subject to special safety surveillance measures the government formulated in April 2010. In November 2012, the government concluded a memorandum of understanding with the low-cost airlines to share information on aviation safety (data on reliability, personnel training, safety inspection results, etc.). Additionally, the government is hosting a safety promotion seminar for the budget carriers once every year.

Conclusion

Korea has expedited the entry of new airlines, including low-cost carriers, in the aviation market and diversified air transport services through an overhaul of the air transportation licensing system. Deregulation has made it easier for air transport operators to enter the market, helping to promote a diversity of air transport services and eventually, contributing to the growth and development of the aviation industry through competition.

The entry of low-cost airlines in the aviation market has helped increase consumer benefits and intensify industrial competitiveness. It has also had positive impacts on creating jobs in the aviation sector. The government has consistently implemented policies to ease restrictions and promote a competitive environment, thereby helping to increase user benefits and expand the scope of choice.

With the growth of the air transport industry, aviation liberalization is underway globally through the implementation of the “Open Skies Policy.” Korea is also actively promoting aviation agreements, aiming to expedite the growth of national flag-carrying airlines through expansion of their global networks.

Conclusions



Chapter

06



The nation's first-ever civil aviation organization was inaugurated with the establishment of the Republic of Korea in 1948. Afterwards, the Aviation Act was enacted, laying the groundwork for building a legal framework for civil aviation.

Korea's air transport market expanded rapidly in the 1980s as a result of the nation's economic growth, the lifting of overseas travel restrictions, and the successful staging of the 1988 Seoul Olympics.

The government has since eased market entry restrictions, implemented airport development projects, and built aviation safety and security systems. These policy measures were aimed at coping with changes in the aviation sector at home and abroad, such as revisions made to international aviation accords, intensifying competition in the aviation industry, advances in aviation technologies, and growth in air traffic demand.

Korea, which has successfully executed its airport development projects, currently has 15 airports in service. Fourteen of them are under the operational control of Korea Airports Corporation. The only exception is Incheon International Airport, which is operated by Incheon International Airport Corporation.

Incheon International Airport has firmly established itself as one of the major hub airports in Northeast Asia. It has been rated the world's first for nine years in a row (2005-2013) in a global airport service quality evaluation.

The government's effective policy support, cooperation provided by relevant ministries, and high-quality airport services can be cited as the most important success factors of the airport.

Accident and emergency countermeasures had been the focus of Korea's aviation safety and security policies until the nation underwent ICAO aviation safety audit in the 2000s. The audit brought about remarkable changes in the Korean government's aviation safety and security policies. The government thoroughly prepared for the ICAO audit by devising elaborate plans to amend the relevant laws and regulations based on international standards, build a cooperation system among the pertinent ministries and organizations, and conduct mock audits. Consequently, in the 2009 ICAO aviation safety audit, Korea was found to have accomplished the implementation rate of 98.89% for aviation safety international standards. Korea was also rated to be the world's best in terms of implementing international standards in the category of aviation security as well. In the second USAP (universal security audit program) audit conducted in August 2011 following the first one implemented in 2004, Korea recorded the international standards implementation rate of 98.57%.

The government eased market entry restrictions, thereby helping to diversity air transport services and expediting the entry of small airlines, including low-cost carriers, in the air transport market.

In Korea, low-cost airlines began entering the air transport market in 2005. Their entry into the aviation market.

The entry of low-cost airlines in the aviation market, which started in 2005, has contributed to increasing consumer benefits and intensifying the industrial competitiveness. It has also had positive impacts on creating jobs in the aviation sector.

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Appendix

I

**Timeline of Changes in Korea's
Administrative and Organizational
Structure of Aviation**

Categories	1940s	1950s	1960s	1970s
President	LEE Seung-man 1948-1952	YUN Bo-seon 1960-1962	PARK Chung-hee 1971-1972	CHOI Kyu-hah 1979-1980
	Ministry of Transport 1945-1994			
Government	<ul style="list-style-type: none"> 1945: Transport Bureau under the U.S. Army Military Government 1946: Reorganized into the Transport Department 1948: Inauguration of the Transport Ministry with the establishment of the first ROK government April 1948: Aviation Division under Transport Bureau / November: Aviation Division under Facilities Bureau / October 1961: Aviation Division under the newly established Tourism and Public Road Bureau 	<ul style="list-style-type: none"> 1961: Amendment of the Government Organization Act 1963: Establishment of the Aviation Bureau (2 divisions) 1969: Reorganization of the bureau, with establishment of five divisions: aviation policy, air navigation, facility, communications and electronics 	<ul style="list-style-type: none"> Feb. 1970: Complete organizational restructure following amendment of the Government Organization Act (aviation-related divisions reduced to two in number) Feb. 1972: With reorganization of the Aviation Bureau, four divisions were established: aviation policy, air navigation, facility, communications and electronics Sep. 1979: Establishment of the International Affairs Division within the bureau Dec. 1979: Enactment of the International Airport Authority Act 	
Deregulation in the aviation industry	Period of growth under restrictions (pre-1978 U.S. deregulation) <ul style="list-style-type: none"> Government protection and regulation for the air transport industry For reasons of national security, airports were mostly owned and operated by the state or provincial governments 			
Regulatory changes caused by aircraft accidents and international standards	<ul style="list-style-type: none"> 1952: Joining ICAO 	<ul style="list-style-type: none"> 1974: ICAO adopts a resolution for a regional cooperation system for aviation accidents <ul style="list-style-type: none"> December 1977: Air transport operators required to obtain government approval for business plan changes Jan. 1971: KAL aircraft crash at Sokcho Airfield 1972: Introduction of mandatory inspection system for aircraft spare parts 		
Airport operation	<ul style="list-style-type: none"> Embryonic Period (1950s-1970s) 		<ul style="list-style-type: none"> Growth Period (1980s-1990s) 	
	<ul style="list-style-type: none"> Following national liberation in 1945, airports were managed and operated by the U.S. Army Military Government and the Air Force 1961: Jurisdiction for airports turned over to the Transport Ministry (regional aviation administration) 			

Categories	1980s			1990s			2000s			2010s	
	President	CHUN Doo-hwan 1980-1981	1981-1988	ROH Tae-woo 1988-1993	KIM Young-sam 1993-1998	KIM Dae-jung 1998-2003	ROH Moo-hyun 2003-2008	LEE Myung-bak 2008-2013	PARK Geun-hye 2013-2017		Ministry of Land, Infrastructure and Transport
Government	Ministry of Transport 1945-1994			Ministry of Construction and Transport 1994-2008			Ministry of Land, Transport and Maritime Affairs			Ministry of Land, Transport and Maritime Affairs	
	<ul style="list-style-type: none"> • May 1980: International Airport Authority established • April 1990: renamed Korea International Airport Authority • June 1990: Aviation Technology and Communications Electronics divisions established within the Aviation Bureau • Feb. 1991: Enactment of a decree for unifying the structure of the Transport Ministry and its affiliated organizations • Nov. 1991: international cooperation coordinator's position established at the Aviation Bureau; Airport Facilities Division reorganized into Airport Development Division • Dec. 1991: Korea International Airport Authority renamed Korea Airports Authority; charged with the task of building a new airport in the Seoul metropolitan area • 1991: Regional Airport Management Bureau restructured to become Regional Aviation Administration • Jan. 1992: New Airport Construction HQ established at Korea Airports Authority 			<ul style="list-style-type: none"> • Sept. 1994: Metropolitan New Airport Construction Authority established (New Airport Construction HQ at Korea Airports Authority dissolved) • 1994: Amendment of the Government Organization Act led to the merger of the Construction and Transport ministries, lurching the Ministry of Construction and Transport • 1995: Airspace Division at Seoul Regional Aviation Administration dissolved • 1998: Establishment of six divisions - aviation policy, aviation safety, air traffic management, aviation technology, aviation facility, and international aviation - within the Aviation Bureau. - Establishment of the following 17 divisions within the Regional Aviation Administration: <ul style="list-style-type: none"> • general affairs, accounting, security, air navigation, air traffic management, flight communications operation, airworthiness, inspection 1, inspection 2, civil engineering, architecture and equipment, electronics, electricity, management, facility, air traffic management, and oversight. - Establishment of the following five divisions with the Area Control Center: management, communications electronics, airspace, air traffic control, and aviation information. • In January 1999, the Incheon International Airport Corporation Act was enacted • Feb. 1999: Metropolitan New Airport Construction Authority renamed Incheon International Airport Corporation • 1999: Adjustment of functions and name changes (Aviation Technology Division→Airworthiness Division, Aviation Facilities Division→Airport Facilities Division) - Seoul Regional Aviation Administration: Air Traffic Control Bureau→Air Traffic Communications Bureau, Aviation Inspection Bureau→Aviation Safety Bureau, Aviation Facilities Bureau→Airport Facilities Bureau - Branch offices established at regional airports (Sokcho, Gangneung, Wonju, Gunsan, Cheongju, Jeju, Yeosu, Ulsan, Mokpo, Daegu, Yecheon, Pohang, Gwangju, Sacheon) • March 2001: Opening of Incheon International Airport • 2001: Functions related to aircraft safety reinforced (Flight Safety and Flight Technology divisions dissolved; Flight Standards, Airworthiness, Qualification Management, and Accident Investigation divisions newly established) - Busan Regional Aviation Administration: Division-based structure changed to Office- and Bureau-based system (Management, Facility, Flight Inspection, Air Traffic Management divisions→Management Bureau (General Affairs, Accounting divisions), Airport Facilities Bureau (Facilities Division, Electricity and Communications Division, Aviation Inspection Division, Air Traffic Control Office) • Jan. 2002: Korea Airports Corporation Act enacted • 2002: Aviation Safety HQ established to increase professional expertise in the aviation safety field • 2002: Enforcement of the Aviation Safety and Security Act led to streamlining of the aviation-related organization by placing regional aviation administrations under the Aviation Safety HQ • 2006: Inauguration of Aviation and Railway Accident Investigation Bureau through merger of the Aviation Accident Investigation Bureau and the Railway Accident Investigation Bureau 			<ul style="list-style-type: none"> • Feb. 2008: Inauguration of the Ministry of Land, Transport and Maritime Affairs (MLTM) through merger of the Ministry of Construction and Transport and some sections of the Ministry of Fisheries and Maritime Affairs and the Ministry of Public Administration and Autonomy • August 2008: Incheon International Airport's 3rd runway constructed • May 2009: Organizational overhaul at MLTM through merger of divisions implementing similar functions, and inauguration of the Office of Aviation Policy, for effective implementation of national policy tasks. 			<ul style="list-style-type: none"> • 2013: MOLIT inauguration 	

Categories	1980s	1990s	2000s	2010s
<ul style="list-style-type: none"> • Period of continuous growth and internationalization (1988-1997) 	<ul style="list-style-type: none"> • Period of stable growth and advancement (1998-2003) 	<ul style="list-style-type: none"> • Period of leap forward and rapid change (2004-2007) 	<ul style="list-style-type: none"> • Period of stability and second leap forward (2008-Present) 	
<p>Deregulation in the aviation industry</p>	<ul style="list-style-type: none"> • Relaxation of standards for non-scheduled air transportation operators; license system→registration system (1999) • Change in the aircraft standard (50seater → 80 seater) (2003) • Introduction of continuous monitoring system for airlines and airports • Conclusion of air services accords at a rapid pace • Separation of aviation safety and aviation policy functions • Introduction of international standards for aviation safety policy 	<ul style="list-style-type: none"> • Aug. 2001: Korea downgraded to category 2 in FAA aviation safety assessment - Sept. 2001: Introduction of certificate and approved maintenance organization certificate systems; enactment of regulations concerning airworthiness standards publication and the duty to comply - Nov. 2001: Enactment of regulations for slapping fines on violations of flight certification and airworthiness standards • Aug. 2003: ICAO regulations strengthened on international business of wireless communications workers - Nov. 2005: Enactment of regulations for verifying spoken aviation English capability • 2004: ICAO 35th Assembly resolution; 2006: A recommendation on aviation safety management systems adopted at world aviation director generals' conference - March 2007: Enactment of regulations for establishing and operating aviation safety management systems • Acceptance of ICAO Annex 13 recommendations - June 2009: Enactment of regulations for aviation safety self-report 	<ul style="list-style-type: none"> • Further lifting of restrictions on air transport operators' market entry • Laying the basis for promoting the business of small airlines and more diversified forms of air transport • 3rd-phase construction of Incheon airport started to intensify the airport's competitiveness • Promoting the use of Gimpo Airport for short-haul international flights • Implementation of air transport user protection system 	
<ul style="list-style-type: none"> • Advent of an era of multiple airlines following the introduction of a competitive system • Domestic airfare system changed to a reporting system (1992) • Expansion of international routes • Reinforcement of airport facilities in preparation for internationalization of domestic airports (formulation of the Basic Plan for Airport Development, 1991) • Rapid growth in air traffic demand following overseas travel liberalization 	<ul style="list-style-type: none"> • 1992: FAA's IASA program launched • July 1993: Asiana plane crash on Mt. Ungeo near Mokpo Airport - Installation of marker beacon facilities - Securing the basis for aviation accident investigation • Aug. 1997: KAL plane crash on Guam - Sept. 1998: Screening procedures strengthened regarding airplane captain's operational qualifications related air routes; Making it mandatory to install mid-air collision prevention equipment on aircraft • 1998: At 32nd ICAO Assembly, resolutions adopted on mandatory inspection of aviation safety management status and the duty to correct deficiencies identified during inspections - Feb. 1999: Introduction of the incident report system - Jan. 1999: Implementation of the aviation safety inspector system; Employment of professional inspectors 	<ul style="list-style-type: none"> • July 1989: KAL plane crash on the high seas off Tripoli, Libya - Feb. 1991: Upward adjustment of fines for violation of maximum in-flight work-hour regulations for flight attendants • 1989: ICAO 29th Assembly adopts a recommendation for establishment of safety inspection organization 		
<p>Regulatory changes caused by aircraft accidents and international standards</p>				

Airports	<ul style="list-style-type: none"> • Growth period (1980s-1990s) • 1990: International Airport Authority→Korea Airports Authority (renaming) <ul style="list-style-type: none"> - Operational control of regional airports handed over to the authority - 1992: Gunsan Airport opened to civil aviation - 1997: Wonju Airport opened to civil aviation - 1997: Cheongju International Airport opened to civil aviation • 1992: Inauguration of New Airport Construction HQ within Korea Airports Authority <ul style="list-style-type: none"> - Start of 1st phase new airport construction • 1994: Business of New Airport Construction HQ transferred to Metropolitan New Airport Construction Authority 	<ul style="list-style-type: none"> • Advancement period (2000-) • 1999: Metropolitan New Airport Construction Authority renamed Incheon International Airport • 2001: Opening of Incheon International Airport <ul style="list-style-type: none"> - 2001-2008: 2nd phase construction - 2009-2017: 3rd phase construction • 2002: Korea Airports Authority→ Korea Airports Corporation (renaming)
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Significance of Korea's Aviation Organization Development

The Korea Transport Institute (KOTI) is a comprehensive research institute specializing in national transport policies. As such, it has carried out numerous studies on transport policies and technologies for the Korean government.

Based on this experience and related expertise, KOTI has launched a research and publication series entitled "Knowledge Sharing Report: Korea's Best Practices in the Transport Sector." The project is designed to share with developing countries lessons learned and implications experienced by Korea in implementing its transport policies. The 21th output of this project deals with the theme of "Significance of Korea's Aviation Organization Development."



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