JAL Group Safety Report
FY2021

Japan Airlines Co., Ltd.

J-AIR Co., Ltd.

Japan Transocean Air Co., Ltd.

Japan Air Commuter Co., Ltd.

Ryukyu Air Commuter Co., Ltd.

Hokkaido Air System Co., Ltd.

ZIPAIR Tokyo Inc.

SPRING JAPAN Co., Ltd.

JAPAN AIRLINES

The JAL Group Safety Report FY2021 is a safety report prepared by the eight JAL Group airlines in accordance with Article 111, Paragraph 6 of the Civil Aeronautics Act.

Preface

On behalf of the JAL Group, I would like to express our sincere appreciation for your continued support and patronage of the "Wings of the JAL Group."

In FY2021, the COVID-19 pandemic continued and seriously restricted the movement of people and goods. It was also a year of renewed awareness of various risks such as restrictions on flights to Europe due to the Ukraine-Russia situation.

Even in these circumstances, we maintained our air transportation network, which is essential for society, and transported COVID-19 vaccines and provided air services as an alternative to ground transportation in a disaster to fulfill our mission as a public transportation company that supports society.

The environment surrounding the airline industry is expected to constantly change from moment to moment. However, safety is the basis for business continuity of the JAL Group and this will remained unchanged no matter what the circumstances are. We will strive to fulfill our responsibilities as a social infrastructure and lifeline, and uphold safety as our highest priority as we work together to build a society where everyone can live safely and with peace of mind.

Representative Director, President
Japan Airlines Co., Ltd.

Names and Abbreviations of JAL Group Airlines

Japan Airlines Co., Ltd.	: JAL
J-AIR Co., Ltd.	: J-AIR
Japan Transocean Air Co., Ltd.	: JTA
Japan Air Commuter Co., Ltd.	: JAC
Ryukyu Air Commuter Co., Ltd.	: RAC
Hokkaido Air System Co., Ltd.	: HAC
ZIPAIR Tokyo Inc.	: ZIP
SPRING JAPAN Co., Ltd.(*)	: SJO

(*)A consolidated subsidiary from June 29, 2021

Contents

1. Fundamental Safety Policy

The JAL Group has established the Safety Charter as the fundamental policy for safety under the Corporate Policy. Representing top management's commitment to safety, it is included in the Safety Management Manual and has been reported to the Minister of Land, Infrastructure, Transport and Tourism in accordance with the Civil Aeronautics Act.

All JAL Group employees carry a card printed with the Safety Charter and perform their daily duties as professionals in conformance with the Safety Charter.

Safety Charter

Safety: The protection of lives.
This is the commitment and basic foundation of business continuity for the JAL Group. We take to heart our mission and responsibility as safety professionals to ensure a safe operation on every flight with the best of our knowledge, skills and abilities.

To accomplish this, we will act according to the following principles.

- Stop immediately when safety concern arises.
- Comply with rules and strictly follow standard operating procedures.
- Always check and confirm; never rely on assumptions.
- Promptly communicate information without omission to ensure safety.
- Deal with problems quickly and appropriately without underestimation.

2. Review of FY2021

(1) Administrative Dispositions and Administrative Guidance

The JAL Group did not receive any Administrative Dispositions (*1) or Administrative Guidance (*2) in FY2021.

(*1) Administrative Disposition: Issued to business operators when the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) deems it necessary to secure safe transportation. Article 112 (Business Improvement Order), Article 113 -2 - (3) (Rescission of permission for entrustment of management of business and order to improve management of entrusted business) and Article 119 (Suspension of Business and Cancellation of License) of the Civil Aeronautics Act fall under this category.
(*2) Administrative Guidance: Issued to business operators when requested by the MLIT to improve their operations, even in cases that do not apply to an Administrative Disposition. A Business Improvement Advisory and Administrative Warning fall under this category.

(2) Aircraft Accidents and Serious Incidents

① Aircraft Accidents and Serious Incidents

In FY2021, the JAL Group reported two aircraft accidents (*1) and one serious incident (*2). The Japan Transport Safety Board (JTSB) of the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) is conducting investigations to determine the cause of these incidents. The JAL Group is providing its full cooperation in the investigations and has established an in-house accident investigation committee to implement measures to prevent recurrence.

	2021	2020
Aircraft accident	2 (0.008)	0 (0.000)
Serious incident	1 (0.004)	1 (0.006)
Total	241,006	181,794

( ): Number of incidents per 1,000 flights.

(*1) Aircraft accident: A situation arising from the operation of an aircraft and resulting in fatal or serious injury, an aircraft crash, collision, fire, damage to the aircraft during flight requiring major repair, or other situations classified as an aircraft accident by the MLIT.
(*2) Serious incident: An incident not amounting to an aircraft accident, but where a recognized danger of an accident occurring was present, such as a runway excursion, an emergency evacuation or similar incident, fire or smoke on board, abnormal decompression, encounter with abnormal weather conditions, or other situations classified as a serious incident by the MLIT.

a. Aircraft Accident

Passenger aboard JL2326 injured due to shaking of aircraft

A passenger aboard JL2326 (from Konotori Tajima Airport to Osaka International Airport) operated by JAC on February 15, 2022 suffered a compression fracture of the second lumbar vertebra from a very hard fall due to sudden turbulence during cruising. On April 12, 2022, the case was classified as an aircraft accident by the Japan Civil Aviation Bureau (JCAB), MLIT.

Cabin attendant aboard JL669 injured due to shaking of aircraft

A cabin attendant aboard JL669 (from Tokyo International Airport to Oita Airport) on March 26, 2022 fell and suffered a sacral fracture due to sudden turbulence during cruising. The case was classified as an aircraft accident by the JCAB, MLIT on March 28, 2022. None of the passengers were injured.

b. Serious Incident

Runway incursion on landing runway of JL3653

On January 8, 2022, flight JL3653 (from Fukuoka Airport to Kagoshima Airport) operated by JAC was approaching the runway after being cleared for landing when another aircraft, which had been instructed to hold short of the runway, entered the runway. JL3653 immediately performed Go Around in accordance with instructions of air traffic control (ACT), continued flying according to their instructions, and landed after receiving landing clearance. On January 8, 2022, the case was classified as a serious incident by the JCAB. None of the passengers or crew members were injured.

② Aircraft Accidents and Serious Incidents in previous years

The following two investigation reports were released.
（For details, please check the JAL's website.）

a. Aircraft Accident

Cabin attendant injured due to shaking of Japan Air Commuter flight JC3763
(Date of occurrence: October 12, 2019, Date of publication: July 29, 2021)

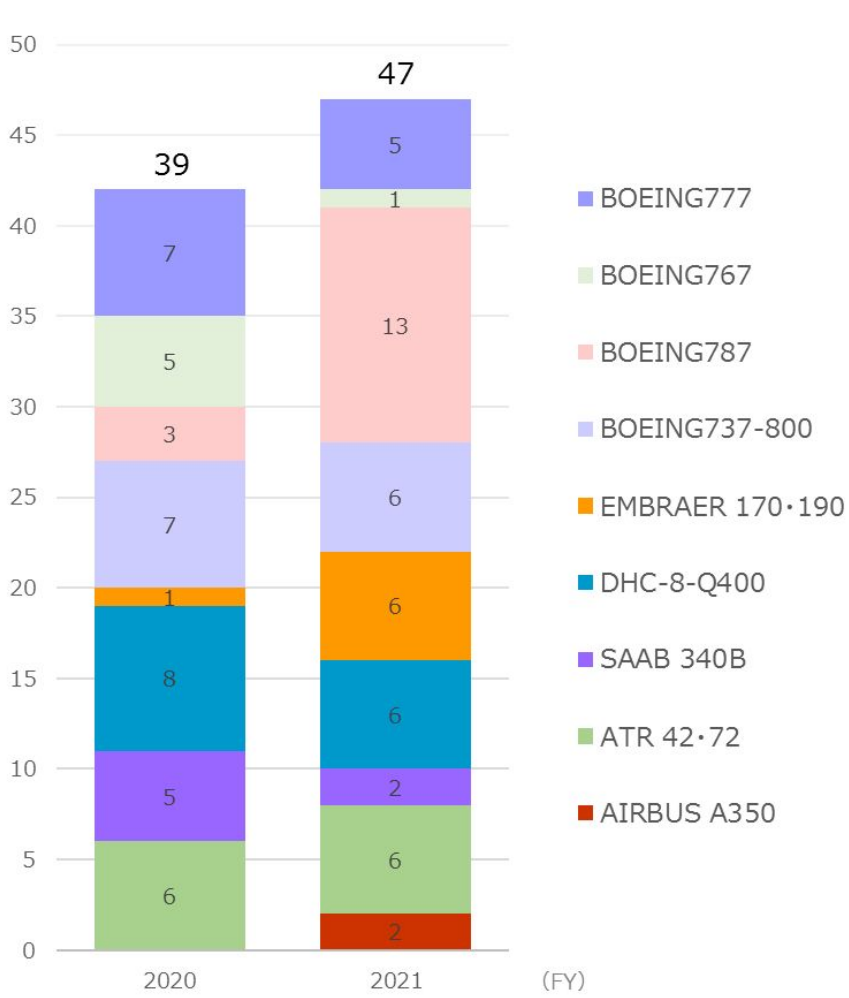
b. Serious Incident

Runway excursion of Japan Air Commuter flight JC3830
(Date of occurrence: January 8, 2020, Date of publication: March 24, 2022)

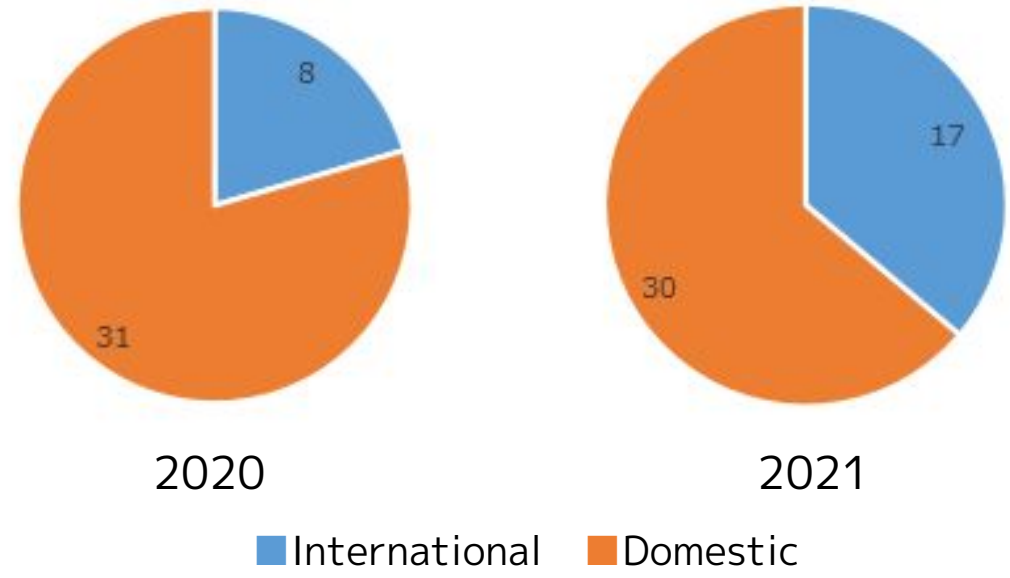
(3) Irregular Operations

In FY2021, 47 irregular operations(*) were reported, of which 32 cases were Air Turn Back to the departure airport, eight diversions, six runway closures and one landing requiring priority handling by air traffic control.
By aircraft type, the number of irregular operations of the BOEING 787 and the EMBRAER E170 and E190 increased. We promptly identified the cause of each occurrence, implemented measures and re-evaluated the effectiveness of past measures.

■Incidents by aircraft type



■Incidents by domestic and international flight

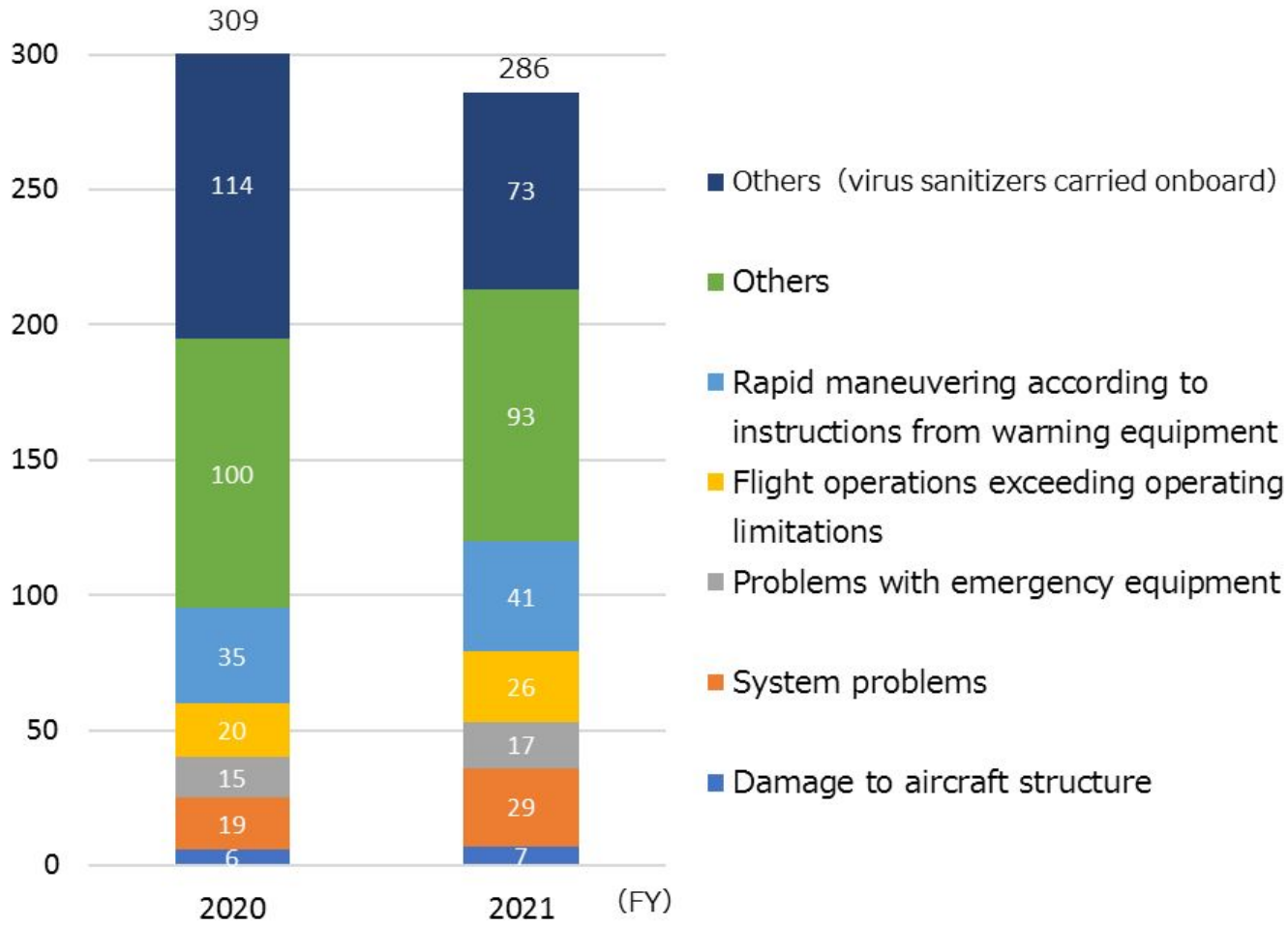


(*) Irregular Operations: A situation in which partial malfunction of multiple aircraft systems occur, for example, and the pilots respond according to the manual and return to the airport to ensure safety, resulting in a schedule change including the destination (excluding bird strike, lightning strike, etc.). In general, it is not a situation that immediately affects safety of operations.

(4) Safety Events

① Safety Events

In FY2021, the number of safety events(*) decreased by 23 from the previous year to 286 due to a decrease in events classified in Others (virus sanitizers carried on board). For details, refer to "③ Main Cases and Countermeasures" starting on page 8.



(*) Safety Events (mandatory occurrence report): Article 111-4 of the Civil Aeronautics Act and Article 221-2-3 and 4 of the Ordinance for Enforcement of the Civil Aeronautics Act mandate reporting to the MLIT (This report uses the term Safety Events), and the following situations are applicable. Accidents specified in each item of Article 76 (1) of the Civil Aeronautics Act and situations (serious incident) in Article 76 (2) of the Act do not fall under this category. Generally speaking, they do not immediately lead to an aircraft accident.

Classification of Safety Events and Examples
- Damage to aircraft structure
  [Example] Structural problems found during regular maintenance
- System problems
  [Example] Engine trouble, communications/electric system problems
- Problems with emergency equipment
  [Example] Malfunction of fire and smoke detectors
- Flight operations exceeding operating limitations
  [Example] Operations in exceedance of speed limits
- Rapid maneuvering according to instructions from warning equipment
  [Example] Operation according to instructions from the Traffic alert and Collision Avoidance System (TCAS)
- Others
  [Example] Regulations, Parts Departing from Aircraft (PDA), transport of dangerous goods

② Breakdown

		2021									2020 Total
		JAL	J-AIR	JTA	JAC	RAC	HAC	ZIP	SJO(*)	Total	
Damage to aircraft structure		1	0	0	2	4	0	0	0	7	6
Damage sustained (except bird strike and lighting)		0	0	0	0	1	0	0	0	1	1
Major repair		1	0	0	2	3	0	0	0	6	5
System problems		8	2	15	1	3	0	0	0	29	19
Breakdown	Engine	3	1	2	0	0	0	0	0	6	6
	Oxygen supply	0	0	0	0	0	0	0	0	0	0
	Navigation system	0	0	0	0	0	0	0	0	0	3
	Landing gear	1	0	0	0	0	0	0	0	1	4
	Fuel system	0	0	1	0	0	0	0	0	1	1
	Others	4	1	12	1	3	0	0	0	21	5
Problems with emergency equipment		1	1	11	0	4	0	0	0	17	15
Flight operations exceeding operating limitations		17	3	4	2	0	0	0	0	26	20
Rapid maneuvering according to instructions from warning equipment		28	7	1	3	0	0	1	1	41	35
Breakdown	Activation of ACAS	24	6	0	1	0	0	1	0	32	31
	Activation of GPWS	2	0	1	2	0	0	0	1	6	3
	Others	2	1	0	0	0	0	0	0	3	1
Others		123	10	6	11	8	2	4	2	166	214
Breakdown	Operations Manual	11	1	0	0	4	1	3	2	22	20
	Maintenance Manual	8	0	3	6	3	0	1	0	21	56
	Parts Departing from Aircraft	0	1	0	0	0	0	0	0	1	1
	Dangerous goods (excluding virus sanitizers)	42	2	1	1	1	0	0	0	47	15
	Dangerous goods (virus sanitizers carried onboard)	60	6	2	4	0	1	0	0	73	114
	Others	2	0	0	0	0	0	0	0	2	8
Total		**178**	**23**	**37**	**19**	**19**	**2**	**5**	**3**	**286**	**309**

(*) SJO is from June 29, 2021 to March 31, 2022.

③ Main Cases and Measures　( ) Number of cases in FY2020

【Damage to aircraft structure】 7 cases (6 cases)

Seven cases of work to repair peeling and corrosion of structural components found during routine maintenance or while parked on the ground on one BOEING 737-800, two ATRs and four DHC-8-Q400s.

【System problems】 29 cases (19 cases)

Details are as follows.

Engine 6 cases (6 cases)

Two cases related to the thrust reverser system of a BOEING 737-800 and four cases requiring Turn Back caused by bird strike and traces of bird strike found during post-arrival maintenance service. In all the cases, maintenance work was performed such as replacing the parts that caused the malfunction, inspecting operation, and confirming soundness of the aircraft system.

Oxygen supply 0 cases (0 cases)

No problems with the oxygen supply system

Navigation system 0 cases (3 cases)

No problems with the navigation system

Landing gear 1 case (4 cases)
Indication of failure of the landing gear retraction mechanism causing a BOEING 787 to perform Air Turn Back after takeoff. Maintenance work was performed such as replacing the part that caused the malfunction, inspecting operation, and confirming soundness of the aircraft system.

Fuel system 1 case (1 case)
Failure of some fuel gauges on a BOEING 737-800 during flight. Maintenance work was performed such as replacing the part that caused the malfunction, inspecting operation, and confirming soundness of the aircraft system.

Others 21 cases (5 cases)
Five cases of failure messages issued by the Traffic alert and Collision Avoidance System (TCAS)(*) on a BOEING 737-800. In the other cases, maintenance work was performed such as replacing the part that caused the malfunction, inspecting operation, and confirming soundness of the aircraft system.

(*) Traffic alert and Collision Avoidance System (TCAS): To prevent mid-air collision between aircraft, the TCAS automatically instructs pilots to take precautions (resolution advisory:RA) to avoid a collision when aircraft flying in the vicinity are judged to be closer than a specified distance. All JAL Group aircraft are equipped with the TCAS.

【Problems with emergency equipment】 17 cases (15 cases)

In all 17 cases, measures were taken such as replacing the malfunctioning parts and inspecting the aircraft.

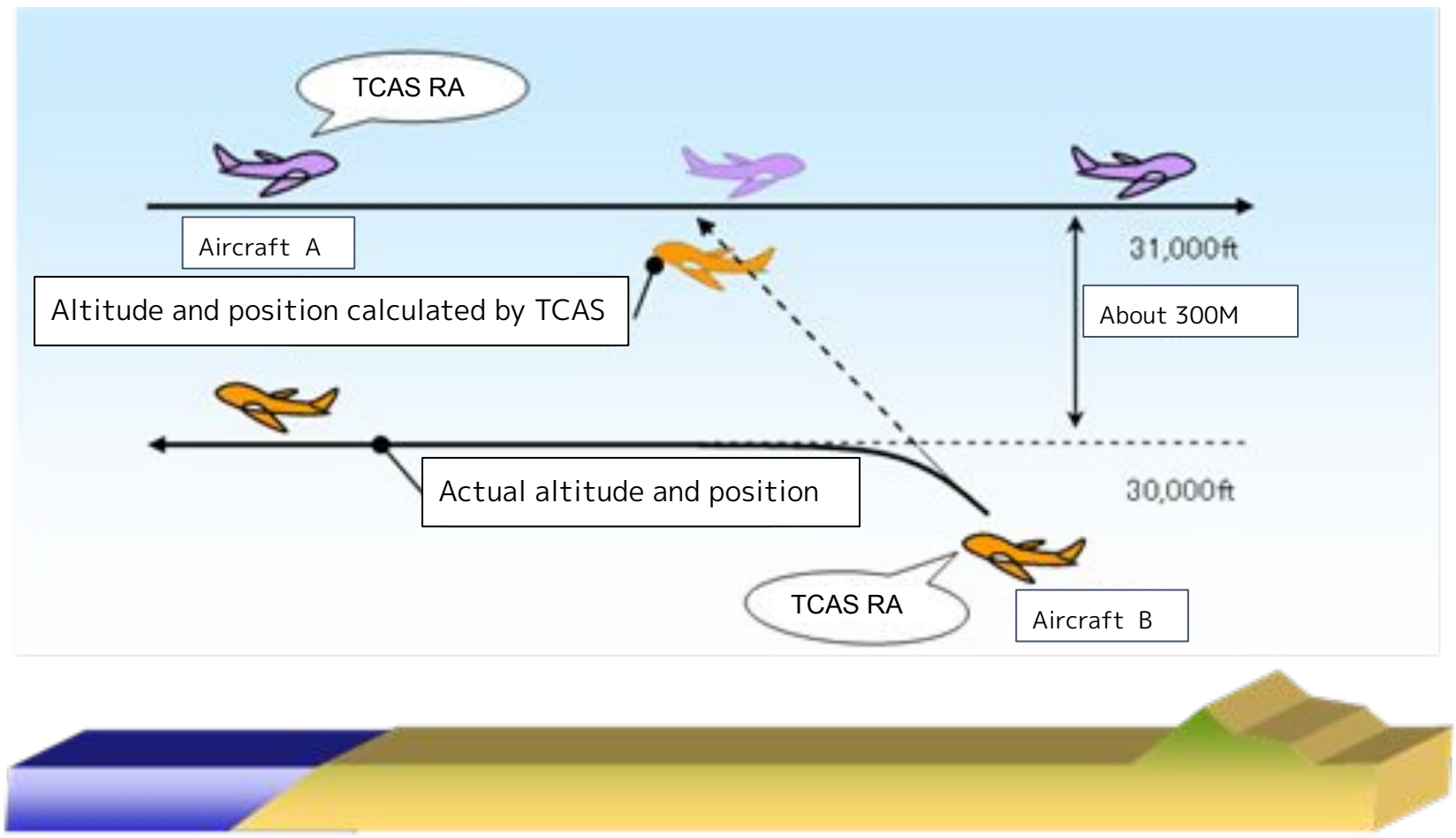
【Flight operations exceeding operating limitations】 26 cases (20 cases)

There were 12 cases of exceedance of operating limitations, nine cases of altitude or route deviation from ATC instructions, four cases of route deviation due to flight data input error, and one temporary exceedance of speed limitations. We confirmed the soundness of the aircraft and took measures to inform and alert the public about these cases.

【Rapid maneuvering according to instructions from warning equipment】

41 cases (35 cases)

In 32 cases, the pilots responded according to the TCAS Resolution Advisory (RA). The TCAS may activate depending on the position and speed of other aircraft even when the aircraft is operated normally (*1) according to ATC instructions. It is designed so that appropriate maneuvering by pilots in accordance with TCAS instructions will not cause a safety event. In each of the 32 cases, the pilots responded appropriately to TCAS instructions. In six cases, the Ground Proximity Warning System (GPWS) (*2) was activated. The GPWS may activate depending on the relationship between the flight path and terrain features. It is designed so that appropriate maneuvering by pilots in accordance with GPWS instructions will not cause a safety event. In each of the six cases, the pilots responded appropriately to GPWS instructions. In three cases, takeoff was aborted, but in every case, the pilots responded appropriately to instructions from the warning equipment.



(*1) Example of TCAS activation in normal operations:
Aircraft A is cruising at an altitude of 31,000 feet (about 9,300 meters) and Aircraft B is expected to climb to 30,000 feet (about 9,000 meters) and then to level flight, so there is no risk of collision between the two aircraft. However, the TCAS cannot recognize that Aircraft B is scheduled to level flight, so it issues an evasion instruction for the safety of both aircraft and to eliminate the possibility that Aircraft B may continue to climb and approach Aircraft A.

(*2) Ground Proximity Warning System: A device that gives warning when an aircraft approaches ground surface or ocean surface. The E-GPWS (Enhanced GPWS) is a developed model that has a worldwide terrain, airport and obstacles database. All JAL Group aircraft are equipped with the E-GPWS.

【Others】 166 cases (214 cases)

There were 120 reports of transportation of dangerous goods (lithium-ion batteries, coolants, insecticides, virus removal/sterilization products, etc.). The number of virus sanitizers carried onboard decreased as a result of alerting passengers of restricted carry-on items over JAL's website and other measures.
In addition, 22 cases related to flight management including crew time management, training management and flight planning, and 21 cases related to maintenance management including maintenance check items and inspection intervals. In response, we confirmed safety by re-inspecting the aircraft as well as alerting staff through notices and reviewing manuals.

3. Safety Targets

We established JAL Group safety targets in accordance with the FY2021-2025 Medium Term Management Plan and made efforts to achieve them.

Vision

Accumulate safety layers and realize a safe and secure society as a leading company of safety

Numerical Targets

Zero aircraft accidents and zero serious incidents

Action Targets

1. Use digital technology, expand data collection, deepen analysis, and thoroughly enforce measures

We will proactively apply new digital technology to safety measures to speed up data collection and improve analytical skills. Moreover, we will collect and apply wide-ranging safety information to our safety measures.
We will also actively participate in technological studies by manufacturers to improve our technical capabilities and strengthen measures.

2. Develop human resources who think and act on the basic foundation of safety

Due to the decrease in employees who experienced accidents and the increase in employees who have never experienced one, we will continue to pass on their experiences, feelings, and thoughts on safety at the time of the accident to the next generation, and by so doing, we will develop human resources who will always act on the basic foundation of safety.
We will also draw on lessons learned from the alcohol-related issues and instill a strict collective norm on alcohol consumption.

3. Be prepared for changes in the environment affecting aviation in coordination with internal and external parties

In order to protect our customers and employees from the increasingly diverse threats of terrorism and other threats, we will take measures by deepening cooperation with external organizations. As ensuring safety is essential to the development of air mobility, we will work to build a solid safety foundation. In addition, we will ensure the safety and security of our customers and employees from the increasingly severe disasters that have occurred in recent years, and be prepared to minimize damage and achieve the early recovery of operational functions.

(1) Achievement of FY2021 Safety Targets

Achievement of Numerical Targets

Two aircraft accidents and one serious incident(*) occurred against the target of zero aircraft accidents and zero serious incidents. As a result, we did not achieve the target.
Please refer to page 5 “Aircraft Accidents and Serious Incidents” for more information.

(*)In this case (JL3653), another aircraft, which was instructed to hold, entered the landing runway of JL3653 which was on approach for landing after being cleared by ATC.

Achievement of Action Targets

The following 3 action targets and 16 related measures were implemented in FY2021.

1. Use digital technology, expand data collection, deepen analysis, and thoroughly enforce measures

01 Share the latest weather information, including turbulence en route

To prevent injuries caused by turbulence en route, we introduced a system using Wi-Fi communication to share the latest weather information in real time, including turbulence en route.

02 Promote data-based fatigue risk management (FRM)

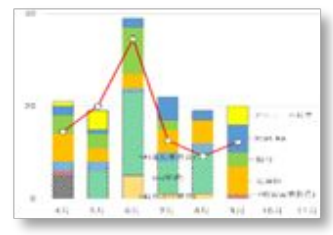
We completed preparations and started trials of a Fatigue Dashboard (fatigue management index), providing various information on fatigue risks of crew using an index scale. We also assessed fatigue assessment software for risk management to reduce events caused by fatigue risk.

03 Strengthen predictive maintenance

To improve aircraft quality, we developed failure prediction logic using flight data, and studied and verified new technologies such as AI for predictive maintenance. We also checked the status and needs of each airline and created an action plan, with a view to expanding it to each Group airline.

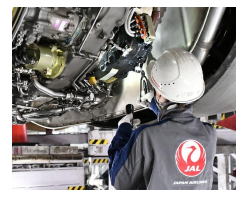
04 Detect risks by expanding Safety Performance Indicators (SPI) and analysis of safety information

We established SPIs(*1) and built a system to more extensively monitor the status and results of safety activities and safety events and started analysis. We also studied analysis technologies to detect “hidden risks" from safety information in the database. Based on our studies, we decided on a policy to start text mining and made preparations for implementation.



05 Strengthen measures to prevent Parts Departing from Aircraft (PDA)

The number of CAT I/II(*2) incidents decreased significantly from the previous fiscal year through such measures as improvements to prevent PDA, and the use of hazard maps for signs of PDA and work cards to prevent PDA post maintenance work. We will continue to take action, such as further using the PDA database and strengthening measures to prevent engine malfunctions.



06 Strengthen assessment of cases at other airlines and strengthen measures

We have began evaluation of accident investigation reports and mandatory reports of other airlines with the aim to utilize them in our own risk assessments and measures.

07 Detect potential risks by improving internal audits

To identify potential safety events hidden in daily operations, we have begun studies to build an internal audit system to evaluate the effectiveness of the framework in addition to existing standard conformity audits.

08 Permeate human factors throughout the organization and deepen analysis methods

We held workshops and education courses to promote the use of the Human Factors Analysis and Classification System (HFACS)(*3). We also started to develop a database of analysis results to statistically analyze past human error factors, leading to effective measures. Furthermore, we built an interviewer training program in order to extensively identify background factors of human errors, and preparations, which is ready to put into operation.

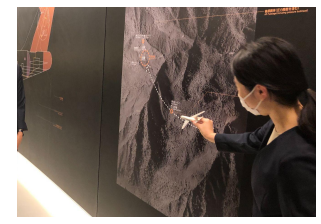
2. Develop human resources who think and act on the basic foundation of safety

09 Further pursue an effective safety culture according to changes with the times

We conducted Safety Awareness Education to pass on lessons learned from accidents and to maintain a high level of safety awareness of all employees, and reviewed education on the Three Actuals Principle(*4) according to career milestones. To develop human resources who think and action on their own, we expanded voluntary educational programs, such as cross-industry exchange seminars.

10 Develop human resources to pass on lessons in each workplace

To develop human resources to pass on lessons learned, we started a program for employees from a wide range of workplaces to work together in activities, such as climbing Mt. Osutaka to console the victims and running the Safety Promotion Center.



11 Continuously conduct campaigns and education

The JAL Group continued to take steps to foster an organizational culture of thinking from the basic foundation of safety with a special emphasis on the drinking issue. Awareness and knowledge reforms were promoted. To raise awareness, we held an original campaign for all JAL Group employees, lectures on proper alcohol consumption for the entire airline industry in cooperation with the Scheduled Airlines Association of Japan, and direct dialogue with our executives. To increase knowledge, we conducted education and workshops by specialists to reaffirm our knowledge on alcohol. In addition, to lay the foundation for establishing a strict collective norm on alcohol consumption, we strengthened our testing system by introducing a new alcohol testing system using facial recognition technology. Furthermore, we built a pilot support program (see 12 on the right) to maintain good mental health of pilots.
Through these initiatives, we endeavored to cultivate an organizational culture and develop human resources that think and act with safety as a major premise. As a result alcohol has not been detected on staff since October 2019.

12 Build a pilot support program

To support mental and physical health issues of crew who work irregular hours and in special work environments, we established and started trials of a system for anonymous consultation of worries and concerns (JAL Peer Support Program) . As a result, we confirmed its effectiveness and began preparations for full-scale operation in JAL and expansion to Group airlines.

3. Be prepared for changes in the environment affecting aviation in coordination with internal and external parties

13 Introduce advanced security inspection equipment

We began updates to advanced security inspection equipment at airports in Japan. We launched a facial recognition system for HND/NRT international flights and tested AI-based security inspection equipment cooperatively with JCAB and manufacturers. In response to the revised Civil Aeronautics Act, effective March 10, we conducted public-private sector activities to disseminate it, educated staff who are authorized to give instructions, and established procedures on assigning such staff.

14 Promote security risk management activities with the industry working as one

To prepare for the diversifying threat of terrorism, we regularly exchanged information on aviation security and risk management with other companies in Japan and worked together on common issues. We have collected information on international affairs from a wide range of sources, including aviation security information agencies and foreign carriers, and utilized the information for risk assessment. Furthermore, we are working Group-wide to strengthen security against cyber terrorism.

15 Build a safety foundation for the drone business

Based on our aviation experience, we conducted risk assessment based on in-flight risk scenarios that were identified in past drone tests. We also participated in committees such as the JCAB-led System Design Working Group, and compiled requirements for ensuring flight safety.

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16 Strengthen disaster prevention and business continuity management in the event of a disaster

We conducted regular drills every quarter to minimize damage and quickly restore the transport infrastructure and to strengthen business continuity management.

(*1) Safety Performance Indicator (SPI): An indicator of various safety data. By monitoring SPIs, we gain a broad and speedy understanding of growing safety risks.
(*2) CATI (Category I): Parts with a size (area) more than 1000 ㎠ or a weight more than 1 kg (regardless of material).
CATII (CategoryII): Non-metallic parts whose size (area) is 100 ㎠ or more and less than 1000 ㎠, or whose weight is 0.2 kg or more and less than 1 kg, or metallic parts whose weight is 0.1 kg or more and less than 1 kg, etc. The total loss of rubber seals and lights with a length of 100 cm or more shall be treated as Category II regardless of weight, material and size.
(*3) Human Factors Analysis Classification System (HFACS): A method of preventing human error through the analysis of not only unsafe behavior but also potential causes of events, and correction of procedures, work environments, and organizational factors.
(*4) The Three Actuals Principle: A concept advocated by Prof. Yotaro Hatamura of the Safety Advisory Group that the essence of an accident can be understood by visiting the “actual place” (the accident site), seeing the “actual object” (aircraft wreckage, personal belongings of the victims, etc.), and listening to stories from the “actual people” (those who experienced the accident).

(2) FY2022 Safety Targets

We are committed to achieving our numerical targets of "Zero Aircraft Accidents and Zero Serious Incidents" and the following action targets initiatives.

1. Use digital technology, expand date collection, deepen analysis, and thoroughly enforce measures

01 Share the latest weather information including turbulence en route

・Expand the system for automatic information sharing of turbulence en route in real time
・Strengthen measures to prevent injuries by shaking from turbulence

02 Promote date-based fatigue risk management (FRM)

・Develop a Fatigue Dashboard (fatigue management indicators)
・Introduce a risk management process using fatigue assessment software
・Prevent failures due to fatigue risk

03 Strengthen predictive maintenance

・Improve aircraft quality by expanding predictive maintenance with new technologies

04 Detect risks by improving Safety Performance Indicators (SPI) and analysis of safety information

・Establish SPIs and share safety information
・Analyze with analytical techniques which can handle wide-ranging safety information
・Identify potential safety risks

05 Strengthen measures to prevent Parts Departing from Aircraft (PDA)

・Further use the PDA database
・Strengthen measures against engine failures

06 Strengthen assessment of cases at other airlines and strengthen measures

・Collect a wider range of information on unsafe events at other companies
・Conduct risk assessment and enforce measures to proactively prevent incidents

07 Detect potential risks by improving internal audits

・Establish rules for evaluating effectiveness and audit standards based on the results of external surveys
・Conduct effectiveness audits to detect potential hazards

08 Permeate human factors throughout the organization and deepen analysis methods

・Store analysis results in a database and conduct statistical analysis
・Start an interviewer training program
・Start studies on Safety2(*)

2. Develop human resources who think and act on the basic foundation of safety

09 Further pursue an effective safety culture according to changes with the times

・Expand voluntary educational programs
・Launch a new Grade-based education program
・Implement measures to study and practice our safety culture

10 Develop human resources to pass on lessons in each workplace

・Expand participating organizations in memorial mountain climbing and operating the Safety Promotion Center

11 Continuously conduct campaigns and education

・Conduct awareness and knowledge education on alcohol
・Continue campaigns
・Establish a strict collective norm on alcohol consumption

12 Build a pilot support program

・Expand the JPSP (JAL Peer Support Program) to Group airlines

13 Address organizational issues of Group airlines

・Launch initiatives to identify and resolve organizational issues affecting safety
・Efforts and support to solve organizational issues of Group airlines

3. Be prepared for changes in the environment affecting aviation in coordination with internal and external parties

14 Introduce advanced security inspection equipment

・Continue to upgrade to more advanced aviation safety inspection equipment
・Participate in trials of inspections using AI technology

15 Promote security risk management activities with the industry working as one

・Implement risk management in collaboration with external aviation security officers
・Enhance the information gathering system to make prompt decisions and responses

16 Build a safety foundation for the drone business

・Implement drone control, flight control, and operations control in test flights, and risk assessment based on data
・Build a system to ensure high safety utilizing JAL's know-how

17 Strengthen disaster prevention and business continuity management in the event of a disaster

・Continue to conduct disaster prevention drills to minimize damage and quickly restore operations

(*) Safety 2: The idea that people can maintain their safety function by responding flexibly to changes in the environment. Instead of the traditional idea of reducing the number of human failures (Safety 1), Safety 2 increases safety by increasing the number of successes.

4. Safety Management System

(1) Safety Management Policy

The JAL Group has established the Safety Charter as the fundamental policy for safety under the Corporate Policy.
Every employee, from top management to frontline employees, has a correct understanding of the concept and policy of safety management in accordance with the Safety Charter and performs their everyday work accordingly.

① Operating Policy of the Safety Management System

The Safety Management System (SMS) is based on four pillars: Safety Policy and Objectives, Safety Risk Management, Safety Assurance, and Safety Promotion. Management declares the safety policy, which is communicated to all Group companies, safety targets are established each fiscal year, and all JAL Group employees including management perform their duties in accordance with the SMS to maintain and enhance flight safety of the entire JAL Group.

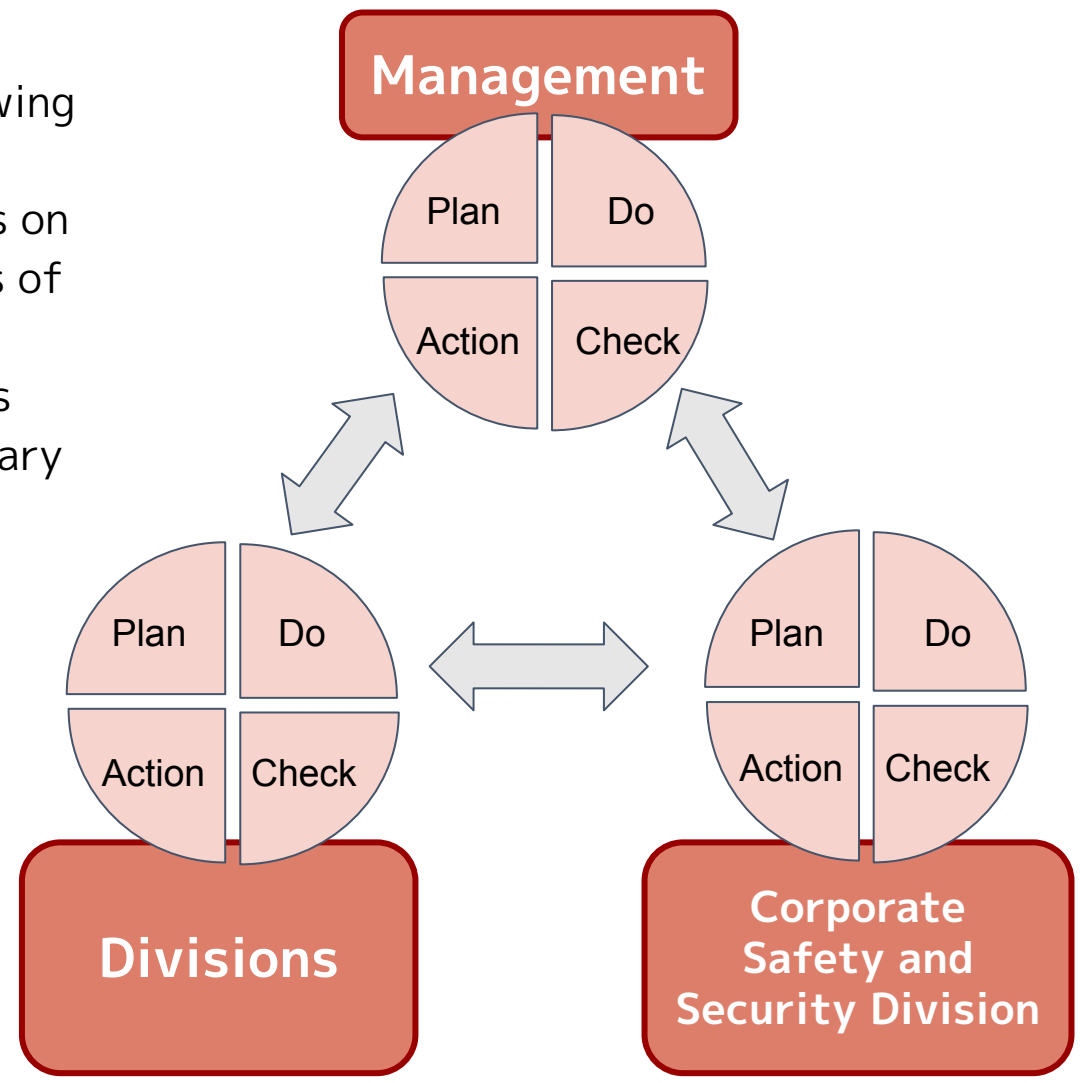
Furthermore, to maintain high levels of safety, management, each division, and the Corporate Safety and Security Division implement the PDCA cycle regarding safety and link the cycle across organizations to ensure that the SMS functions properly and safety is continuously improved upon.

Management

Management implements the SMS by taking the following actions in the Group Safety Enhancement Council: establish safety management policies, receive reports on the achievement status of safety targets, the results of safety audits, the progress of safety measures, the occurrence of aircraft accidents and serious incidents and the status of preventive measures, decide necessary measures as management, and issue instructions to implement those measures.

Divisions

Each division implements the SMS, presents status reports to management and the Corporate Safety and Security Division, and makes necessary improvements based on results of PDCA and instructions from management and the Corporate Safety and Security Division.



Corporate Safety and Security Division

The Corporate Safety and Security Division implements the SMS at the Group level and makes improvements based on instructions from management and status reports from divisions. It submits reports on SMS implementation and improvement to management, identifies issues facing each division, and gives instructions to correct the situation.

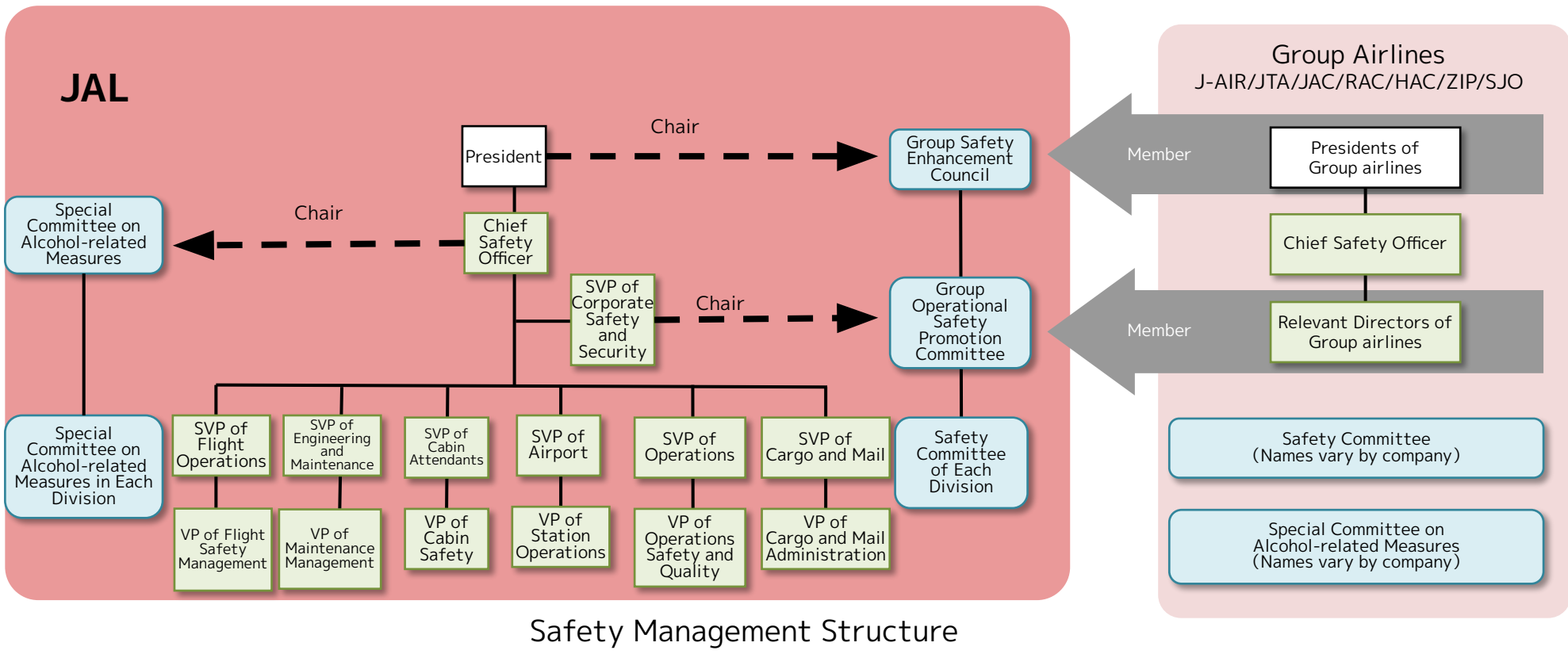
② Establishment and Management of Manuals（SMS Documentation)

The JAL Group has established and documented safety regulations and operating standards and procedures in accordance with applicable laws, regulations, and international standards, and has a system in place to ensure that all relevant employees are aware of these matters.

(2) Safety Management Structure

① Safety Management Structure

To maintain uniform and high safety standards throughout the JAL Group, each Group airline including JAL implements the SMS in accordance with shared policies confirmed by the Group Safety Enhancement Council. The Group Operational Safety Promotion Committee is a sub-committee for maintaining and strengthening safety coordination between divisions and Group airlines.
For more information about each committee, please refer to “Safety Management Structure of Each Group Airline” on page 18.



Safety Management Structure

② President

The President assumes final responsibility for safety in the SMS.
The President of each company declares and disseminates safety policies throughout the company and secures the resources necessary for the SMS to function effectively.

③ Chief Safety Officer

In accordance with Article 103-2 of the Civil Aeronautics Act, each JAL Group airline appoints a person who is responsible and authorized to oversee safety management, make important management decisions on safety policies and safety investments, and report important safety matters to the President (“Chief Safety Officer”). The Chief Safety Officer is appointed by the President of each company.

The Chief Safety Officer of each JAL Group airline is as follows.
(April 1, 2021 – March 31, 2022)

Company	Chief Safety Officcer	
Japan Airlines	Representative Director, President	AKASAKA Yuji
J-AIR	Managing Director	KURONO Kotaro
Japan Transocean Air	Director, Managing Executive Officer	OSHIRO Yoshinobu
Japan Air Commuter	Director	TOMITA Shinobu
Ryukyu Air Commuter	Managing Director	KOMURO Toshinobu
Hokkaido Air Commuter	Executive Officer	YOSHIDA Satoshi
ZIPAIR Tokyo	Director	YOSHIZAWA Kenichi
SPRING JAPAN	Director, Executive Vice President	SHIN Toshinori

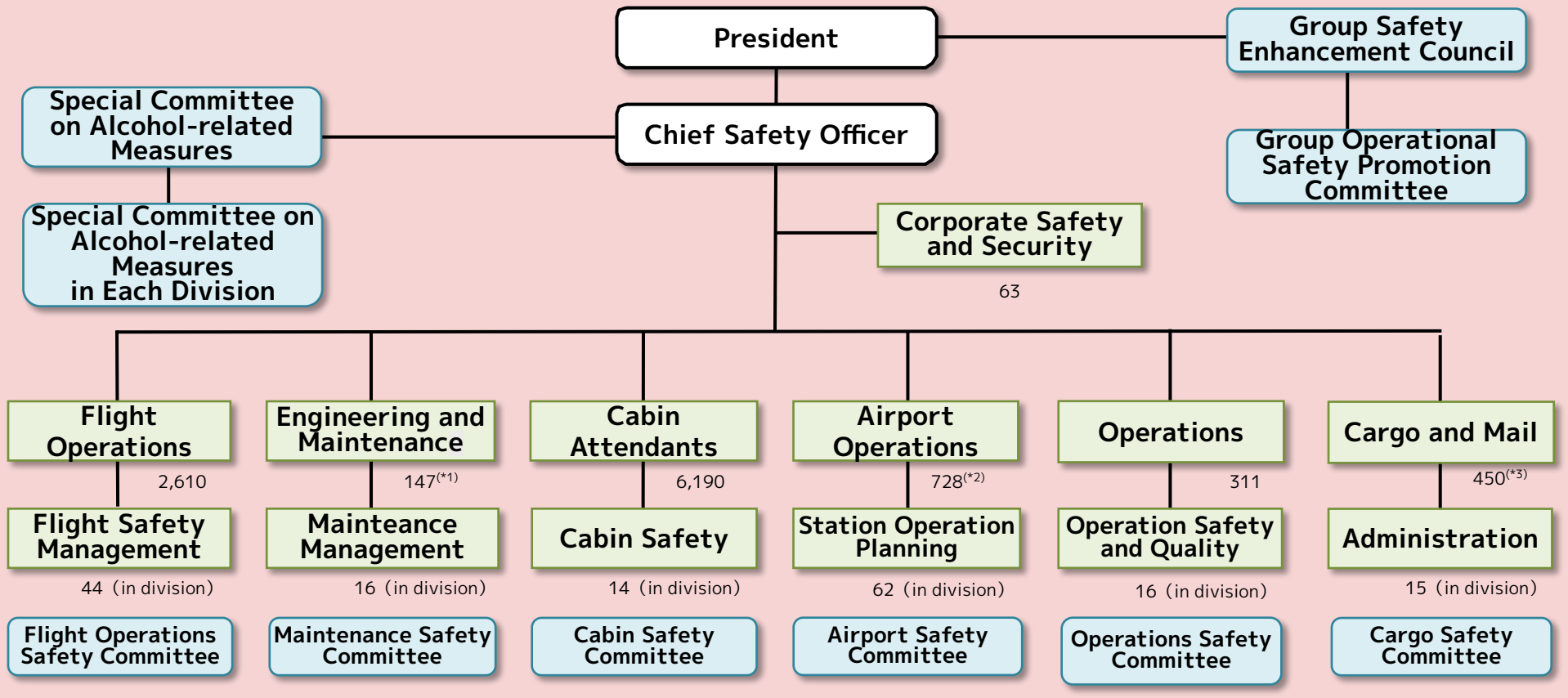
④ Safety Management Structure of Each Group Airline

Organizations and employees: as of March 2022 (excluding employees on leave)

JAPAN AIRLINES

a. Japan Airlines

(a) Safety management structure



(*1) The Engineering and Maintenance Division has 4,333 employees including JAL Engineering employees. (Refer to page 27 and 28 for details of Outsourcing of Aircraft Maintenance.)
(*2) The Airport Operations Division has 8,695 employees including employees of 11 JAL Group companies such as JAL SKY and JAL Ground Service.
(*3) The Cargo and Mail Division has 1,442 employees including employees of six Group companies such as JAL Cargo Service.

(b) Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants and dispatchers

	Number	Organization	Remarks
Pilots	2,277	Flight Operations	
Maintenance engineers	136(*4)	Engineering and Maintenance	Includes 110 qualified maintenance engineers (*5)
Cabin attendants	6,183	Cabin Attendants	
Dispatchers	83(*6)	Operations	

(*4) There are 3,083 employees engaged in maintenance including JAL Engineering employees, of which 1,757 are qualified maintenance engineers.
(*5) National qualifications of maintenance engineers are First Class Aircraft Maintenance Technician, First Class Aircraft Line Maintenance Technician and Aircraft Overhaul Technician.
(*6) There are 83 dispatchers including employees of JAL SKY.

(c) Safety management organizations

Corporate Safety and Security Division

The Corporate Safety and Security Division is responsible for overseeing safety enhancement of Japan Airlines and the JAL Group.

Flight Operations, Engineering and Maintenance, Cabin Attendants, Airport Operations, Operations, Cargo and Mail Divisions

The executive officers of production divisions chair the safety committee of their respective division, make overall judgment and decisions on operations affecting safety under their command, and report to the President and the Chief Safety Officer of the company.

General Affairs Division

The General Affairs Division has established Disaster Handling Regulations to mitigate and prevent the spread of damage, maintain business activities, and resume operations as quickly as possible after a disaster. It provides disaster prevention and response measures to ensure the safety of our employees, passengers, visitors, and directors, and preserve JAL Group assets in the event of a natural disaster such as fires, explosions, wind, flood and snow damage, earthquakes and tsunami triggered by an earthquake, volcanic eruption, and other abnormal phenomena.

(d) Safety committees

The JAL Group has established various safety committees to allow us to understand the status of daily operations and make necessary improvements based on information of events, in coordination with each function and organization.

Group Safety Enhancement Council

The Group Safety Enhancement Council has been established to ensure flight safety and promote safety management in accordance with the JAL Group Corporate Policy. It is composed of the President (Chair), the Chief Safety Officer, executive officers appointed by the President, and Presidents of Group airlines.

Group Operational Safety Promotion Committee

The Group Operational Safety Promotion Committee, a sub-committee of the Group Safety Enhancement Council, has been established to improve safe air transport and safety of the JAL Group by maintaining and strengthening coordination of safety between divisions and Group airlines. It is composed of the Vice President of JAL's Corporate Safety and Security (Chair), Vice Presidents of JAL safety management departments appointed by the Chair, and the Chief Safety Officer or executive officer in charge of safety of each Group airline.

Special Committee on Alcohol-related Measures

The committee has been established to manage alcohol-related risks of pilots, cabin attendants, maintenance engineers, dispatchers, and drivers in the airport. It is composed of JAL's Chief Safety Officer (Chair), Senior Vice President of Corporate Safety and Security, executive officers of Flight Operations, Cabin Attendants, Engineering and Maintenance, Airport Operations, Operations, and Cargo and Mail, and other members.

Special Committee on Alcohol-related Measures in Each Division

The committees in each division, which are sub-committees of the above Special Committee on Alcohol-related Measures, have been established to gather and analyze information and monitor measures established in each production division. It is chaired by the executive officer of each division and composed of the division's safety managing department and related departments, and Corporate Safety and Security.

Safety Committee of Each Division

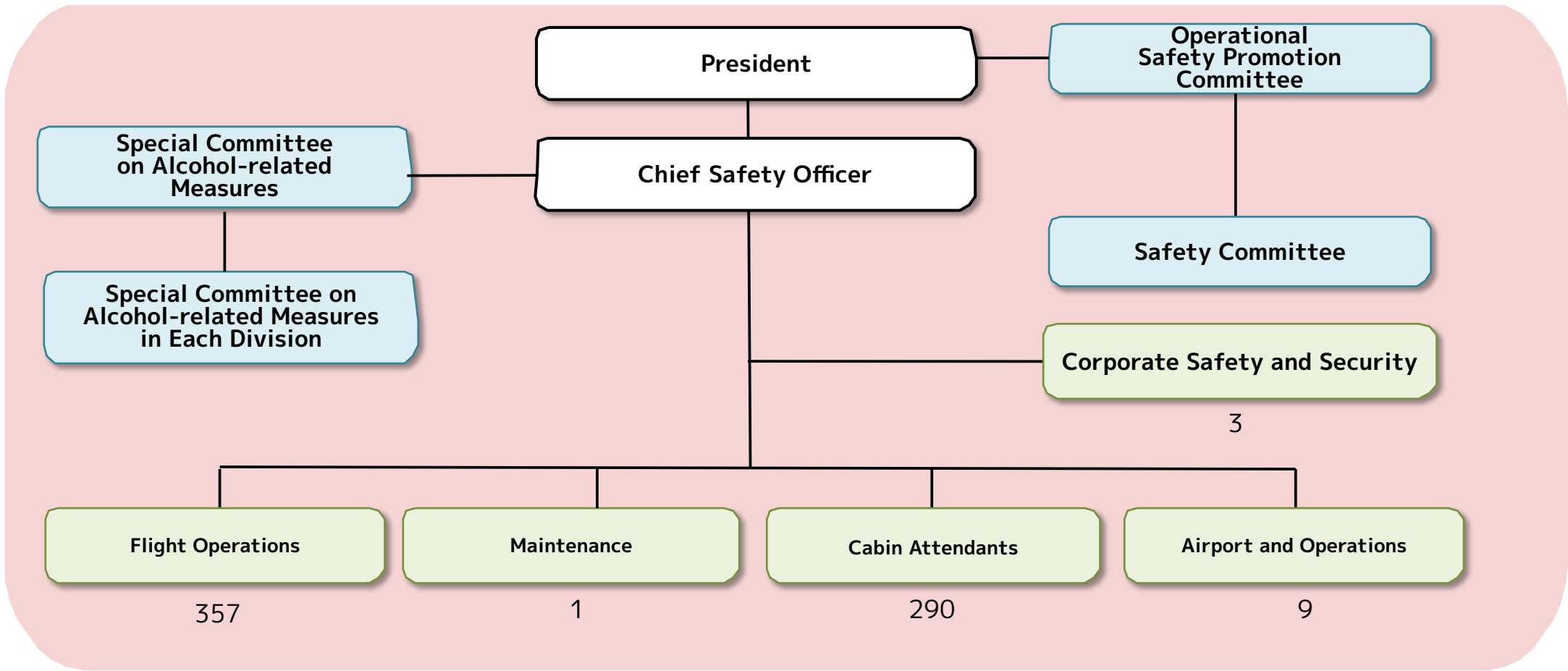
(Flight Operations Safety Committee, Engineering and Maintenance Safety Committee, Cabin Safety Committee, Airport Safety Committee, Operations Safety Committee, and Cargo Safety Committee)

These committees have been established to strengthen coordination of safety and decide safety policies within the production division.

J-AIR

b. J-AIR

(a) Safety management structure



(b) Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants and dispatchers

	Number	Organization	Remarks
Pilots	305	Flight Operations	
Cabin attendants	288	Cabin Attendants	
Dispatchers	41	Airport and Operations	Shared with JAL

(*)From April 2016,maintenance management has been outsourced to JAL Engineering.

(c) Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

(d) Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), the Chief Safety Officer, directors, and the executive officer in charge of safety management. It drafts proposals, plans, coordinates, and provides recommendations and advice on flight safety. The President and the executive officer in charge of safety attend safety meetings of Japan Airlines, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Safety Committee

The Safety Committee, which is a sub-committee of the Operational Safety Promotion Committee, is composed of employees of each division. It establishes and promotes safety enhancement measures through coordination between divisions.

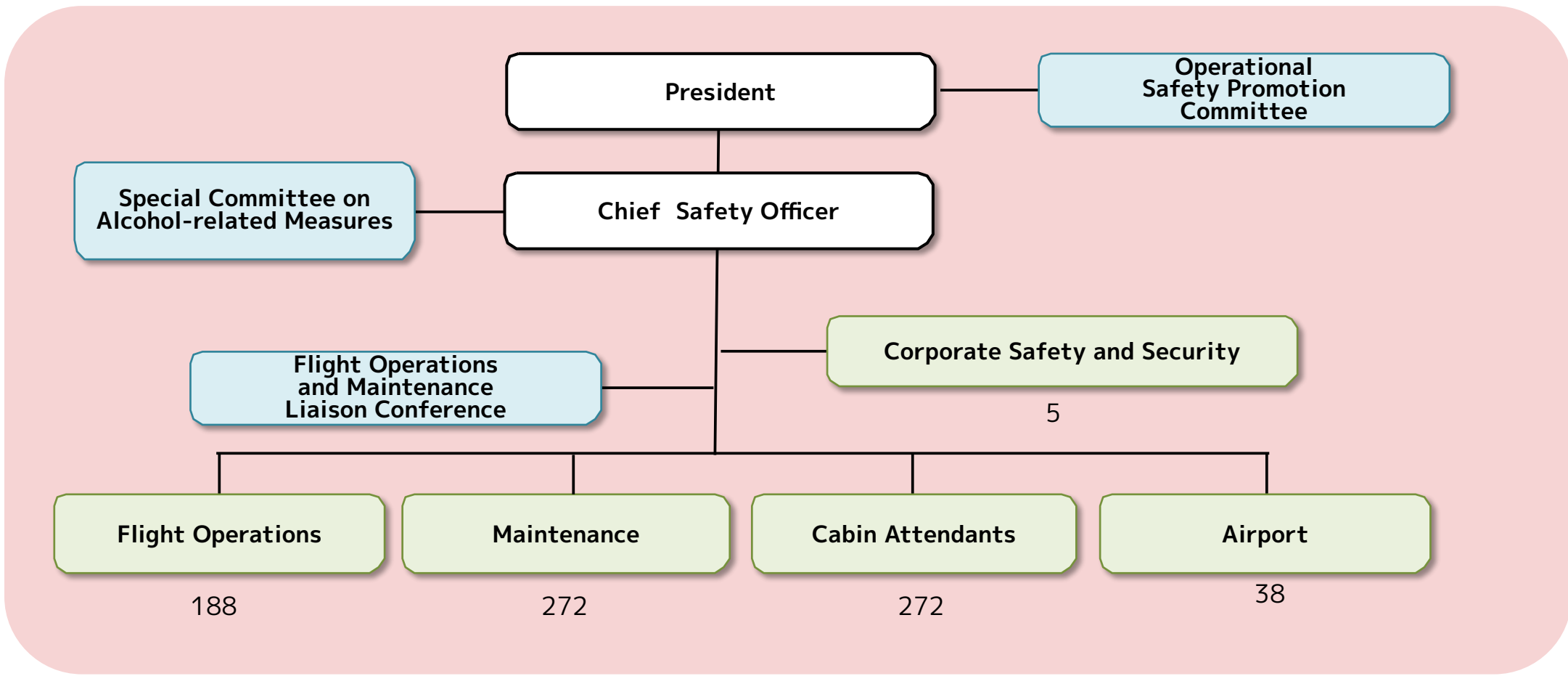
Special Committee on Alcohol-related Measures

The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.

JAPAN TRANSOCEAN AIR

c. Japan Transocean Air

(a) Safety management structure



(b) Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants and dispatchers

	Number	Organization	Remarks
Pilots	150	Flight Operations	
Maintenance engineers	179	Maintenance	Of these, 119 employees are qualified for maintenance engineer
Cabin attendants	261	Cabin Attendants	
Dispatchers	16	Airport	Operations Control

(c) Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

(d) Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), the Chief Safety Officer, directors, and the executive officer in charge of safety management. It plans, coordinates and provides advice on all matters relating to safe aircraft operations and aviation security from the company's perspective, and promotes overall safety measures. The President and executive officer in charge of safety attend safety meetings of Japan Airlines, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Flight Operations and Maintenance Liaison Conference

The conference is chaired by an officer appointed by the President and the members are officers in charge of Flight Operations and Maintenance. They share information, promote communication and mutual understanding, and strengthen coordination between the two divisions to contribute to flight safety.

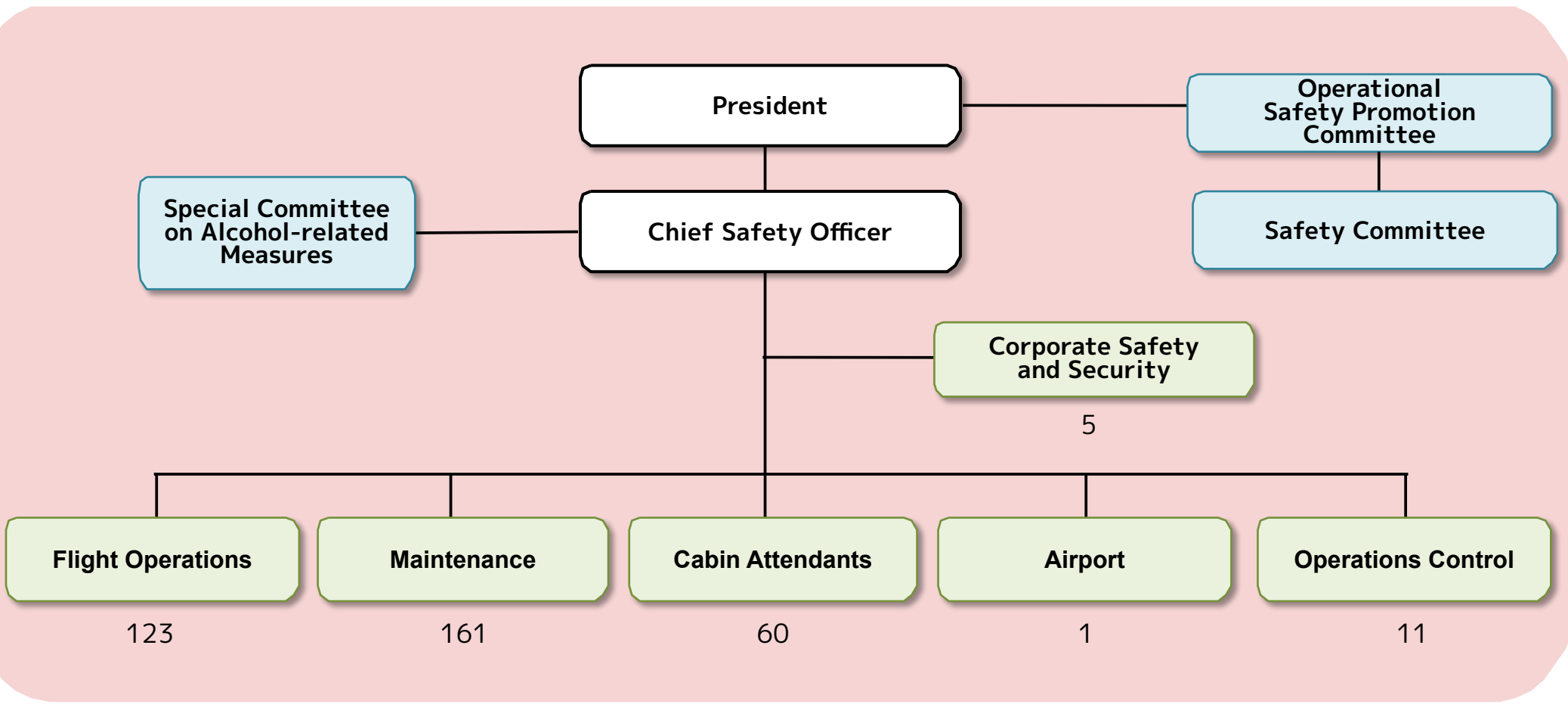
Special Committee on Alcohol-related Measures

The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.

JAPAN AIR COMMUTER

d. Japan Air Commuter

(a) Safety management structure



(b) Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants and dispatchers

	Number	Organization	Remarks
Pilots	92	Flight Operations	
Maintenance engineers	107	Maintenance	Of these, 90 employees are qualified for maintenance engineer
Cabin attendants	60	Cabin Attendants	
Dispatchers	10	Operations Control	

(c) Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

(d) Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), the Chief Safety Officer, directors and leaders of organizations engaged in safety. It plans, coordinates and provides recommendations and advice on flight safety. The President and executive officer in charge of safety attend safety meetings of Japan Airlines, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Safety Committee

The committee, which is a sub-committee of the Operational Safety Promotion Committee, is composed of employees of each division. It promotes communication between divisions, and drafts proposals, coordinates and promotes safety enhancement measures.

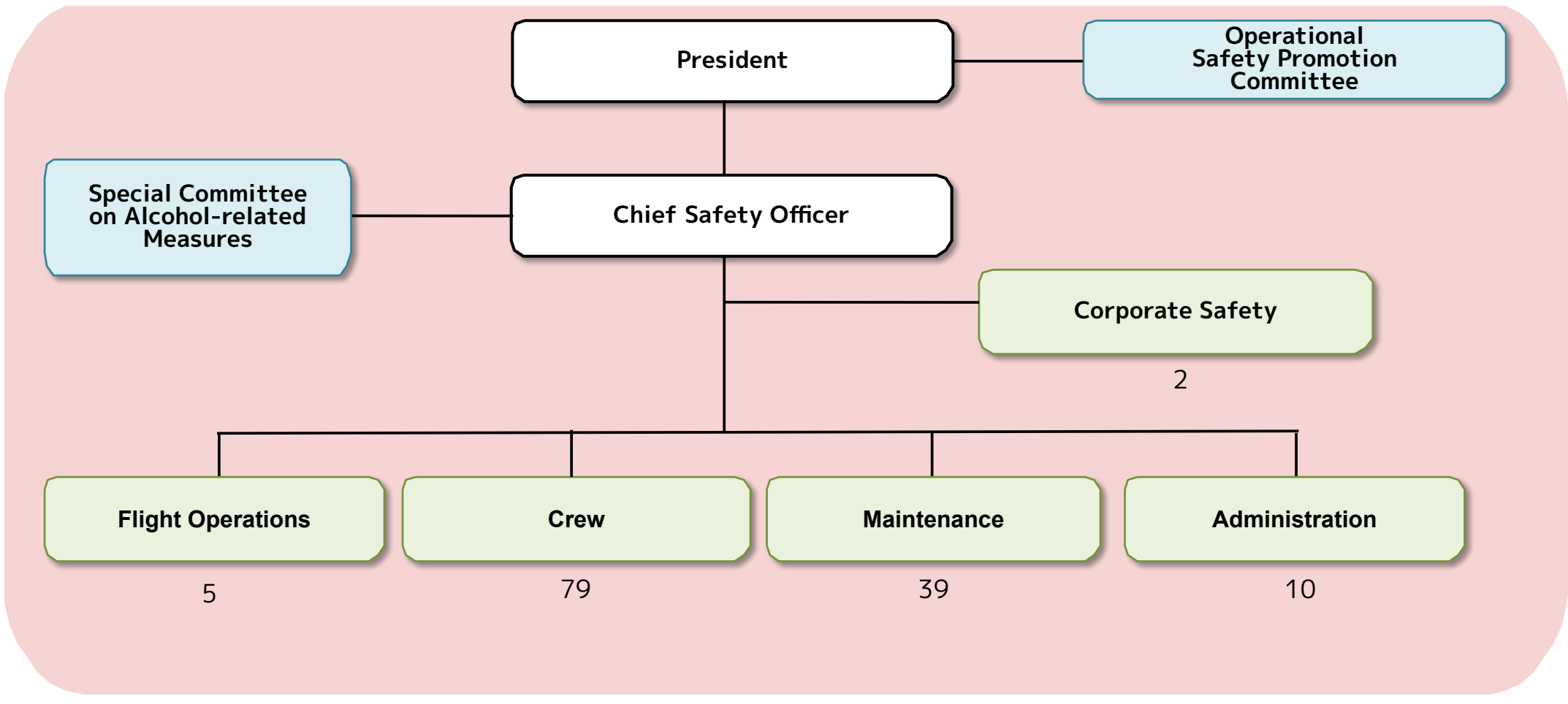
Special Committee on Alcohol-related Measures

The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.

RYUKYU AIR COMMUTER

e. Ryukyu Air Commuter

(a) Safety management structure



(b) Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants and dispatchers

	Number	Organization	Remarks
Pilots	47	Crew	
Maintenance engineers	21	Maintenance	Of these, 14 employees are qualified for maintenance engineer
Cabin attendants	25	Crew	
Dispatchers	16	Flight Operations	Shared with JTA

(c) Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

(d) Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), the Chief Safety Officer, directors, and members appointed by the President. It drafts proposals, coordinates, and provides recommendations and advice on flight safety. The President and executive officer in charge of safety attend safety meetings of Japan Airlines and Japan Transocean Air, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

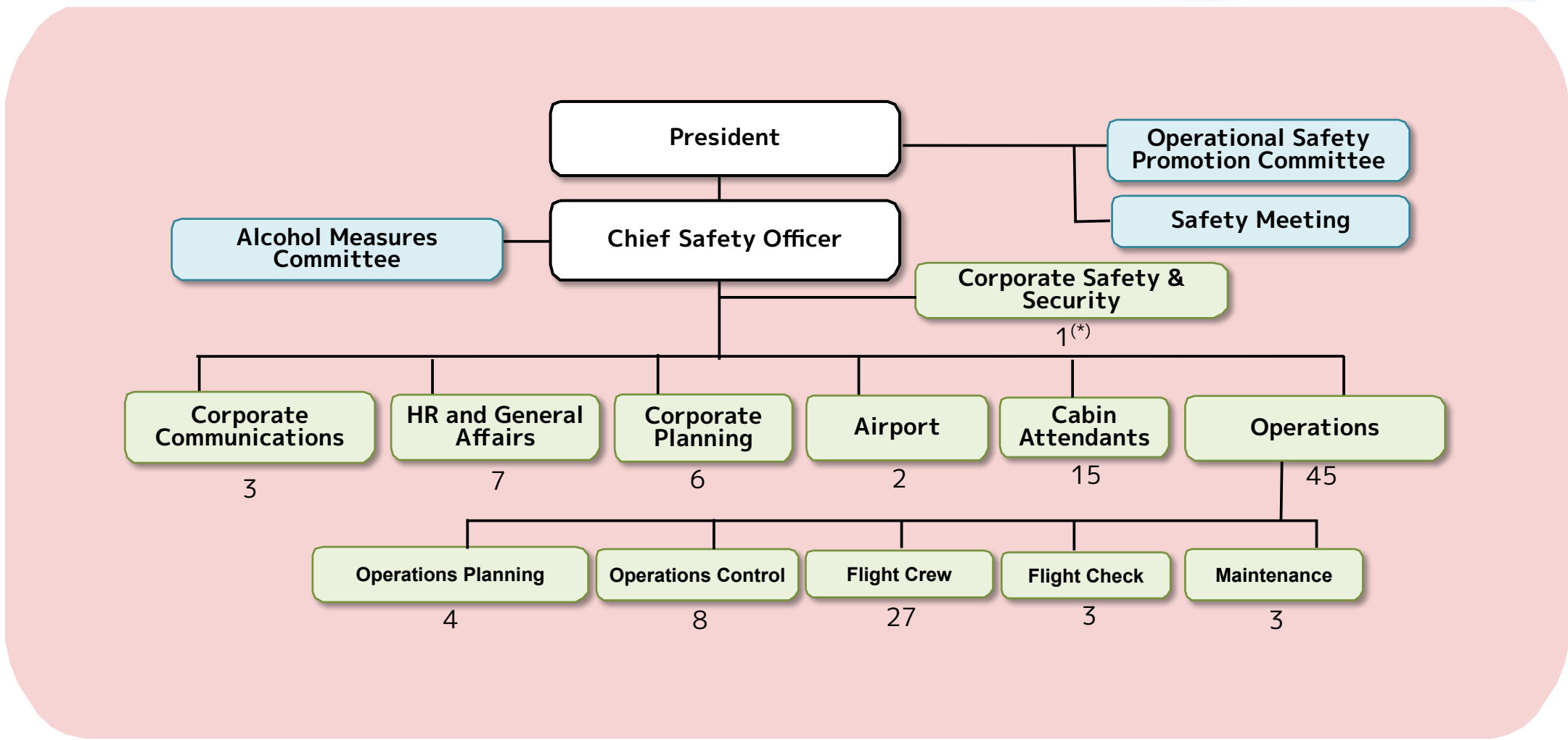
Special Committee on Alcohol-related Measures

The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.

HOKKAIDO AIR SYSTEM

f. Hokkaido Air System

(a) Safety management structure



(*) The Senior Vice President of Safety Promotion is the Chief Safety Officer.

(b) Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants and dispatchers

	Number	Organization	Remarks
Pilots	29	Flight Crew	
Cabin attendants	15	Cabin Attendants	
Dispatchers	7	Operations Control	

(*) Since November 2007, duties of the general safety manager have been delegated to JAC.

(c) Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

(d) Safety committees

Operational Safety Promotion Committee

The committee is composed of the President (Chair), executive officers from all divisions, and members appointed by executive officers. It plans, drafts proposals, coordinates, and provides recommendations and advice on flight safety. The President and executive officer in charge of safety attend safety meetings of Japan Airlines, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Safety Meeting

The committee, composed of the Safety Promotion Department and staff in charge of safety of frontline divisions, has been established to drive the SMS from the frontline perspective.

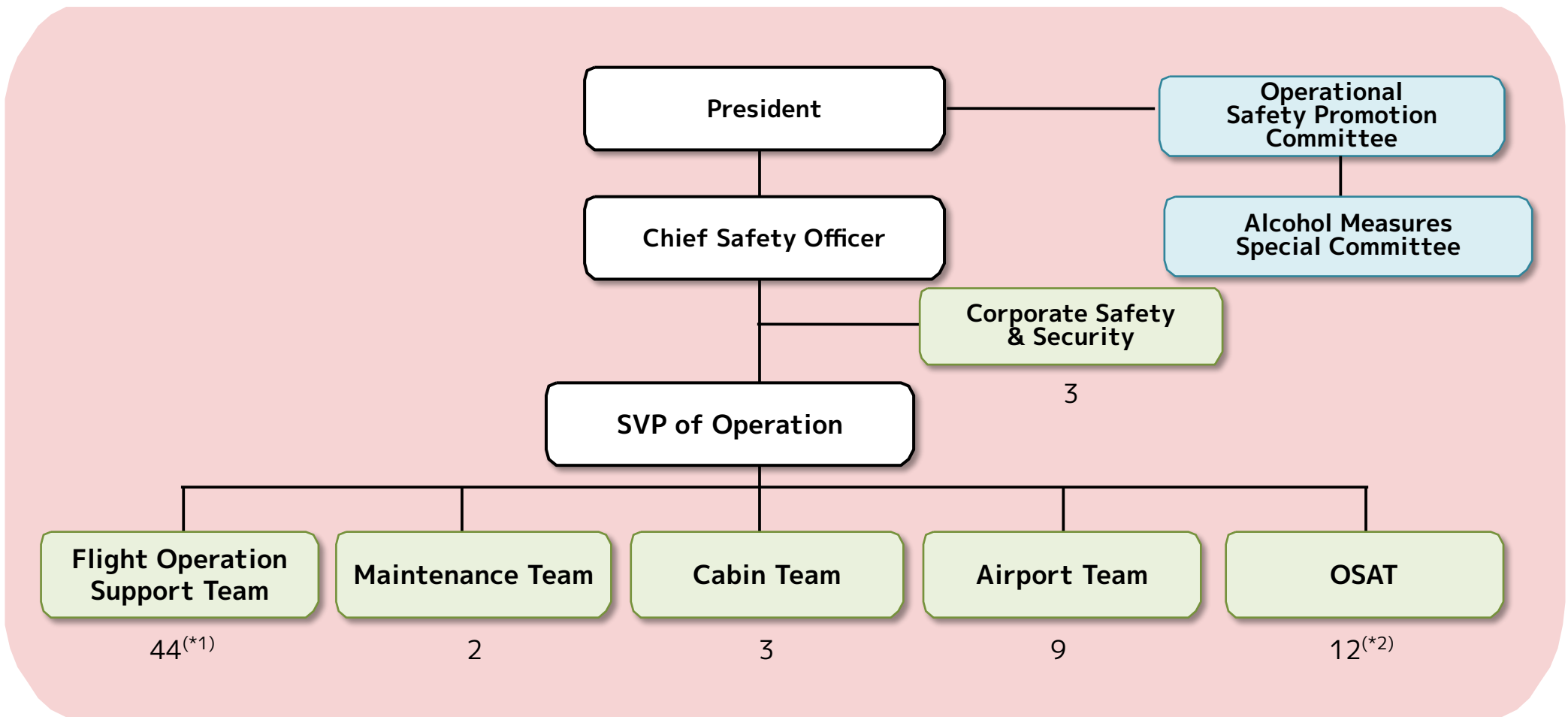
Alcohol Measures Committee

The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.

ZIPAIR

g. ZIPAIR Tokyo

(a) Safety management structure



(*1) Including 39 dispatchers shared with Japan Airlines
(*2) OSAT：Operation Support & Action Team

(b) Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants and dispatchers

	Number	Organization	Remarks
Pilots	95	Flight Operation Team	
Cabin attendants	231	Passenger Operation team	
Dispatchers	39	Flight Operation Support Team	Shared with JAL

(*) Since December 2019, maintenance management has been outsourced to JAL Engineering.

(c) Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

(d) Safety committees

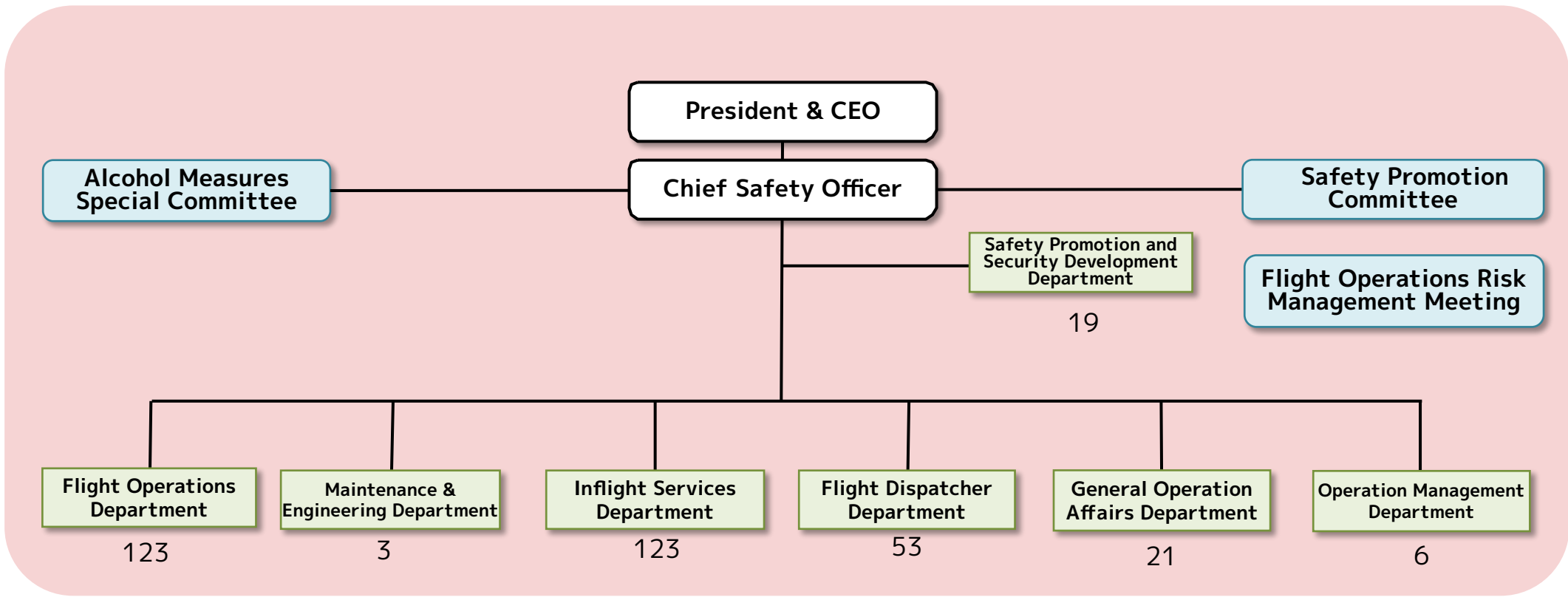
Operational Safety Promotion Committee
The committee is composed of the President (Chair), directors including the Chief Safety Officer, the executive officer in charge of safety management, and the Vice Presidents of General Affairs, and Planning and Marketing. It plans, drafts proposals, coordinates, and provides recommendations and advice on flight safety and aviation security. The President and executive officer in charge of safety attend safety meetings of Japan Airlines, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Alcohol Measures Special Committee
The committee is operated under the responsibility and authority of the Chief Safety Officer in order to take an organization-wide systematic approach towards the prevention of alcohol-related incidents as part of efforts to rebuild alcohol consumption measures.

SPRING JAPAN

h. SPRING JAPAN

(a) Safety management structure



(b) Number of pilots, maintenance engineers, qualified maintenance engineers, cabin attendants and dispatchers

	Number	Organization	Remarks
Pilots	72	Flight Operations Department	
Cabin attendants	113	Inflight Services Department	
Dispatchers	10	General Operation Affairs Department	

(c) Safety management organization

The Safety Promotion Department is responsible for safety management of the company.

(d) Safety committees

Safety Promotion Committee

The committee is composed of the Chief Safety Officer (Chair), the President, members specified in the Safety Management Manual, and the Secretariat. It plans, drafts proposal, coordinates and provides recommendations and advice on flight safety and aviation security.
In addition, the President, and relevant executive offices and employees attend safety meetings of Japan Airlines, where they maintain close coordination and share information, and disseminate the information to all employees of the company.

Flight Operations Risk Management Meeting

The meeting, which is subordinate to the Safety Promotion Committee, analyzes and shares safety information across the organization and reports to the Safety Promotion Committee.

Safety Promotion Meetings within Production Divisions

These meetings are held within each production department to review safety management practices within the department and provide feedback. The results are reported to the Safety Promotion Committee through the Flight Operations Risk Management Meeting.

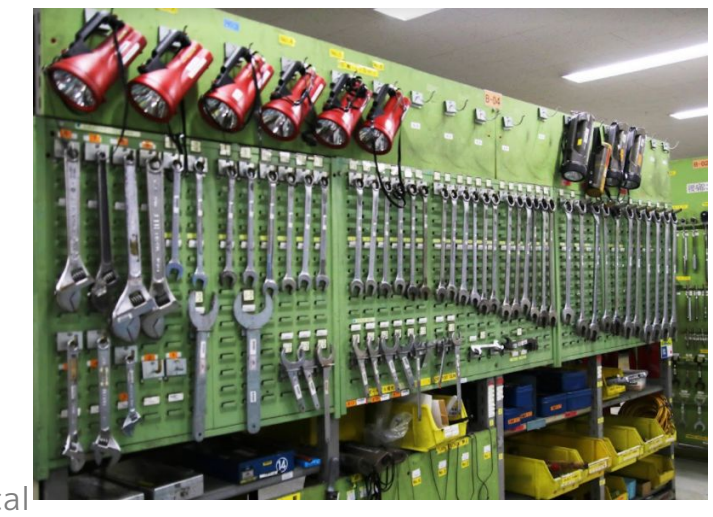
Alcohol Measures Special Committee

The committee is operated under the responsibility and authority of the Chief Safety Officer to ensure company-wide management of alcohol consumption measures, information gathering and analysis, and implementation and monitoring of measures.

⑤ Aircraft Maintenance Outsourcing

a. Outsourcing of aircraft maintenance management

Pursuant to Article 113 Clause 2 of the Civil Aeronautics Act concerning the outsourcing of aircraft maintenance management(*), the JAL Group partially outsources maintenance and maintenance management of JAL Group-owned aircraft to JAL Engineering and Japan Air Commuter. Maintenance services are provided according to the safety standards of the outsourcing party.

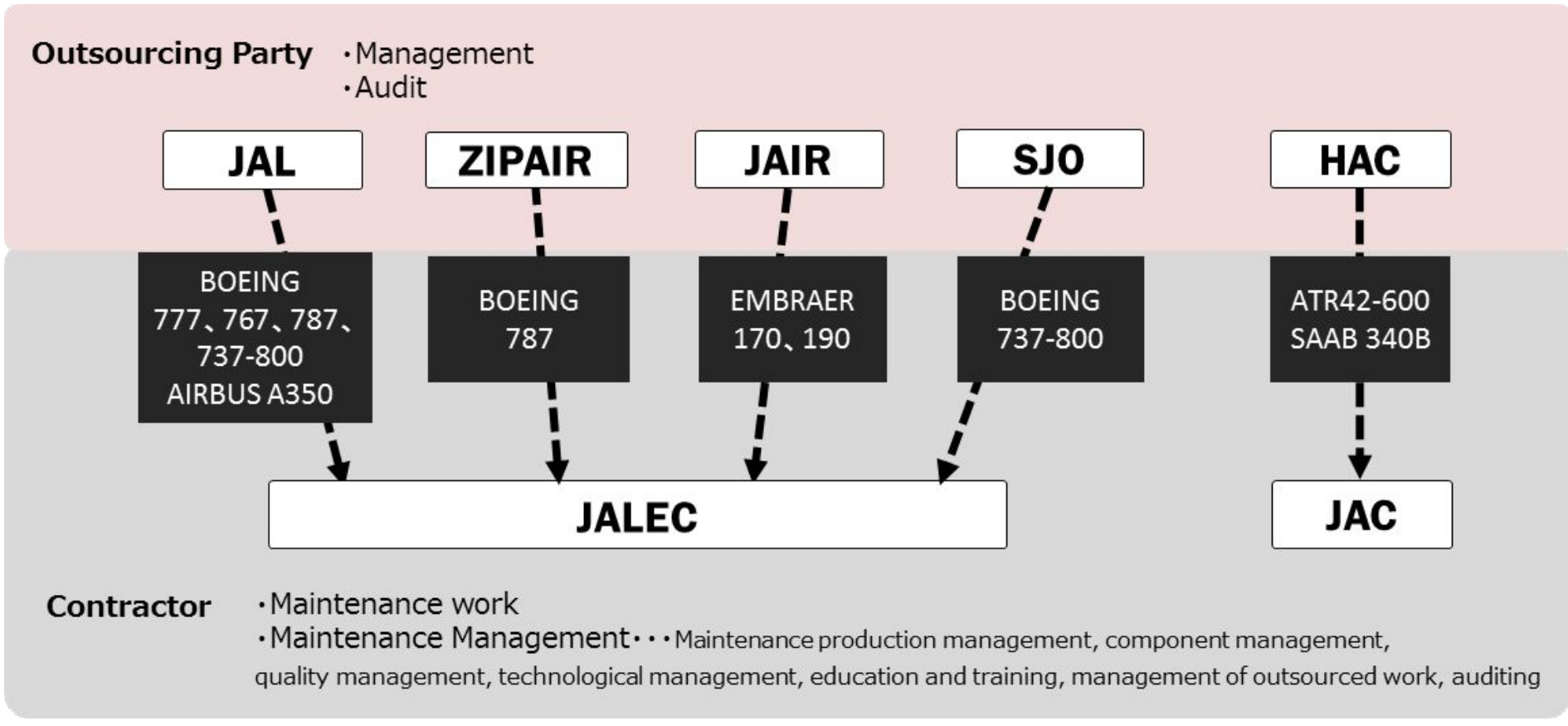


Tools used for maintenance work

(*) Outsourcing of aircraft maintenance management: To outsource overall aircraft maintenance management including the authority to direct and supervise maintenance work. All maintenance work and management of aircraft maintenance work (production management, component management, technological management, education and training, management of outsourcing, auditing) outsourced to the contractor is performed according to the business plan of the outsourcing party.

Outsourcing Party	Contractor	Aircraft
Japan Airlines（JAL）	JAL Engineering（JALEC）	BOEING 777・BOEING 767・ BOEING 787・BOEING 737-800・AIRBUS A350
ZIPAIR Tokyo（ZIP）		BOEING 787
J-AIR		EMBRAER 170・EMBRAER 190
SPRING JAPAN（SJO）		BOEING 737-800
Hokkaido Air System（HAC）	Japan Air Commuter（JAC）	SAAB 340B(*)・ATR42-600

(*) Retired in December 2021



Maintenance work
by JAL Engineering

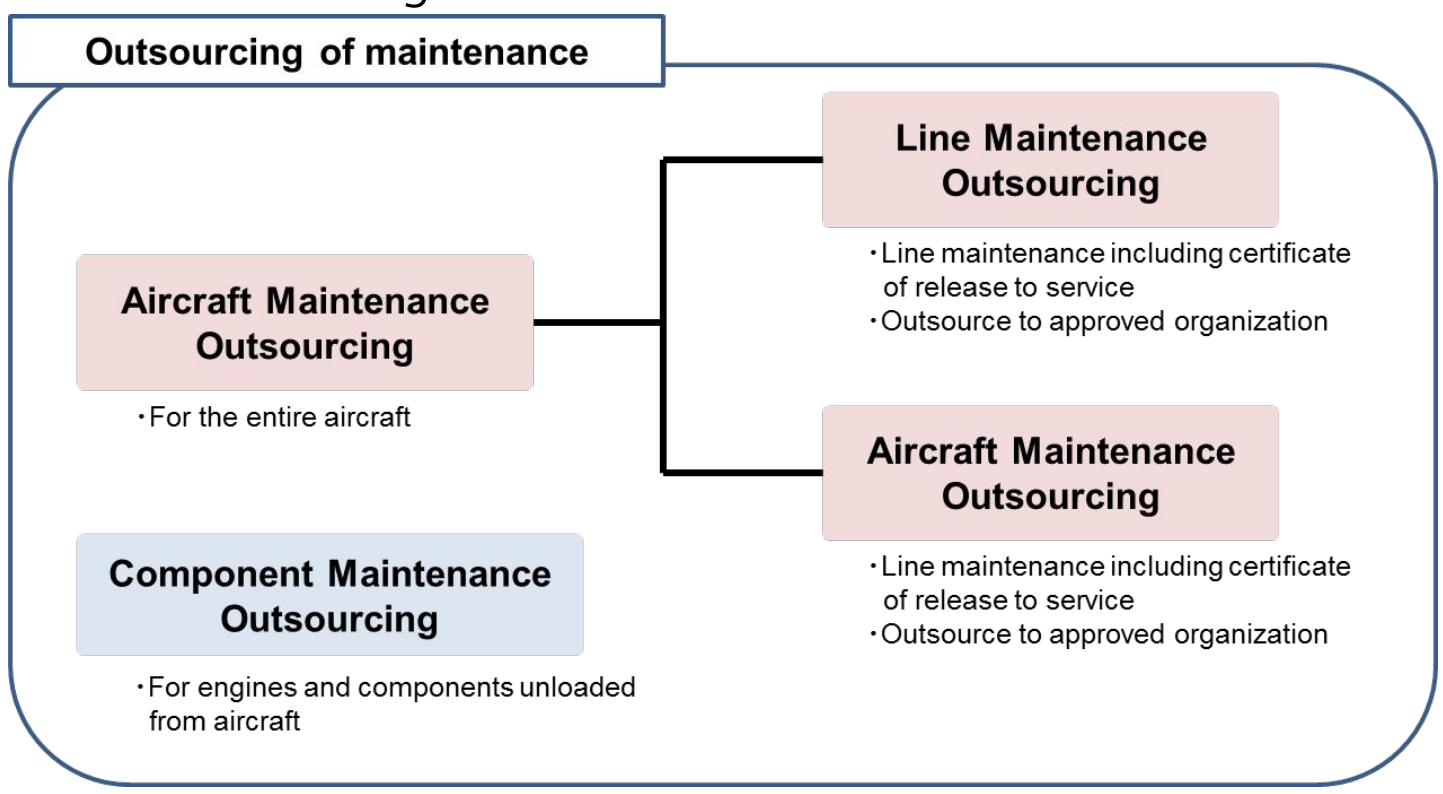
When maintenance management is outsourced to a JAL Group company, the person responsible for management of the outsourcing party supervises everyday work and conducts a quality audit regularly (once a year). The contractor also assigns a person responsible for management, who closely exchanges information with the outsourcing party and ensures that maintenance work and maintenance management are performed appropriately.

In this way, the JAL Group airlines coordinate to improve safety and quality even when maintenance management is outsourced.

b. Outsourcing of maintenance work

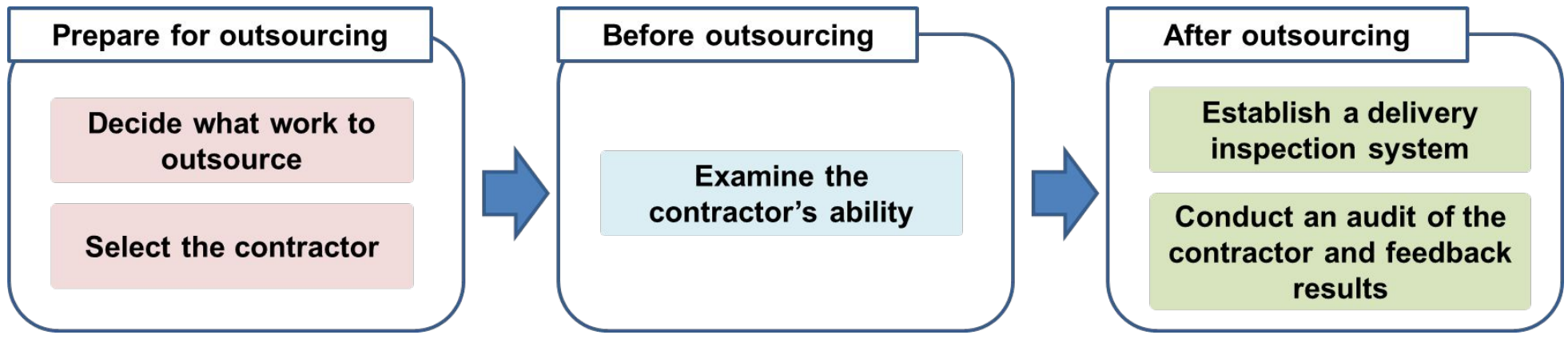
In addition to outsourcing of aircraft maintenance management described in the preceding section a., the JAL Group provides outsourced maintenance services for companies within and outside the JAL Group.

(a) Details of outsourcing



(b) Management of outsourced work

When outsourcing aircraft maintenance, we select a contractor with experience as a service provider that has been approved by the MLIT and evaluate whether they satisfy standards set by the company. Even after outsourcing maintenance, we conduct a delivery inspection of each maintenance task as a quality control check and regularly audit the contractor, as necessary, to confirm that they have maintained their maintenance standards.



(c) Main contractors

Contractors (Aircraft Maintenance)		Contractors (Component Maintenance)
Line Maintenance	Aircraft Maintenance	
・JAL Engineering ・Japan Transocean Air ・Japan Air Commuter ・Lufthansa Technik ・United Airlines ・American Airlines ・Air Canada ・Hong Kong Aircraft Engineering ・ST Engineering Aerospace Services ・KLM Royal Dutch Airlines ・British Airways ・Taikoo (Xiamen) Aircraft Engineering ・Shanghai Taikoo Aircraft Engineering Services ・Lufthansa	・Japan Transocean Air ・ST Engineering Aerospace Services ・Taikoo (Xiamen) Aircraft Engineering ・ST Engineering Aerospace (Guangzhou) Aviation Services ・Boeing ・Airbus	・JAL Engineering ・All Nippon Airways ・General Electric ・Eagle Services Asia ・Mitsubishi Heavy Industries Aero Engines ・Jamco ・Domestic and international contractors and manufacturers such as SR Technics

(3) Implementation of Safety Management System

We implement the safety management system (SMS) in accordance with the safety management policy to ensure that the SMS functions smoothly.

① Safety Information Gathering and Dissemination

We gather a wide range of information from reports on unsafe behavior and acts, the flight data analysis program, crew fatigue risk management program and alcohol risk management program, and use it to prevent safety events. In FY2021, we established a management policy on crew fatigue risk and made efforts to gather further information.

Fatigue Risk Management Program

In order to contribute to the improvement of flight safety and quality, we gather data to manage fatigue-related risks among pilots and cabin crew and take appropriate corrective action based on the gathered data.

(Fatigue Risk Management Policy)

We acknowledge that fatigue is a present symptom in cockpit and cabin crew duties, and therefore, we manage fatigue-related risks and make efforts to mitigate the risks in order to improve flight safety. JAL's fatigue risk management program applies to all flights operated by the company. It is based on scientific and historical data and is driven by continuous risk management. Fatigue risk management is only possible when the company and crew responsibly fulfill their respective duties.

Information that is of importance for preventing recurrence of safety events and for raising safety awareness of our employees is circulated within the company and posted on the "Safety" webpage of JAL's website. The main media for sharing safety information are as follows:

- Corporate Safety, an internal document providing the JAL Group's internal safety policy
- "Safety and Quality" webpage of JAL's website
- "Safety" webpage of our intranet
- Safety magazine "FLIGHT SAFETY"

"Safety and Quality" webpage of JAL's website

Safety information magazine
"FLIGHT SAFETY"
(in Japanese only)

② Safety Risk Management

The JAL Group manages safety risks through the following step-by-step process, establishes measures to ensure safety, and deals with accidents and events appropriately.

Identify hazard (*)

Utilizing gathered information on unsafe conditions and unsafe events, we identify hazards and real or hidden risk factors with the potential to cause or contribute to an aircraft accident, serious incident or other adverse events.

(*) Hazard: Any source of danger or potential danger which may cause or contribute to an aircraft accident, serious incident or other adverse events

Assess risk

We determine the severity of consequences and the probability of occurrence, assess the acceptability of the risk level and examine the need to take action. Multiple risks are prioritized, as necessary, to know which ones are most urgent.

Establish measures

We establish and implement measures to eliminate each hazard so that high priority risks are reduced to a tolerable level.

Monitor and review

We monitor the measures and evaluate their effectiveness. If the risk is determined not to be acceptable, we establish and implement additional measures.

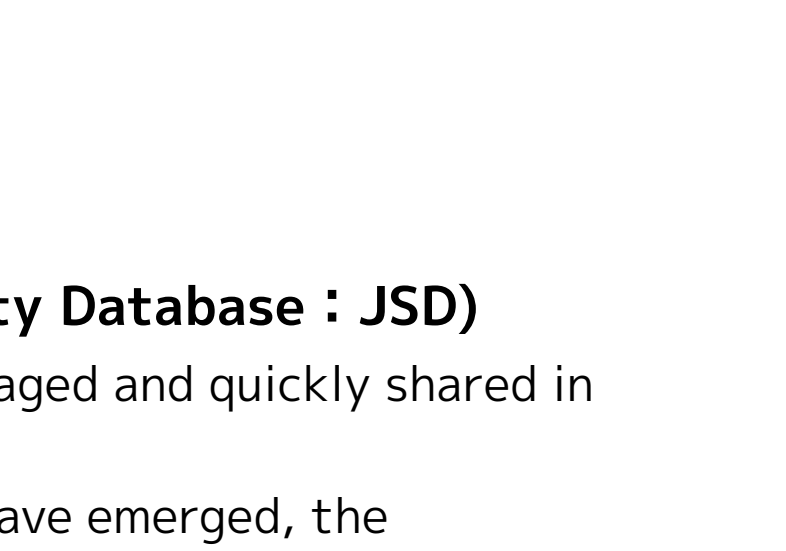
Main Activities

a. Integrated safety information database (JAL Safety Database：JSD)

All safety incidents occurring within the JAL Group are managed and quickly shared in a common database.
In addition to risk assessment by departments where risks have emerged, the Corporate Safety and Security Division assesses hazards within the Group using ERC to detect potential risks as early as possible.

b. Event Risk Classification (ERC)

Events are assessed from the viewpoint of the likelihood of hazardous events and the effectiveness of current control mechanisms (safety barriers) in order to strengthen the proactive prevention of accidents and other irreversible events. We also monitor the trend of concentration and frequency of events by scoring the risks and plotting them in each field for a certain period of time. When the cumulative score exceeds the threshold, we identify the safety issue and take mitigation measures, as necessary.



Risk assessment matrix

c. Human Factors Analysis Classification System (HFACS)

In order to reduce human error, we analyze not only unsafe behavior but also a wide range of factors such as procedures, work environments and organizational impacts, and take measures against underlying risk factors. We also statistically analyze the identified factors and address potential organizational issues to proactively prevent human error.

d. Safety Performance Indicator (SPI)

We set up and monitor indicators on the occurrence of unsafe acts and unsafe conditions. By identifying safety issues extensively and quickly, we are able to take proactive measures before the risk becomes apparent. By establishing SPIs of safety activities, we can determine whether they are sound and effective.

Example of risk identified by ERC and mitigation measures

In FY2021, in order to reduce the risk of onboard injury to passengers and crew and to proactively prevent an aircraft accident, it became apparent, using ERC, that baggage falling from the overhead stowage bin was a safety issue. The areas on the overhead stowage bin door for cabin attendants to check that the door is properly locked was revised on certain aircraft types.

Checking by hand

PHOTOGRAPHY BY SACHIE ABIKO

③ Disaster Measures

As natural disasters have become more frequent and severe, affecting social and economic activities including everyday life, it has become imperative for transport business operators to improve their preparedness for disasters to reduce and prevent the spread of damage, maintain business activities and resume operations as quickly as possible. Under these circumstances, the JAL Group has established the JAL Group Disaster Handling Regulations and has built a framework to prevent and reduce damage by strengthening preparedness.

④ Internal Audits

The JAL Group conducts internal audits regularly in accordance with the requirements of the MLIT to confirm that the SMS is effective and a continuous improvement process is implemented. Furthermore, IOSA(*)-registered airlines Japan Airlines, Japan Transocean Air and J-AIR undergo regular internal audits in accordance with IATA requirements to verify conformance with IATA standards.

(*) IOSA (IATA Operational Safety Audit); An international safety audit program established by IATA to confirm that the safety management system of an airline is functioning effectively.

⑤ Management Review

The JAL Group reviews issues in order to assess whether the SMS is functioning effectively and to make necessary improvements. Specifically, JAL's Corporate Safety and Security Division, the Flight Operations, Engineering and Maintenance, Cabin Attendants, Airport Operations, Operations, and Cargo and Mail divisions, and safety promotion organizations of Group airlines work together to gather, analyze and assess a wide range of information throughout the year, including achievement status of safety targets, progress of safety measures, business plans, safety awareness among employees, and initiatives based on third-party advice. The review focuses on identifying issues that require strong management involvement, such as safety awareness and safety culture issues that are difficult to identify through internal audits. The identified issues are reflected in safety measures of the following year and mid- and long-term safety initiatives of divisions and Group airlines.

⑥ Management of Change

Expansion and downsizing of organizations or changes to facilities, systems, processes and procedures due to internal and external changes in the environment may unintentionally create new hazards or affect existing risk mitigation measures. The JAL Group has established a process of Management of Change to ensure that safety risks associated with change are addressed.

⑦ Third-Party Assessments

a. Transport Safety Management Assessment

In FY2021, Hokkaido Air System and ZIPAIR Tokyo underwent a Transport Safety Management Assessment(*1) by the MLIT Minister's Secretariat. Necessary measures will be taken to address Advice and Expectations below(*2). As for the other Group airlines, we reported the status of top management and the Chief Safety Officer, and safety management enhancement measures on an SMS Status Confirmation Form.

【Assessment】	Hokkaido Air System ・The company, led by top management, is making concerted efforts to implement priority safety measures. The CAPD cycle is continuously implemented to decide measures each year. ・The Chief Safety Officer is working to cultivate a safety culture by sending messages to all employees to prevent recurrence of incidents. ZIPAIR Tokyo ・Top management is demonstrating positive leadership in efforts to raise safety awareness and improve safety management. ・Initiatives such as wheelchair meetings have contributed to building a sense of ownership over problems.
【Advice】	ZIPAIR Tokyo ・Strengthen efforts to proactively prevent accidents by improving the quantity and quality of safety hazard information.
【Expectations】	Hokkaido Air System ・Create initiatives to build a system of “discovering new things by studying the past” in order to address ongoing issues such as coordination between departments. ZIPAIR Tokyo ・Conduct internal audits through interviews with top management and the Chief Safety Officer, or outsource to a JAL Group company or a third party, to further improve the effectiveness of internal audits as opportunities to identify internal issues.

(*1) Transport Safety Management Assessment:
An assessment of all transportation modes (air, rail, marine, vehicles) conducted by the Minister’s Secretariat of the MLIT to check the Safety Management System (SMS) of the company, and identify and advise improvements.
(*2) Assessment, advice and expectations

【Assessment】	【Advice】	【Expectations】
・Excellent points ・Points of originality and ingenuity ・Matters being tackled earnestly	・Matters to be further promoted to improve effectiveness ・Matters where improvement can be made ・Matters requiring continuous efforts for further improvement	・Matters where further improvement in safety management can be expected, though not of an advisory level

b. Safety Audit by the Authorities

In FY2021, the JAL Group airlines undertook a total of 49(*1) safety audits by the JCAB, MLIT(*2). We analyzed the cause of problems, considered measures and took the following corrective measures.

- Establish appropriate procedures for reporting and managing situations that pose a safety hazard
- Establish an education program on reporting situations that pose a safety hazard
- Establish appropriate procedures for maintaining systems to disseminate important information such as Interoffice Correspondence
- Establish appropriate procedures to maintain communication systems in the event of a dangerous goods accident

(*1) En-route audit is not included.
(*2) Safety audit by the JCAB, MLIT: An inspection conducted by the JCAB, MLIT at the premises of the airline's head office divisions, airport bases, training facilities and other facilities to confirm the establishment of the SMS and performance of duties by flight operations, maintenance and other divisions.

c. Outside Directors and Outside Audit and Supervisory Board Members

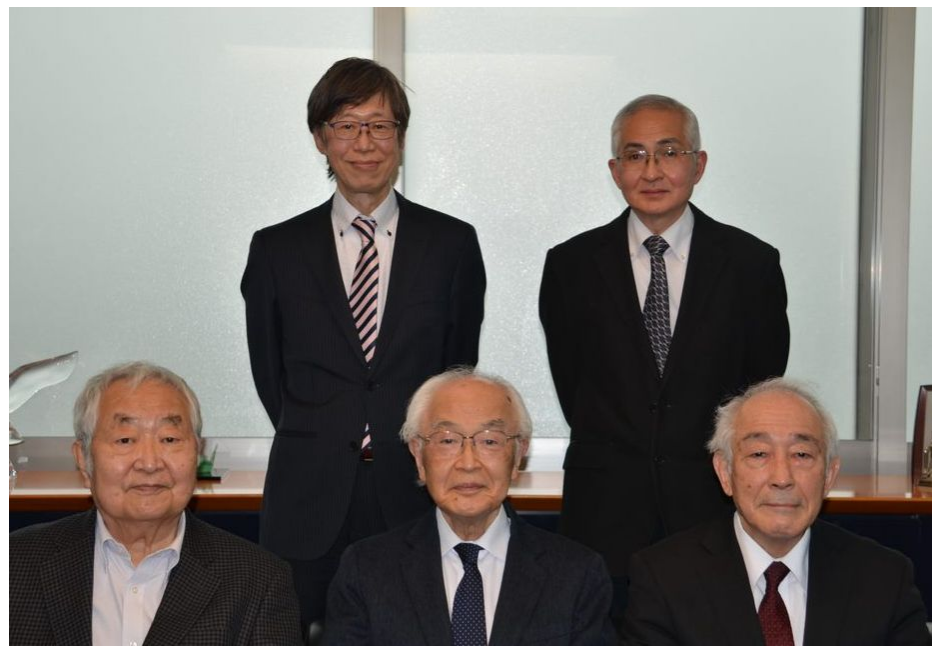
Japan Airlines has three Outside Directors and three Outside Audit and Supervisory Board Members, who provide objective advice and recommendations on responses to the external environment and various issues.

Outside Director			Outside Audit and Supervisory Board Member		
					
KOBAYASHI Eizo (Important positions concurrently assumed outside the Company) ・Director Emeritus of ITOCHU Corporation ・Director (Outside), OMRON Corporation ・Outside Director of Japan Exchange Group, Inc.	HATCHOJI Sonoko (Important positions concurrently assumed outside the Company) ・Outside Director, Daicel Corporation ・Outside Director, Maruha Nichiro Corporation	YANAGI Hiroyuki (Important positions concurrently assumed outside the Company) ・Outside Director of AGC Inc. ・Outside Director of Kirin Holdings Company, Limited	KAMO Osamu (Important positions concurrently assumed outside the Company) ・Attorney at Law, Managing Partner of Ginza Sogo Law Office ・Outside Audit & Supervisory Board Member of Azearth Corporation	KUBO Shinsuke (Important positions concurrently assumed outside the Company) ・Managing Partner of Kyoei Accounting Office ・Outside Audit & Supervisory Board Member of KAWASAKI KISEN KAISHA, Ltd.	OKADA Joji (Important positions concurrently assumed outside the Company) ・Member, Business Accounting Council of Financial Services Agency ・Governor(Outside), Japan Exchange Regulation

(As of April 1, 2022)

d. Safety Advisory Group

In August 2005, JAL requested five experts with extensive knowledge and experience in human factors, analysis of failures and defects, organizational management and culture, and safety to provide the company with objective advice and recommendations. This external panel of experts, called the Safety Advisory Group, provides a wide range of safety advice and recommendations from a professional perspective, which are used in management and safety operations of the JAL Group.



Members of Safety Advisory Group
Back row, from left, Prof. Haga, Prof. Komatsubara
Front row, from left, Prof. Hatamura, Mr. Yanagida (Chair), Prof. Kamata

Follow-up meeting with management

Members of Safety Advisory Group	
YANAGIDA Kunio (Chair)	Non-fiction writer, critic
HATAMURA Yotaro	Professor Emeritus at The University of Tokyo, Representative of Hatamura Institute for the Advancement of Technology Ltd. Fields of expertise include nano and micro machining, production machining science, healthcare engineering, the science of failure, the science of danger, and the science of creativity.
KAMATA Shinichi	Professor Emeritus at National Defense Academy of Japan Fields of expertise include organizational theory and business administration.
HAGA Shigeru	Senior Technology Advisor at Research Institute for Social Safety, Professor Emeritus at Rikkyo University Fields of expertise include traffic psychology, industrial psychology and ergonomics.
KOMATSUBARA Akinori	Professor at Faculty of Science and Engineering of Waseda University Fields of expertise include human life engineering.

e. IATA Operational Safety Audit (IOSA)

IOSA is an international safety audit program designed to ensure that an airline’s SMS is functioning effectively. JAL Group airlines Japan Airlines, Japan Transocean Air and J-AIR are IOSA-registered airlines. IATA member airlines are required to undergo an audit regularly, and the next audit is scheduled for 2023 (FY2022).

⑧ Education, Training and Safety Awareness

The JAL Group provides education and training(*) according to the role and position of each employee to equip them with the skills, knowledge and abilities necessary for safety-related duties. We also share necessary safety information and conduct Safety Education regularly.

(*) Some of the education and training courses were conducted online, while on-site education and training was conducted with adequate infection prevention measures such as ventilation and disinfection in place.

a. Initiatives based on the Three Actuals Principle

The Three Actuals Principle is a concept advocated by Prof. HATAMURA Yotaro of the Safety Advisory Group that frontline staff can understand the essence of accidents by going to the “actual place,” seeing the “actual object” (parts of remaining aircraft, personal belongings of the victims, etc.) and listening to stories of the “actual people” who experienced the situation at the time of the accident.

JAL Group staff climb the Osutaka Ridge, "the actual place" of the accident, to console the souls of the victims, and see remaining parts of the aircraft and other "actual objects" in the Safety Promotion Center. By watching news videos of the accident and listening to talks from the “actual people,” the JAL Group employees reaffirm the importance of safety from the depths of their mind.

JAL Group Safety Seminar
for New Employees

Over 270,000 people from inside and outside the company have visited the Safety Promotion Center.
(as of March 31, 2022)

Safety Talks: Stories to Pass On to Future Generations
Listening to talks from the “actual people” who experienced the accident

Voice of an employee-guide at the Safety Promotion Center

TAKAYAMA Yuka
Corporate Safety and Security,
Japan Airlines

In response to recommendations of the Safety Advisory Group and a request from the bereaved families of the JL123 accident to exhibit aircraft wreckage and never let such a tragic accident happen again, the Safety Promotion Center was established as a place to remind ourselves to never forget the lessons learned and reaffirm the importance of flight safety. This is our starting line of safety. The number of employees who experienced the accident is decreasing year by year. I belong to the younger generation who knows nothing about the accident, but I think we must correctly understand the circumstances surrounding the accident, put ourselves in the position of the bereaved families and pass on the lessons learned. It is also very important for each employee to visit the Osutaka Ridge, the “actual place,” and to feel and think about the accident. Through these tours, I would like everyone to think about the preciousness of life and the importance of maintaining flight safety.

b. Safety Education

In order to maintain safety, which is the basic foundation for business continuity of the JAL Group, we provide employees with knowledge, skills and abilities necessary for their everyday duties and education to develop employees with a high level of safety awareness.

(a) JAL Group Safety Education

All JAL Group employees receive Safety Education every year to re-evaluate safety associated with their duties and to foster an awareness that safety is the basis for business continuity of the JAL Group.

The 3rd JAL Group Safety Education

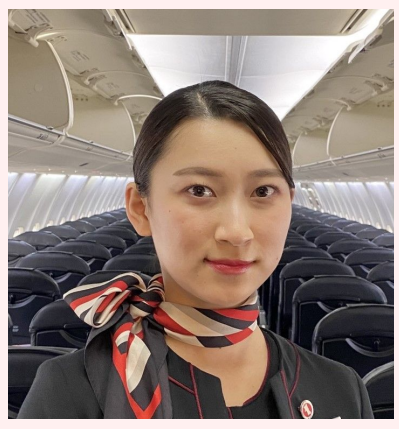
In FY2021, the theme focused on studying safety duties and safety rules that vary from job to job. By learning the relationship between the job before and after their own and how it affects the work process, we aimed to deepen understanding between divisions and increase our layers of safety.

(b) JAL Group Safety Seminar for New Employees

The JAL Group provides a common Group education program for new employees so that they may feel and think about JAL's past accidents and consider what they each need to do to ensure safety with a sense of ownership. The program includes a visit to the Safety Promotion Center, climbing the Osutaka Ridge to console the souls of the deceased, watching video interviews of people who experienced the accident, and finally, creating a Safety Pledge to put their thoughts into action, thereby increasing our safety layers.

A memorial climb up the Osutaka Ridge

Voice of a participant of the Safety Seminar for New Employees



KIMURA Yuiko
Cabin Attendants Division,
Japan Airlines

Cabin attendants perform their duties each day with an awareness that they are also safety personnel. Through this seminar, I reaffirmed that we must never forget that we are entrusted with precious lives during the flight. I also learned about the feelings of the bereaved families of the Mt. Osutaka accident and realized that loved ones such as family and friends are among our passengers. I will not forget what I felt through the seminar and perform flight duty with a strong awareness of security personnel.
Tragic events such as accidents have occurred around the world, but we are grateful that passengers choose to fly with Japan Airlines. I will perform my duties, while demonstrating to passengers that flying is safe.

(c) JAL Group Safety Seminar for New Managers

The JAL Group provides education for new managers to renew their awareness of the relationship between their responsibility as organizational leaders and safety. By reviewing past accidents and studying the Three Actuals Principle, they think about the relationship between their duties as manager and their organization, and safety, put their determination into words in their Safety Pledge, and strive to raise and permeate safety awareness throughout the organization.

Voice of a participant of the Safety Seminar for New Managers

MURASHIMA Mitsuharu
Maintenance Department,
Narita Aircraft Maintenance Center,
JAL Engineering

Each time I climbed Mt. Osutaka or visited the Safety Promotion Center, I renewed my thoughts that I must never let an accident happen. Through this seminar, I realized that a change in position can change the weight of responsibility for safety. As a maintenance engineer, it was natural for me to continuously raise my awareness of safety, but I kept asking myself whether my organization and staff were truly capable of maintaining safety and whether their criteria for making day-to-day decisions were unaligned. It made me strongly aware of my duty to improve the situation without hesitation. I would like to contribute to flight safety as a manager, not by flying planes as an engineer, but by fulfilling my responsibility to carry our passengers safely to their destination based on the second to third person perspective. I will ask myself whether I am doing my best wholeheartedly to protect our customers' safety.

(d) Safety Promotion Seminar

Safety Promotion Seminars are held for JAL Group employees and staff of contractors. This is a voluntary seminar, which provides an opportunity to raise safety awareness by visiting the Safety Promotion Center and climbing the Osutaka Ridge.

In FY2021, we created an environment enabling employees to access safety information from anywhere amid movement restrictions during the pandemic, such as taking an online tour of the Safety Promotion Center. We also held seminars to learn about safety initiatives of other companies. By learning new ways of thinking and applying them to work, we aim to further increase safety awareness of all employees.

Praying at Irei-no-Sono Monument

(e) Education on Alcohol Consumption

All JAL Group employees are educated on alcohol consumption every year to review drinking issues of the JAL Group and alcohol-related knowledge, thereby renewing their awareness of safety and building up their self-discipline.

c. Training and assessment

To assure stable safety and quality standards, the following training and education programs are provided for pilots, maintenance engineers, cabin attendants and dispatchers.

(a) Pilots

It takes more than 10 years for a pilot to go from trainee, who learns the fundamentals of flight, to first officer and then to captain through various training, assessment and flight experiences. Even after becoming first officer or captain, they are legally required to undergo regular training and annual check. Using a flight simulator, they receive various training and assessment, including responses to abnormal and emergency situations as well as normal flight operations.
In the past, pilot training and assessment focused on accuracy of manual control and technical skills such as control of engine failure. Recent training and assessment also emphasize consistency of flight training with modern aircraft operations.


Flight simulator training

For example, importance is placed on flight management skills (non-technical skills) to build an effective team for managing flight safely, such as solving problems or managing the changing conditions of the flight through effective communication between the captain and first officer. Practical training and assessment based on the Competency-Based Training and Assessment (CBTA) concept(*) has become a global standard. JAL also uses this method in training and assessment to develop the ability to adapt to changing situations (resilience) and increase safety. We also analyze and utilize training and AI-based assessment data, and various information on route operations to improve training and assessment.

(*) Competency: The concept of combining skills, knowledge and attitude as behavioral indicators necessary for crew duties. (Skills include technical and non-technical skills.)

(b) Cabin attendants

Cabin attendants learn basic duties required of them as safety personnel through a practical training program so that they can think and act autonomously. During regular emergency rescue training, they are trained on how to respond to an emergency landing (ditching), fire, sudden decompression, and how to operate evacuation exit doors and handle disruptive behavior. The program is created to enable each cabin attendant to display their abilities autonomously and handle emergency situations together with pilots and other crew members. They also receive regular safety education to gain a correct understanding of safety procedures and relevant laws and regulations described in manuals.


Annual emergency training

(c) Maintenance engineers

Active learning

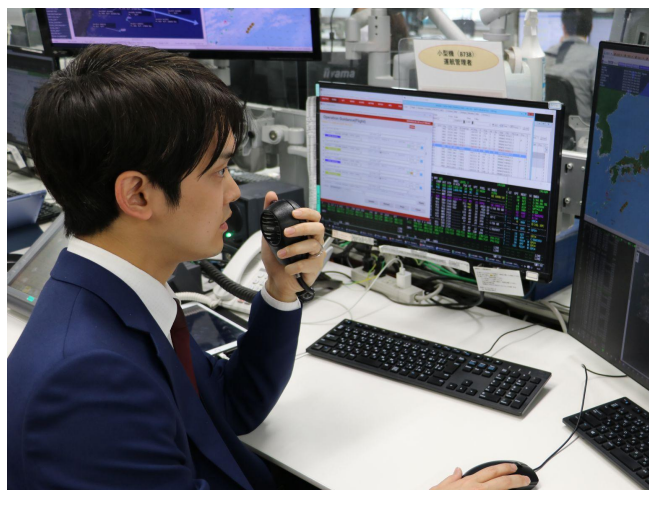
After joining the company, maintenance engineers receive education and training in a well-planned manner, acquire various qualifications including internal, Japanese and European qualifications, and continuously gain advanced knowledge and skills. While obtaining qualifications, they not only learn new technologies installed on the latest aircraft but also technological principles and changes to gain the ability to pursue and think over questions and problems.

In addition, we are strengthening their overall capabilities, which forms the basis of work, by introducing a new fundamental education system that incorporates "active learning," or learning through repeated interactive dialogue. Continuing from the previous fiscal year, we expanded online training.

In order to fully demonstrate their knowledge and skills, they are also required to have dignity and excellent human qualities. The following education and training programs were implemented to foster a strong sense of responsibility for safety and quality, a sense of mission, and a high level of safety awareness as maintenance engineers of the JAL Group.

・Human factors training
・Quality assurance training
・Safety Forum
・Education by grade

(d) Dispatchers



Dispatcher gaining practical experience

After joining the company, dispatchers receive education and training on a wide range of subjects relating to aircraft, including aeronautical meteorology, aviation regulations, aircraft systems, and air traffic control, and must pass competence tests for aircraft dispatchers, which is a national qualification. Afterwards, they must further increase their knowledge and skills through hands-on experience and training and pass the company’s practical and oral examinations in order to work as a JAL Group dispatcher. After passing the examination, they continue to brush up on their knowledge through examinations at regular intervals and other means to ensure that the necessary knowledge and skills are maintained.

Due to drastic changes in the environment surrounding flight operations, such as natural disasters and conflicts, dispatchers are required to respond to different types of operation risks. We have introduced IOC(*1) competency(*2) to respond quickly and accurately to changes in the environment, achieve safe and secure operations, and become an advanced decision-making group. Based on this concept, we provide training to further enhance safety, with a particular focus on improving communication skills and resilience(*3). Through such training, examinations, and day-to-day duties, they continue to acquire and expand their knowledge and skills to support safe aircraft operations.

(*1) IOC: An organization for centrally managing operations of the JAL Group
(*2) IOC competency: Competencies (behavioral characteristics) defined by ICAO, adapted for IOC staff
Communication, Situation Awareness, Workload Management, Problem Solving/Decision Making, Team Building, Strengthening Organizational Functions, Specialty Skills, and Application of Procedures and Regulations
(*3) Resilience: Flexibility of an individual or a team in responding to unexpected changes in the situation and recovering the original state

d. Initiatives to cultivate a safety culture

(a) Direct communication between employees and management

Workplace tours by executive officers

The JAL Group provides opportunities for top management and executive officers of Flight Operations, Engineering and Maintenance, Cabin Attendants, Airport Operations, Operations, Cargo and Mail, and other production divisions to visit frontlines on a regular basis to communicate directly with our employees. During the Semiannual Safety Campaign and the Year-end and New Year Safety Inspection, executive officers of general managing divisions such as General Affairs, Accounting, Human Resources and IT Planning, as well as production divisions, visit airports in Japan and overseas, and frontlines of Flight Operations, Cabin Attendants, Engineering and Maintenance, Operations, and Cargo and Mail.

In FY2021, despite the impact of movement restrictions during the pandemic, we communicated with employees not only in Japan but also overseas through online patrol of overseas airports, in addition to round table meetings at domestic airports.

Round table meeting
between employees and management

(b) Communication Leader Meeting (CLM)

The CLM is a meeting where employees in various occupations and divisions assemble from all over Japan to communicate with each other, create an open corporate culture, promote autonomous activities and strengthen frontline capabilities. This is an initiative to make connections and broaden their outlook by bringing colleagues together to discuss and solve active or latent issues within the JAL Group and find solutions.

CLM Activities Reporting Meeting for Management

(c) Employee recognition awards

The JAL Group presents certificates of commendation to employees with the aim to foster a culture of praise and enhance safety awareness. In the JAL Awards Fortress of Safety category, employees are awarded for such actions as proactively preventing events that affect safe operations by acting in accordance with the Safety Charter or analyzing and reporting irregularities and contributing significantly to sharing knowledge and proactively preventing recurrence.

Certificate of Appreciation Presentation Ceremony

In addition to the above awards, the Senior Vice President of Corporate Safety and Security presents a Certificate of Appreciation to employees for detecting abnormal situations and proactively preventing trouble.

Voice of a recipient of a Certificate of Appreciation from Corporate Safety and Security

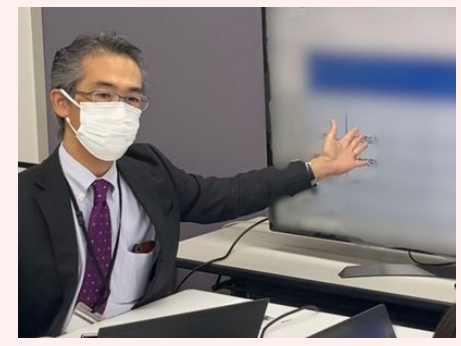
TSUKAGOSHI Daisuke
Haneda Group,
JAL Cargo Handling

Receiving a Certificate of Appreciation made me realize that efforts based on voluntary attention bring about results. I also believe that receiving recognition of our teamwork, which we built through friendly competition, is proof of our organization's high awareness of safety.

I feel that our safety layers and safety quality will further increase and grow stronger when individuals get together and work as a team. To achieve this, I will continue to do my best to maintain safety by responding sensitively to the smallest safety concern, speak up without fear, and maintain active communication with my colleagues.

Thoughts of an administrator of the awards

We try to foster a culture of praise by actively praising our employees even for the smallest things. Since the recipients of the awards are not limited to frontline staff and organizations but extend to the departments that support them, we are always on the lookout for information to collect. We also ask the heads of organizations to attend the ceremony to present Certificates of Appreciation in front of their frontline colleagues. Although it is a steady effort, we feel that praise and recognition will spark communication between management and the frontline, and contribute to closing the distance between management and the workplace. Through these awards, we hope to contribute to the creation of an environment in which every employee is encouraged to voice their opinions in a positive manner, thereby creating a state in which the SMS in the workplace is functioning effectively. The joyful expressions and voices of the recipients at the award ceremonies are our motivation.



FUKUTSU Shigeto
Corporate Safety and Security,
Japan Airlines

5. Data

(1) JAL Group Passenger Traffic Data

① Aircraft types

	2021					
	Total Flights	YoY (%)	RPK (000's)	YoY (%)	RTK (000's)	YoY (%)
777-300ER	5,303	91.9	2,126,527	205.3	1,116,767	154.2
777-200ER	4,948	52.0	774,916	59.5	114,495	47.8
787-8	18,054	132.4	2,119,262	215.3	920,343	179.8
787-9	12,194	141.1	2,202,134	201.4	1,613,992	152.4
767-300ER	21,456	164.3	2,253,514	168.6	289,588	194.8
737-800	82,031	135.3	4,776,157	135.5	388,283	129.1
A350	12,423	244.1	2,542,749	241.6	298,639	240.2
ATR42-600	22,599	138.4	118,965	152.6	9,124	151.3
ATR72-600	3,850	107.7	35,187	110.5	2,696	109.7
DHC8-Q400CC	11,929	99.6	64,494	109.7	5,532	109.5
EMBRAER170	36,989	138.7	533,704	134.8	40,870	134.2
EMBRAER190	23,183	132.2	615,834	125.5	47,576	124.5
SAAB 340B	2,662	52.0	11,422	56.7	857	56.7
Total	257,621	131.0	18,174,867	159.5	4,848,763	154.2

Key
RPK= Revenue Passenger Kilometers
RTK= Revenue Ton Kilometer
Note:
*Data includes sales by other airline partners on JAL operated flights.
*Starting FY2020, International Financial Reporting Standards (IFRS) have been applied, in which award tickets are counted as revenue tickets. As a result, the figures listed above (Passengers, RPK, LF) include passengers traveling with an award ticket.
*SJO is from June 29, 2021 to March 31, 2022.

② International

Combined international traffic data of the JAL Group (JAL, ZIP, SJO)

	2021								2020
	Total Flights	Total Passengers	YoY (%)	RPK (000's)	Y.o.Y(%)	ASK (000's)	YoY (%)	L/F(%)	L/F(%)
America	5,488	345,781	338.1	3,220,925	331.8	11,330,022	197.6	28.4	16.9
Europe	2,239	90,437	200.1	839,219	204.4	4,463,540	169.9	18.8	15.6
Southeast Asia	7,236	367,894	224.7	1,612,464	236.7	6,878,734	207.0	23.4	20.5
Oceania	416	16,753	409.7	131,684	411.8	634,647	285.6	20.7	14.4
Hawaii/Guam	601	32,777	524.9	202,220	526.8	828,392	541.2	24.4	25.1
Korea	333	11,600	704.3	14,593	726.8	121,485	230.6	12.0	3.8
China	808	65,179	177.9	125,280	182.0	346,258	242.4	36.2	48.2
Total	17,121	930,421	258.6	6,146,386	278.9	24,603,078	200.8	25.0	18.0

Key
RPK= Revenue Passenger Kilometers
ASK= Available Seat Kilometers
L/F= Load Factor=RPK÷ASK
Note:
*Data includes sales by other airline partners on JAL operated flights.
*Starting FY2020, International Financial Reporting Standards (IFRS) have been applied, in which award tickets are counted as revenue tickets. As a result, the figures listed above (Passengers, RPK, LF) include passengers traveling with an award ticket.
*Tickets sold as codeshare flights operated by a partner carrier are not included in the data.
＊SJO is from June 29, 2021 to March 31, 2022.

③ Domestic

Combined domestic traffic data of the JAL Group (JAL, J-AIR, JTA, JAC, RAC, HAC, SJO)

			2021						2020
			Total Flights	Total Passengers	YoY (%)	Number of available seats	YoY (%)	L/F(%)	L/F(%)
TOKYO(HANEDA)	-	OSAKA(ITAMI)	9493	1,427,695	134.6	2,427,204	126.3	58.8	55.2
TOKYO(HANEDA)	-	OSAKA(KANSAI)	1017	67,079	213.1	165,579	166.4	40.5	31.6
TOKYO(HANEDA)	-	SAPPORO(NEW CHITOSE)	8803	1,417,561	133.9	2,576,490	125.3	55.0	51.5
TOKYO(HANEDA)	-	NAGOYA(CHUBU)	573	32,575	95.7	83,083	64.4	39.2	26.4
TOKYO(HANEDA)	-	FUKUOKA	9768	1,572,084	143.1	2,836,566	126.1	55.4	48.8
TOKYO(HANEDA)	-	OKINAWA(NAHA)	6958	1,155,104	104.7	2,207,807	99.5	52.3	49.8
TOKYO(HANEDA)	-	MEMANBETSU	1693	126,994	138.4	304,296	155.6	41.7	46.9
TOKYO(HANEDA)	-	ASAHIKAWA	2118	221,081	149.9	456,640	154.8	48.4	50.0
TOKYO(HANEDA)	-	KUSHIRO	1496	111,051	119.2	261,850	130.1	42.4	46.3
TOKYO(HANEDA)	-	OBIHIRO	1978	165,130	134.3	356,724	140.4	46.3	48.4
TOKYO(HANEDA)	-	HAKODATE	1714	176,012	144.2	341,858	144.1	51.5	51.5
TOKYO(HANEDA)	-	AOMORI	2778	205,843	161.5	430,928	152.0	47.8	45.0
TOKYO(HANEDA)	-	MISAWA	2075	114,629	191.4	239,414	158.0	47.9	39.5
TOKYO(HANEDA)	-	AKITA	1614	101,856	200.4	235,379	3,681.8	43.3	38.4
TOKYO(HANEDA)	-	HANAMAKI	56	4,590	229.2	5,320	175.0	86.3	65.9
TOKYO(HANEDA)	-	YAMAGATA	1469	53,060	337.2	139,555	247.3	38.0	27.9
TOKYO(HANEDA)	-	SENDAI	118	15,035	254.2	18,084	187.0	83.1	61.2
TOKYO(HANEDA)	-	KOMATSU	2663	237,845	150.4	454,940	147.7	52.3	51.4
TOKYO(HANEDA)	-	NANKI-SHIRAHAMA	1755	139,142	165.3	276,443	136.2	50.3	41.5
TOKYO(HANEDA)	-	OKAYAMA	2238	162,323	141.9	366,372	136.8	44.3	42.7
TOKYO(HANEDA)	-	IZUMO	2606	251,503	151.4	515,251	156.3	48.8	50.4
TOKYO(HANEDA)	-	HIROSHIMA	3803	307,376	139.8	688,987	143.9	44.6	45.9
TOKYO(HANEDA)	-	YAMAGUCHIUBE	1856	115,520	178.0	302,712	151.3	38.2	32.4
TOKYO(HANEDA)	-	TOKUSHIMA	2966	258,333	162.8	545,062	158.2	47.4	46.1
TOKYO(HANEDA)	-	TAKAMATSU	3148	238,427	157.9	534,384	157.7	44.6	44.6
TOKYO(HANEDA)	-	KOCHI	2521	182,947	150.7	394,363	134.3	46.4	41.3
TOKYO(HANEDA)	-	MATSUYAMA	2931	213,066	162.1	464,372	153.3	45.9	43.4
TOKYO(HANEDA)	-	KITAKYUSHU	1862	121,529	181.1	300,426	159.2	40.5	35.6
TOKYO(HANEDA)	-	OITA	2859	245,497	162.4	492,527	149.8	49.8	46.0
TOKYO(HANEDA)	-	NAGASAKI	2951	261,798	167.2	506,075	149.6	51.7	46.3
TOKYO(HANEDA)	-	KUMAMOTO	3682	358,771	155.5	694,594	132.3	51.7	44.0
TOKYO(HANEDA)	-	MIYAZAKI	2795	190,960	176.9	436,451	157.8	43.8	39.0
TOKYO(HANEDA)	-	KAGOSHIMA	4005	409,126	155.1	835,594	143.3	49.0	45.2
TOKYO(HANEDA)	-	AMAMI-OSHIMA	724	64,425	158.0	119,334	138.1	54.0	47.2
TOKYO(HANEDA)	-	MIYAKO	727	74,463	119.7	144,087	143.7	51.7	62.1
TOKYO(HANEDA)	-	ISHIGAKI	1366	127,667	126.0	268,862	148.8	47.5	56.1
TOKYO(HANEDA)	-	KUMEJIMA	125	6,439	137.3	13,630	97.2	47.2	33.4
TOKYO(NARITA)	-	OSAKA(ITAMI)	142	5,239	982.9	21,435	586.5	24.4	14.6
TOKYO(NARITA)	-	SAPPORO(NEW CHITOSE)	323	32,071	-	61,047	-	52.5	-
TOKYO(NARITA)	-	NAGOYA(CHUBU)	121	4,506	189.2	17,555	64.6	25.7	8.8
TOKYO(NARITA)	-	HIROSHIMA	326	26,415	-	61,614	-	42.9	-
TOKYO(NARITA)	-	SAGA	188	11,773	-	35,532	-	33.1	-
OSAKA(ITAMI)	-	SAPPORO(NEW CHITOSE)	2515	247,708	131.3	411,895	128.6	60.1	58.9
OSAKA(ITAMI)	-	FUKUOKA	2699	141,197	141.1	231,946	136.5	60.9	58.9
OSAKA(ITAMI)	-	OKINAWA(NAHA)	1698	237,698	102.4	579,865	105.8	41.0	42.4

			2021						2020
			Total Flights	Total Passengers	YoY (%)	Number of available seats	YoY (%)	L/F(%)	L/F(%)
OSAKA(ITAMI)	-	MEMANBETSU	80	3,586	97.0	6,118	101.3	58.6	61.2
OSAKA(ITAMI)	-	ASAHIKAWA	62	3,436	93.7	10,230	100.4	33.6	36.0
OSAKA(ITAMI)	-	HAKODATE	648	36,070	211.6	61,370	217.9	58.8	60.6
OSAKA(ITAMI)	-	AOMORI	1747	80,054	136.0	165,661	137.4	48.3	48.8
OSAKA(ITAMI)	-	MISAWA	711	27,729	190.0	67,526	180.4	41.1	39.0
OSAKA(ITAMI)	-	AKITA	1153	36,262	105.8	102,163	116.1	35.5	38.9
OSAKA(ITAMI)	-	HANAMAKI	1748	57,656	122.5	133,817	133.6	43.1	47.0
OSAKA(ITAMI)	-	YAMAGATA	1548	49,570	159.7	119,016	160.9	41.6	42.0
OSAKA(ITAMI)	-	SENDAI	3732	143,962	113.5	339,045	126.2	42.5	47.2
OSAKA(ITAMI)	-	NIIGATA	1635	51,682	110.0	147,649	130.2	35.0	41.4
OSAKA(ITAMI)	-	MATSUMOTO	62	1,827	181.6	4,712	100.0	38.8	21.3
OSAKA(ITAMI)	-	TAJIMA	1270	20,910	134.6	60,960	120.4	34.3	30.7
OSAKA(ITAMI)	-	IZUMO	1724	57,866	132.0	134,615	137.8	43.0	44.9
OSAKA(ITAMI)	-	OKI	692	15,037	163.1	54,100	153.3	27.8	26.1
OSAKA(ITAMI)	-	MATSUYAMA	1272	32,461	156.4	97,014	162.3	33.5	34.7
OSAKA(ITAMI)	-	OITA	1654	54,091	143.2	126,464	152.1	42.8	45.4
OSAKA(ITAMI)	-	NAGASAKI	1757	67,885	111.1	166,295	133.1	40.8	48.9
OSAKA(ITAMI)	-	KUMAMOTO	1838	62,691	202.3	145,806	212.7	43.0	45.2
OSAKA(ITAMI)	-	MIYAZAKI	2271	93,006	145.4	205,986	143.1	45.2	44.4
OSAKA(ITAMI)	-	KAGOSHIMA	3770	158,245	123.6	343,117	131.7	46.1	49.2
OSAKA(ITAMI)	-	TANEGASHIMA	76	1,589	144.1	5,852	115.8	27.2	21.8
OSAKA(ITAMI)	-	YAKUSHIMA	705	19,902	126.5	33,840	116.0	58.8	53.9
OSAKA(ITAMI)	-	AMAMI-OSHIMA	812	53,994	145.2	111,428	155.2	48.5	51.8
OSAKA(ITAMI)	-	TOKUNOSHIMA	8	404	264.1	760	100.0	53.2	20.1
OSAKA(KANSAI)	-	SAPPORO(NEW CHITOSE)	917	59,894	113.0	148,911	120.7	40.2	43.0
OSAKA(KANSAI)	-	OKINAWA(NAHA)	1148	64,683	84.9	189,420	90.0	34.1	36.2
OSAKA(KANSAI)	-	ISHIGAKI	612	33,538	86.6	100,980	124.6	33.2	47.8
OSAKA(KANSAI)	-	MIYAKO	302	20,404	-	49,830	-	40.9	-
SAPPORO(NEW CHITOSE)	-	MEMANBETSU	2023	75,466	101.5	153,824	107.9	49.1	52.2
SAPPORO(NEW CHITOSE)	-	AOMORI	1294	48,264	139.4	99,056	131.9	48.7	46.1
SAPPORO(NEW CHITOSE)	-	AKITA	774	19,357	200.4	59,040	200.7	32.8	32.8
SAPPORO(NEW CHITOSE)	-	HANAMAKI	1003	32,818	135.9	76,361	124.4	43.0	39.3
SAPPORO(NEW CHITOSE)	-	SENDAI	2318	89,674	118.6	181,773	133.6	49.3	55.6
SAPPORO(NEW CHITOSE)	-	NIIGATA	867	27,175	172.7	65,968	159.8	41.2	38.1
SAPPORO(NEW CHITOSE)	-	HIROSHIMA	548	42,130	132.6	90,273	103.3	46.7	36.4
SAPPORO(NEW CHITOSE)	-	IZUMO	34	1,197	76.9	5,610	116.1	21.3	32.2
SAPPORO(NEW CHITOSE)	-	TOKUSHIMA	26	839	67.0	4,290	119.9	19.6	35.0
SAPPORO(OKADAMA)	-	RISHIRI	701	18,394	125.3	32,712	124.7	56.2	56.0
SAPPORO(OKADAMA)	-	MEMANBETSU	488	7,599	389.1	21,672	447.0	35.1	40.3
SAPPORO(OKADAMA)	-	KUSHIRO	2054	54,313	108.4	90,588	106.3	60.0	58.8
SAPPORO(OKADAMA)	-	HAKODATE	3022	87,443	114.8	129,180	97.6	67.7	57.6
SAPPORO(OKADAMA)	-	MISAWA	359	7,626	144.8	16,368	118.9	46.6	38.3
SAPPORO(OKADAMA)	-	OKUSHIRI	108	1,680	-	5,088	-	33.0	-
HAKODATE	-	OKUSHIRI	537	7,801	104.6	21,612	95.5	36.1	32.9
NAGOYA(CHUBU)	-	SAPPORO(NEW CHITOSE)	1805	137,141	106.2	297,783	108.1	46.1	46.9
NAGOYA(CHUBU)	-	OKINAWA(NAHA)	1863	108,868	87.7	307,395	103.3	35.4	41.7
NAGOYA(CHUBU)	-	KUSHIRO	24	2,104	155.0	3,960	93.2	53.1	31.9

			2021						2020
			Total Flights	Total Passengers	YoY (%)	Number of available seats	YoY (%)	L/F(%)	L/F(%)
NAGOYA(CHUBU)	-	OBIHIRO	36	2,135	131.2	5,940	102.9	35.9	28.2
NAGOYA(CHUBU)	-	MIYAKO	221	10,109	1,728.0	36,465	2,762.5	27.7	44.3
NAGOYA(CHUBU)	-	ISHIGAKI	234	11,240	1,415.6	38,610	2,925.0	29.1	60.2
FUKUOKA	-	SAPPORO(NEW CHITOSE)	1096	97,203	117.8	180,840	118.5	53.8	54.1
FUKUOKA	-	OKINAWA(NAHA)	2794	213,977	105.8	461,010	110.5	46.4	48.5
FUKUOKA	-	HANAMAKI	699	19,075	191.9	53,124	211.8	35.9	39.6
FUKUOKA	-	SENDAI	1024	39,936	102.0	97,223	115.2	41.1	46.4
FUKUOKA	-	IZUMO	1376	25,410	159.3	66,160	131.5	38.4	31.7
FUKUOKA	-	TOKUSHIMA	897	25,155	161.9	68,172	144.8	36.9	33.0
FUKUOKA	-	KOCHI	919	31,671	160.3	69,844	144.8	45.3	41.0
FUKUOKA	-	MATSUYAMA	1953	73,736	138.1	148,561	140.0	49.6	50.3
FUKUOKA	-	MIYAZAKI	3814	146,171	165.4	289,978	159.3	50.4	48.6
FUKUOKA	-	KAGOSHIMA	717	13,323	130.6	34,416	111.7	38.7	33.1
FUKUOKA	-	YAKUSHIMA	699	16,636	142.0	33,552	151.0	49.6	52.7
FUKUOKA	-	AMAMI-OSHIMA	722	31,775	128.8	54,872	116.3	57.9	52.3
OKINAWA(NAHA)	-	KOMATSU	363	20,402	110.4	59,895	86.0	34.1	26.5
OKINAWA(NAHA)	-	OKAYAMA	482	25,853	131.4	79,530	99.6	32.5	24.6
OKINAWA(NAHA)	-	MIYAKO	5026	353,969	99.3	747,640	106.4	47.3	50.7
OKINAWA(NAHA)	-	ISHIGAKI	4319	266,707	99.2	631,905	109.0	42.2	46.4
OKINAWA(NAHA)	-	KITADAITO	360	13,255	117.1	18,000	102.3	73.6	64.3
OKINAWA(NAHA)	-	MINAMIDAITO	1007	27,864	105.5	50,350	103.0	55.3	54.0
OKINAWA(NAHA)	-	YORON	733	24,048	142.0	36,650	101.7	65.6	47.0
OKINAWA(NAHA)	-	KUMEJIMA	3873	135,068	103.8	240,110	98.5	56.3	53.4
OKINAWA(NAHA)	-	AMAMI-OSHIMA	308	6,792	110.1	15,400	83.7	44.1	33.5
OKINAWA(NAHA)	-	YONAGUNI	702	18,243	103.6	35,100	100.0	52.0	50.1
OKINAWA(NAHA)	-	OKINOERABU	706	15,446	121.8	33,888	104.9	45.6	39.3
IZUMO	-	OKI	674	17,066	118.0	32,352	98.1	52.8	43.9
KAGOSHIMA	-	MATSUYAMA	398	5,892	129.3	19,588	92.4	30.1	21.5
KAGOSHIMA	-	TANEGASHIMA	2185	51,951	141.0	119,774	121.0	43.4	37.2
KAGOSHIMA	-	YAKUSHIMA	2946	89,483	136.2	182,614	135.2	49.0	48.6
KAGOSHIMA	-	KIKAIJIMA	1287	25,338	151.2	61,776	146.1	41.0	39.6
KAGOSHIMA	-	AMAMI-OSHIMA	4449	142,040	110.8	312,116	135.1	45.5	55.5
KAGOSHIMA	-	TOKUNOSHIMA	2767	97,200	139.2	188,432	137.7	51.6	51.0
KAGOSHIMA	-	OKINOERABU	1726	48,780	124.9	95,872	115.5	50.9	47.0
KAGOSHIMA	-	YORON	711	23,856	165.6	48,934	110.0	48.8	32.4
AMAMI-OSHIMA	-	KIKAIJIMA	1818	30,895	102.7	87,264	113.8	35.4	39.3
AMAMI-OSHIMA	-	TOKUNOSHIMA	1392	31,862	117.5	66,816	104.5	47.7	42.4
AMAMI-OSHIMA	-	YORON	693	7,851	127.3	33,264	104.8	23.6	19.4
OKINOERABU	-	TOKUNOSHIMA	710	14,010	112.8	34,080	106.0	41.1	38.6
MIYAKO	-	ISHIGAKI	1069	33,366	111.0	53,680	97.4	62.2	54.5
MIYAKO	-	TARAMA	1050	27,870	113.4	52,500	103.8	53.1	48.6
ISHIGAKI	-	YONAGUNI	1460	48,205	109.0	73,000	97.3	66.0	58.9
KITADAITO	-	MINAMIDAITO	352	11,784	110.3	17,600	100.9	67.0	61.2
Total			223,885	16,092,114	133.7	32,724,267	129.3	49.2	47.6

＊Excluding charter flights and codeshare flights
＊L/F=Load Factor=RPK÷ASK
＊SJO is from June 29, 2021 to March 31, 2022.

(2) JAL Group Fleet and Aircraft

BOEING 777	Number of Aircraft: 29	**BOEING 767**	Number of Aircraft: 29
	Operator: JAL		Operator: JAL
	Number of Seats: 236~500		Number of Seats: 199~261
	Service Entry: CY 1996		Service Entry: CY 1985
	Average Age: 17.4		Average Age: 14.6
	Average Yearly FH: 2,264		Average Yearly FH: 1,505
	Average Yearly FC: 354		Average Yearly FC: 741
BOEING 787	Number of Aircraft: 51	**BOEING 737-800**	Number of Aircraft: 65
	Operator: JAL・ZIP		Operator: JAL・JTA・SJO
	Number of Seats: 161~291		Number of Seats: 144~189
	Service Entry: CY 2012		Service Entry: CY 2006
	Average Age: 6.1		Average Age: 10.2
	Average Yearly FH: 3,492		Average Yearly FH: 1,935
	Average Yearly FC: 595		Average Yearly FC: 1,263
AIRBUS A350	Number of Aircraft: 15	**EMBRAER 190**	Number of Aircraft: 14
	Operator: JAL		Operator: J-AIR
	Number of Seats: 369~391		Number of Seats: 95
	Service Entry: CY 2019		Service Entry: CY 2016
	Average Age: 1.4		Average Age: 4.8
	Average Yearly FH: 1,576		Average Yearly FH: 1,778
	Average Yearly FC:829		Average Yearly FC: 1,659
EMBRAER 170	Number of Aircraft: 18	**ATR 72-600**	Number of Aircraft: 2
	Operator: J-AIR		Operator: JAC
	Number of Seats: 76		Number of Seats: 70
	Service Entry: CY 2008		Service Entry: CY 2018
	Average Age: 10.2		Average Age: 3.2
	Average Yearly FH: 1,657		Average Yearly FH: 1,435
	Average Yearly FC: 2,071		Average Yearly FC: 1,929
ATR 42-600	Number of Aircraft: 11	**DE HAVILLAND DASH 8-400 CARGO COMBI**	Number of Aircraft: 5
	Operator:JAC・HAC		Operator: RAC
	Number of Seats: 48		Number of Seats: 50
	Service Entry: CY 2017		Service Entry: CY 2016
	Average Age: 2.9		Average Age: 5.4
	Average Yearly FH: 1,605		Average Yearly FH: 1,667
	Average Yearly FC: 2,395		Average Yearly FC: 2,404

*About Average Aircraft Age:
Aircraft can be used almost permanently if they are properly maintained according to their age. High aircraft age does not directly affect safety. All JAL Group aircraft are properly maintained with good quality under the maintenance program recommended by the manufacturer and approved by the MLIT.
*Average Yearly FH (Flight Hour)=Yearly FH ÷ the number of aircraft (as of March 31, 2022)
*Average Yearly FC (Flight Cycle)=Yearly FC ÷the number of aircraft (as of March 31, 2022)
*The SAAB 340B was retired in December 2021.
*SJO is from June 29, 2021 to March 31, 2022.

－About This Report－

The JAL Group Safety Report FY2021 is a safety report prepared by the eight JAL Group airlines in accordance with Article 111, Paragraph 6 of the Civil Aeronautics Act.

【Period Covered by this Report】
April 1, 2021 to March 31, 2022. Some items are related to matters occurring before or after this period.
*SJO is from June 29, 2021 to March 31, 2022.

【Scope of This Report】
This report covers the eight JAL Group airlines listed on the front cover. However, some topics are limited to Japan Airlines. Information on safety initiatives of each company can be viewed on the following websites.

Company (abbreviation)	URL
Japan Airlines (JAL)	http://www.jal.com/en/flight/
J-AIR (J-AIR)	http://www.jair.co.jp/about/safety.html(in Japanese only)
Japan Transocean Airlines (JTA)	https://jta-okinawa.com/safety/(in Japanese only)
Japan Air Commuter (JAC)	http://www.jac.co.jp/company_info/safety.html(in Japanese only)
Ryukyu Air Commuter (RAC)	https://rac-okinawa.com/safety/(in Japanese only)
Hokkaido Air System (HAC)	https://www.info.hac-air.co.jp/wp-content/uploads/2019/04/hacsafetyreport201904.pdf(in Japanese only)
ZIPAIR Tokyo (ZIP)	http://www.zipairtokyo.com/ja/safety/(in Japanese only)
SPRING JAPAN（SJO）	https://jp.ch.com/JP/DownLoadReport(in Japanese only)

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Published in 2022

Japan Airlines Co., Ltd.
J-AIR Co., Ltd.
Japan Transocean Air Co., Ltd.
Japan Air Commuter Co., Ltd.
Ryukyu Air Commuter Co., Ltd.
Hokkaido Air System Co., Ltd.
ZIPAIR Tokyo Inc.
SPRING JAPAN Co., Ltd.