

**AEROTHAI** 



**ANNUAL REPORT**

**2019**

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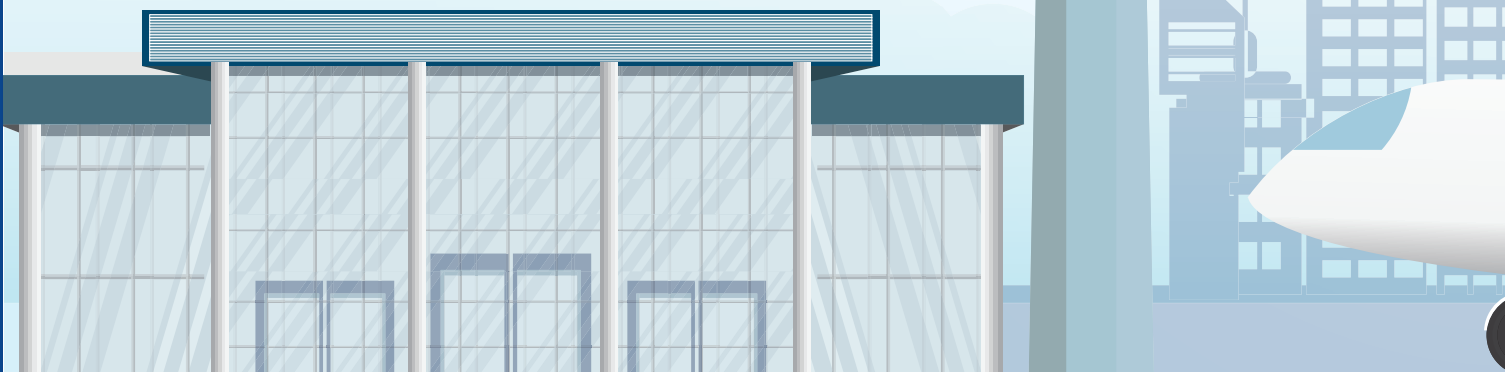
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## Message from the Chairman



“  
the Company will continue to upgrade the service quality development to be in line with the expectations of all stakeholder groups. It believes that the progress of the organization will help promote the sustainable growth of the aviation industry of the Country and region.  
”

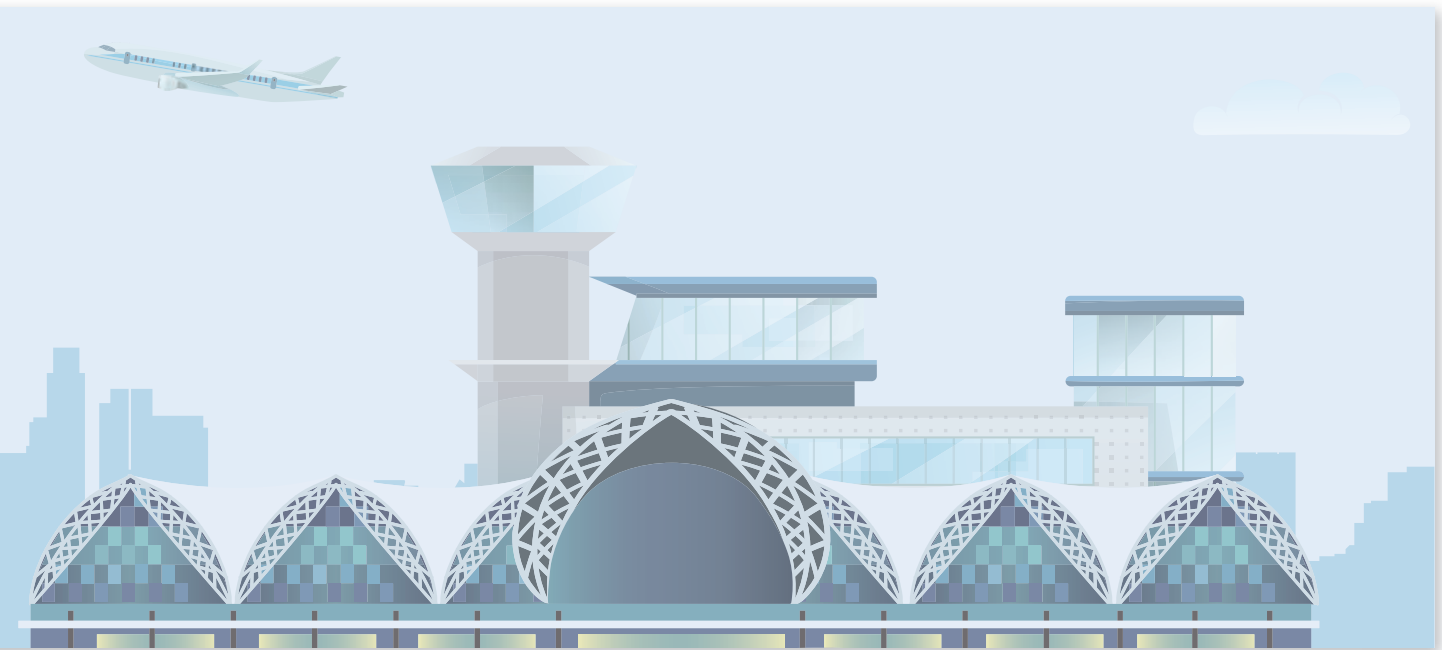
On the auspicious occasion of the coronation of His Majesty the King in 2019, I am very pleased to organize a Chalermprakiat Project: AEROTHAI's Safety Concern and Concentration on Quality of Life, with the Management and staff of Aeronautical Radio of Thailand Limited. This activity is to promote the quality of life and create safety for communities around the Company's premises which is in line with the main mission that focuses on the safety of air navigation services.

To provide air navigation services, the provider must consider “Service Quality” the most important factor. The Company, as the national air navigation services provider, recognizes such importance and focuses on maintaining standards and improving service quality for sustainability according to the revised organization vision this year, namely “A Sustainable Quality Excellent Air Navigation Services Provider”. The Company also sets the Mission, Corporate Values and strategic plans according to the Corporate Plan 2020-2024 to achieve the Vision and to be in line with the 20-year National Strategic Plan framework which is the goal of the Country's sustainable development.

In 2019, the Country's aviation industry still faced challenges from various events that affected the increase of flight volumes that slowed down in line with the declining global economic trend, despite supporting factors from the Government's aviation industry promotion policy and continuous support from the tourism sectors. The Company must give priority to increase the efficiency and capability of the air navigation services along with raising the quality and service standards to meet the needs of users and collaboration

to create value for the aviation business as well as the Country's competitiveness.

The Company has invested in significant strategic projects to increase air traffic efficiency and the ability to handle flights which have been satisfactorily progressing. These include both the design and development of the airspace for the airports with complex air traffic, air route network establishment, promotion and co-driving the Country's airspace management system to be in accordance with the international aviation plan of the International Civil Aviation Organization. For the enhancement of safety, the Company is determined to fix and improve the detection of incidents and focus on the development of fatigue risk management systems in accordance with the requirements of the Civil Aviation Authority of Thailand.



The Company is determined to carry out projects to develop the air navigation service infrastructure and cooperate with various airports to develop the Country's competitiveness. The Company has been promoting cooperation with regional air navigation services providers and aviation organizations at regional and global level to improve efficiency and upgrade aviation standards. The Company also recognized the significance of learning readiness for the personnel to improve and develop work processes, technology and equipment systems to deal with new challenges as well as driving the organization to become a digital organization.

The Company still adhered to the principles and guidelines for good governance and business operation with fairness, transparency and social responsibility, by continuously collaborating with government

agencies and communities. As the National Air Navigation Services Provider, the Company continued to push forward the resolutions to solve the problems of rockets firing and sky lanterns launching, ground radio interference with the aviation communication system including the problems with the standards of aviation meteorological services in order to gain confidence from users and all stakeholders and for sustainable growth.

For future operations on the challenges of the aviation world, the Company will continue to upgrade the service quality development to be in line with the expectations of all stakeholder groups. It believes that the progress of the organization will help promote the sustainable growth of the aviation industry of the Country and region.

On behalf of the Board of Directors, who sets the policy, supervises and continuously monitors the performance of this important mission, I would like to take this opportunity to thank the shareholders, the users, the stakeholders as well as the Management and staff. Moreover, I can assure you that the Company will continue to strive and improve the service efficiency for the benefits of shareholders and stakeholders.

Air Chief Marshal

**(Siwakiat Jayema)**

Chairman of the Board of Directors

## Message from the President



“  
 With the commitment to develop quality services as well as environmental and social awareness, the Management and all employees remain committed to performing their duties to the best in order to make progress on our sustainable organization.  
 ”

Aeronautical Radio of Thailand Limited has been providing Air Traffic Management Services within the Bangkok Flight Information Region (Bangkok FIR), Communications, Navigation and Surveillance Services, Aeronautical Information and Aeronautical Charts Services under the Agreement with the Government for 71 years until now. It has the commitment to raise the quality of services with efficiency to meet the needs of the airline users, develop the potential to become an excellent organization according to the world standards as well as promoting and supporting government agencies and international countries to jointly develop national and regional air transportation operations.

In 2019, the volume of air traffic in Thailand increased by 1.8% from the previous year with a total of 1.05 million flights and with an average annual growth rate of 10% in 10 years from the fiscal years 2009 to 2019 or up 2.5 times in 10 years. It is expected that in 2020 the total flight volume will reach 1.1 million flights. The Company must be prepared to handle the impending challenges with a commitment to manage various plans and projects to achieve the goals.

The plans and projects under the 5-year strategic plan have significant progress in this year as follows:

### 1. The Company has modified/improved the detection of Serious Incidents,

Major Incidents and obstacles in the provision of air traffic services, including prevention of risks from unsafe issues from Safety Survey/Audit. The Company has also developed the fatigue risk management systems in accordance with the requirements of the Civil Aviation Authority of Thailand, to reduce the impact on safety of air traffic services. This includes the promotion of a safety culture and development of Safety Management System. It helps to

create security awareness for the Management and staff throughout the organization systematically. The result is that the incident rate this year has continued to decrease. In addition, the Company has also been accredited ISO certification 22301 : 2012 for business continuity management systems for the central (Tung Mahamek, Don Mueang and Suvarnabhumi) and it will work to get the accreditation for the provincial areas by 2020.

This year, the Company has also determined the airspace development for airports that have Metroplex air traffic, which will be completed in 2021. It has analyzed the airport runway capacity as well as the development of air routes for aircraft operating flights with Visual Flight Rule. The Company has restructured the air route network and airspace management and collaborated the development of various airports. In addition, the Company has participated in promoting and driving the Country's airspace system to be in accordance with the international aviation plans of the International Civil Aviation Organization.

## **2. The Company has set up a suitable recruitment plan**

as well as having an evaluating system for personnel competency throughout the organization in order to manage personnel development in accordance with the organization's direction and goals. In order to successfully driving an organization, it requires an organization culture and personnel who are ready to adapt to changes both in the organization and from external factors. One of the important issues that has an impact is the transition of technology to a new system, changes in operating requirements and standards, and the transition to a digital organization. However, the Company still put its focus on enhancing work life balance and improving the quality of life of employees through various activities continuously.

This year, the Company began to review organization culture to be in line with the changing context by brainstorming ideas from senior Management and creating employees' involvement leading to a new corporate culture "AEROTeam". It has 5 main components: Accountability,

Ethics, Result-Oriented, Operational Excellence and Teamwork. This will be used as a guideline to encourage employees to have desirable behaviours in order to bring the organization to the direction and goals that are sustainable.

## **3. The Company has been evaluated in accordance with State Enterprise Performance Appraisal**

by the State Enterprise Policy Office. The assessment result of 2018 was 4.5862 points (total of 5 points) which was an increase from the previous year at 4.1652 points. The result of the corporate credit rating by TRIS Rating Co, Ltd in 2019 was at the level of "AAA" with the "Stable" outlook, that reflects the status of the Country's main air navigation service provider with good safety statistics, strong financial status and experienced management team.

In the field of innovation, "Intelligent Monitoring and Control System" won the silver medal in category "Computer-Science Electricity-Method of Communication (Class C)" from the International Exhibition of Inventions of Geneva which was held in April 2019 in Geneva, Switzerland and special prizes from the Institute of Inventors and Researchers of Iran.

Regarding good governance principles, the Company promoted morality, ethics and morals through various activities and fraud prevention measures. The Office of the National Anti Corruption Commission assessed the moral and transparency of the operations at a good level.

## **4. The Company has continuously and consistently collaborated to push forward the resolutions to solve the problems of rocket firing and sky lanterns launching**

by communicating and recommending them to the government agencies at the policy making level as well as promoting and enhancing realization to all concerned parties. In addition, the Company has collaborated with the Office of the National Broadcasting and Telecommunications Commission to present the solutions to the problems of ground radio interference with aviation communications

systems. The Company has also collaborated with the Meteorological Department to push for solutions to the problems of aviation meteorological service standards to comply with the safety standards of the International Civil Aviation Organization.

In the regional and global arenas, the Company has cooperated with the international aviation organizations and sent representatives to work as working groups to solve problems and develop standards in air navigation services. This year, the Company was honored to host the meetings of the Civil Air Navigation Services Organization to exchange information and opinions on safety management, monitor and formulate strategies for joint safety development.

#### 5. Progressive Thailand Modernization CNS/ATM System Project.

This year, the Company has started to operate the new air navigation service system as the main system. The System includes Chiang Mai Air Traffic Control Centre, Phitsanulok Air Traffic Control Centre, Udon Thani Air Traffic Control Centre, Phuket Air Traffic Control Centre, Hat Yai Air Traffic Control Centre, Bangkok Approach Control Centre and Provincial Approach Control Centre including air traffic control towers throughout the Country. Preparation for the transition of air navigation system to the TMCS has been made. It is expected that the TMCS system can be fully activated in the year 2020. This year, the Company has also collaborated with the Civil Aviation Authority of Thailand and the aviation stakeholders in Thailand to make strategic plans for the development of airspace and air navigation of the Country to increase capability and create sustainability of the Country's aviation systems. This is one of the works that the Company has continued to push forward.

With the commitment to develop quality services as well as environmental and social awareness, the Management and all employees remain committed to performing their duties to the best in order to make progress on our sustainable organization.

I would like to take this opportunity to thank the shareholders, users and stakeholders who always trust and support the Company's operations.



(Somnuk Rongthong)

President





## Corporate Information

### Company's Background

After the First World War, the Post and Telegraph Department had been assigned by the Royal Thai Government to assume responsibility of providing Air Traffic Control and Aeronautical Communications to international aircraft passing over and landing in Thailand. These ceased with the expansion of the Second World War to Asia which prevented commercial aircraft taking to the sky. When the Second World War ended, international civil aviation resumed. On 15 April 1948, Aeronautical Radio Inc. (ARINC) of the United States of America, International Aeradio Ltd. (IAL) of the United Kingdom and various airlines operating services to Thailand jointly founded Aeronautical Radio of Siam Limited. (AEROSIAM) with the consent of the Royal Thai Government to provide Air Traffic Control services and Aeronautical Communications services in accordance with ICAO's standards and recommended practices.

Later the Thai Government recognized its capability and the importance of the Company's responsibility concerning national security and aviation development. Therefore, the Government acquired a majority of the share capital from the founding airlines and changed its name to Aeronautical Radio of Thailand Limited (AEROTHAI) on 1 November 1963.

International airlines operating services to Thailand were also welcomed as shareholders. The Company's status has since become a state enterprise under the Ministry of Transport, operating as a limited company. The Company operates on behalf of the Government as a non-profit organization to provide safety services which are Air Traffic Control and Aeronautical Telecommunications services in the Bangkok Flight Information Region (FIR) with the network linking with other countries. In addition, there is a business sector which provides aviation related services, both domestic and overseas.



## Vision

“A Sustainable Quality Excellent Air Navigation Services Provider”

(Revised Vision in 2019 for AEROTHAI development and operations in the strategic framework of the Corporate Plan, 2020-2024.)

## Mission

“To be the national air navigation services provider that meets users’ requirements in safety, standards and efficiency in order to create value to the national aviation systems and interests.”





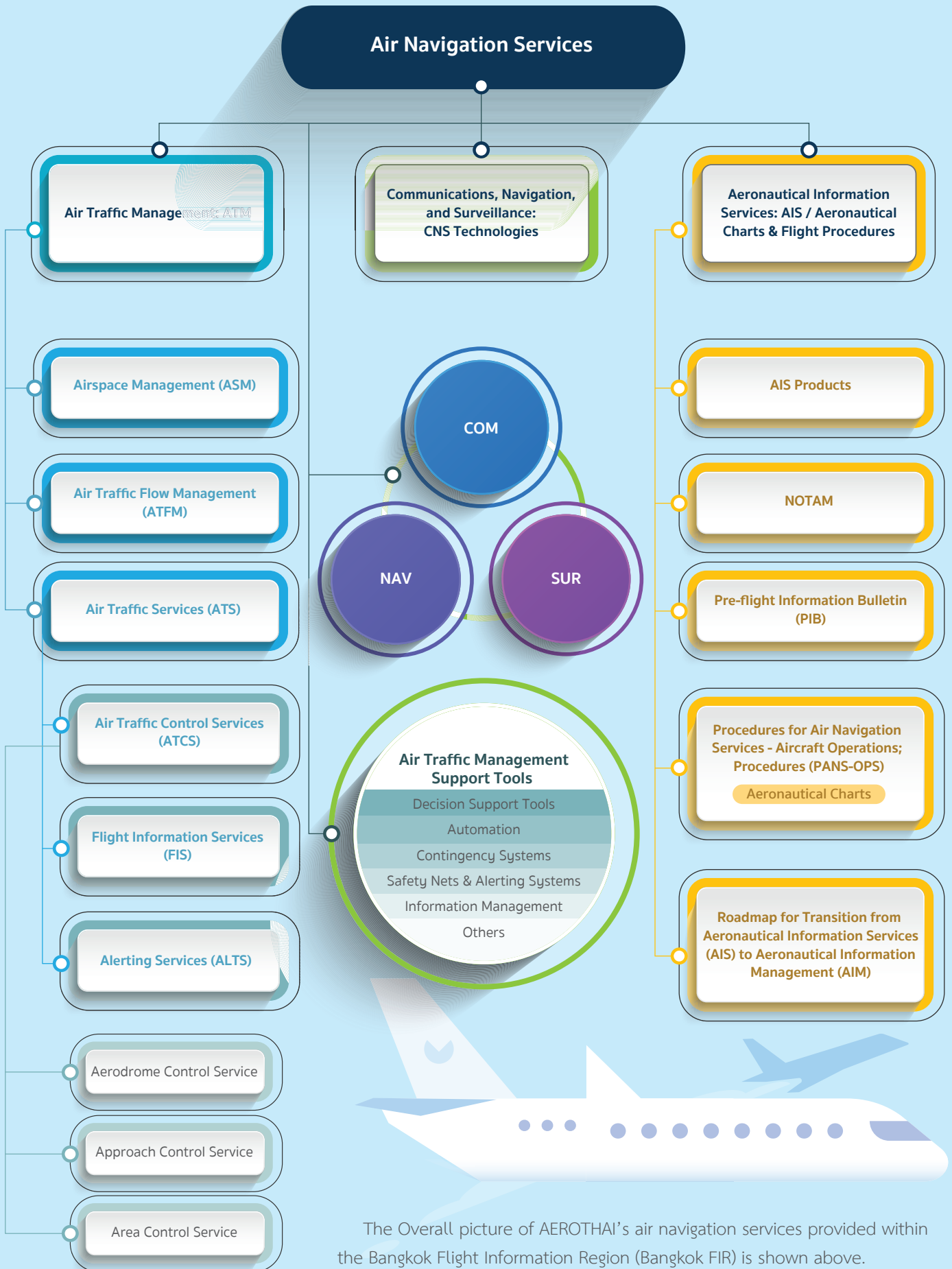
## Role and Responsibilities

### AEROTHAI's role and responsibilities include:

1. Air Traffic Management (ATM) within the Bangkok Flight Information Region for the aviation safety and efficiency of airspace users in Thailand,
2. Aeronautical Communications, Navigation and Surveillance (CNS), Systems/Services, and
3. Aeronautical Information Services (AIS) and Aeronautical Charts and Flight Procedures.

Included also is the related aeronautical communications services to airline operators, and other works assigned by the Government.

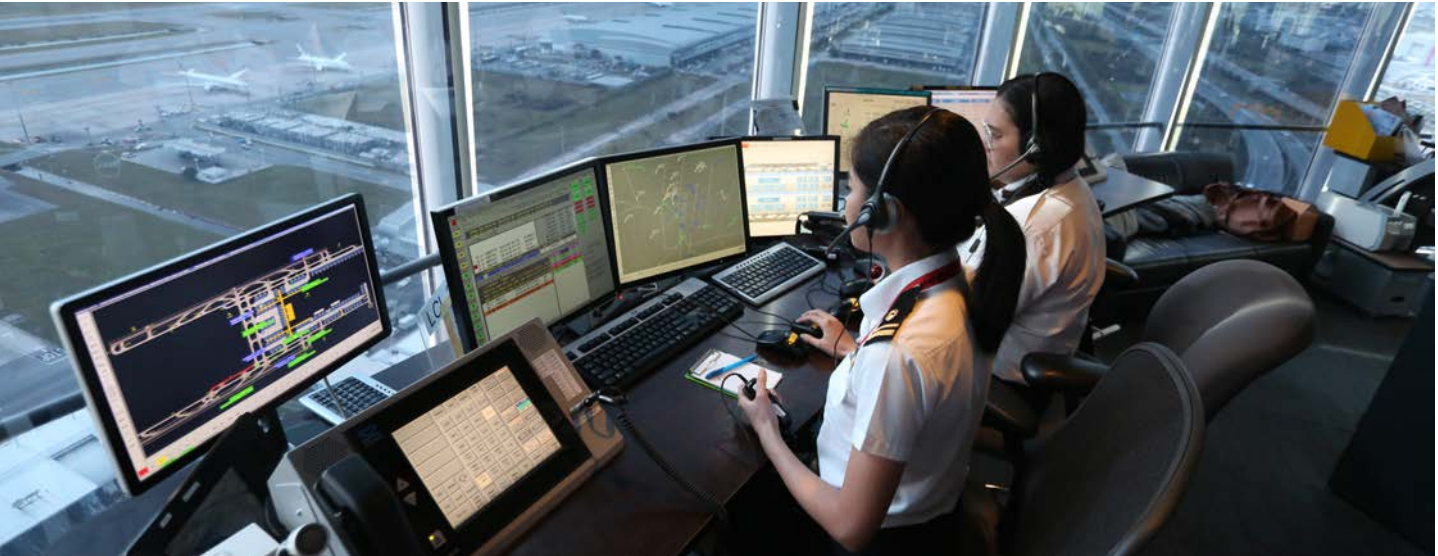




The Overall picture of AEROTHAI's air navigation services provided within the Bangkok Flight Information Region (Bangkok FIR) is shown above.

## The Overall Picture of AEROTHAI Air Navigation Services

The Company provides air navigation services within the Bangkok Flight Information Region (Bangkok FIR) which cover terminal airspaces for 35 airports nationwide and en-route airspace via the Air Traffic Management/Communications, Navigation and Surveillance System (ATM/CNS). In summary, services related to air navigation services which are provided are described below:



### AEROTHAI Air Traffic Management (ATM) comprises of:

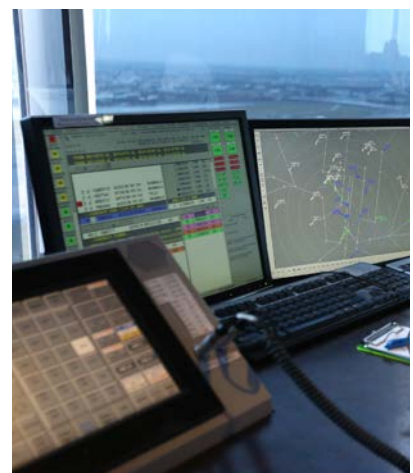
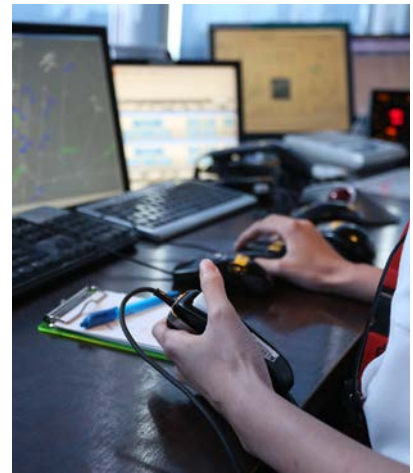
- (i) Airspace Management (ASM)
- (ii) Air Traffic Flow Management (ATFM)
- (iii) Air Traffic Services (ATS), which consist of:

#### **a. Air Traffic Control Services (ATCS), which can be further categorized based on the service areas as follows:**

- Aerodrome Control Service, providing the control service for all traffic in the maneuvering area of an aerodrome and all aircraft flying in the vicinity of an aerodrome.
- Approach Control Service, providing the traffic control service for arriving and departing controlled flights to/from an aerodrome. Approach Control Units, established to provide approach control services, are located either at the AEROTHAI head office or at the airports.
- Area Control Service, providing the control service to all controlled flights flying in the Bangkok FIR. Area Control Centre (ACC) is located at AEROTHAI head office.

#### **b. Flight Information Services (FIS)**

#### **c. Alerting Services (ALTS)**



### Communications, Navigation and Surveillance (CNS)

Infrastructure Services comprise of:

- (i) **Communications System:** for provision of ground-to-ground communications between air traffic controllers and related units both domestic and abroad, and of air-to-ground communications between air traffic controllers and pilots.
- (ii) **Navigation System:** for provision of navigation of the aircraft accurately and unerringly in en route, approach and aerodrome areas. The system also includes satellite navigation of Performance Based Navigation (PBN).
- (iii) **Surveillance System:** for provision of position and altitude of the aircraft, information necessary for flight tracking in air traffic control service. The surveillance system covers the tracking of aircraft operated in aerodrome, approach and en-route environments, as well as aircraft and vehicles moving on the airport surface.

Included also is the provision of ATM Automation/Support Tools such as Flight Data Processing System (FDPS) and Surveillance Data Processing System (SDPS) to support overall air navigation services.

### Aeronautical Information Service (AIS)

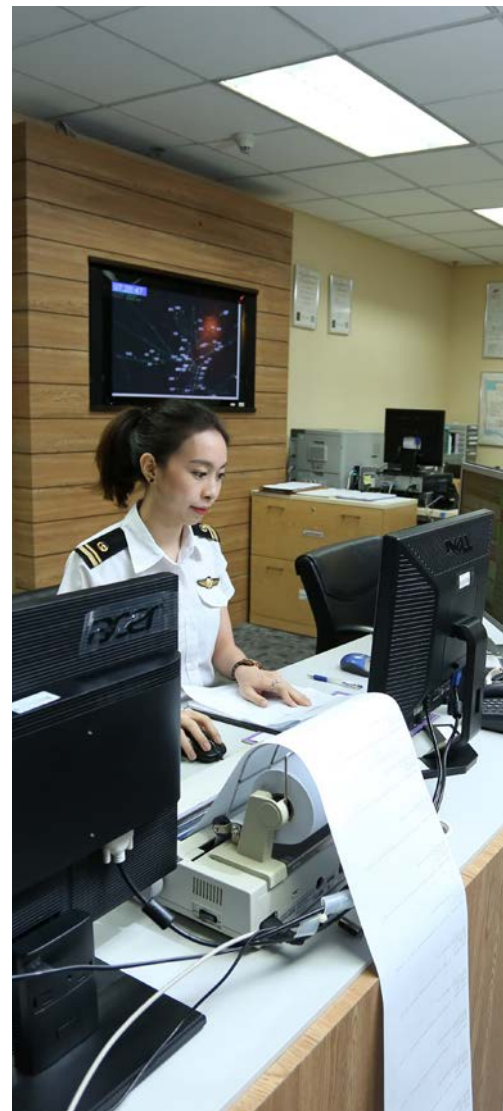
is the provision of aeronautical data and aeronautical information necessary for global air traffic management (ATM) system safety, regularity, economy and efficiency in an environmentally sustainable manner.

AEROTHAI's Aeronautical Information and Flight Data Management Centre provides the following services:

- (i) **Notice to Airmen (NOTAM)** as International NOTAM Office.
- (ii) **Meteorological Data Service** as the Asia/Pacific Regional OPMET Data Bank and the Main Collection Centre under ICAO ROBEX Scheme. AEROTHAI collects and disseminates the operational meteorological information of 33 aerodromes in Bangkok FIR and in the area of responsibilities of Asia/Pacific region through the AFTN and ATN.
- (iii) **Air Traffic Services Reporting Office (ARO)** for aircraft operators to submit flight plan and associated messages (e.g. Change, Delay, and Cancel) directly to the AFTN.

Additionally, AEROTHAI provides Procedures for Air Navigation Services Aircraft Operation (PANS-OPS) in accordance with ICAO Doc 8168.

Other than the above mentioned responsibilities and services, AEROTHAI uses its expertise and research and development (R&D) capability to provide other related services to further fulfill customers' requirements within aviation industry of Thailand and beyond. Such services are also used in-house instead of importing from overseas which is the use of its personnel's knowledge, skills and experiences with maximum benefits.





## Corporate Plan

Under the Vision “A Sustainable Quality Excellent Air Navigation Services Provider” which has been revised in 2019, AEROTHAI’s strategic issues and objectives for the period of 2020-2024 are as follows:


Strategic Issues	Strategic Objectives
1. Providing Safe and Efficient Air Navigation Services	1. To provide safe and secured services in all phases of flight. 2. To build adequate capacity for future demand and upgrade the efficiency of aviation systems.
2. Developing Employees Professionalism	3. To have sufficient number of professional personnel and to systematically manage human resource to achieve Company’s vision and sustainable growth. 4. To have dedicated personnel with attachment and good personnel environment.
3. Becoming High Performance Organization (HPO)	5. To have good corporate performance throughout the organization and to be ready for changes so that the result will be sustainable efficiency and satisfaction of stakeholders and users. 6. To adhere to Good Corporate Governance practices and strive for best-in-class management. 7. To be an organization of innovation through digital technology. 8. To maintain air navigation charges that are fair, transparent, and competitive through efficient management of organizational budget and finance.
4. Improving National Competitiveness and Creating Value for the Aviation Industry	9. To create value to all levels of the aviation industry. 10. To have the complete Air Navigation Service Infrastructure with the capacity in line with the development of the Country’s air transportation.


## Company's Services

AEROTHAI is a state enterprise under the Ministry of Transport. The Ministry of Transport assigned AEROTHAI to provide air navigation services including air traffic control service, aeronautical communication service, and other related services. AEROTHAI provides safe and efficient services according to Standards and Recommended Practices (SARPs) recommended by the International Civil Aviation Organization (ICAO). Under the contract with Ministry of Transport, AEROTHAI agrees to serve all users without making profit, and receive the service fees through the air navigation service charges paid by the users in a fair manner.


### Location and Website

#### ● AEROTHAI Head Office

 **Address:** 102 Soi Ngamduplee, Tung Mahamek, Sathon, Bangkok 10120 Thailand


 **Tel** : 0 2287 3531-41

 **Fax** : 0 2287 3131

 **Website:** [www.aerothai.co.th](http://www.aerothai.co.th)


#### ● Phitsanulok Air Traffic Control Centre


 **Address:** Sanambin Road, Arunyik Sub-district, Mueang District, Phitsanulok 65000

 **Tel** : 0 5530 1422

 **Fax** : 0 5530 1450


#### ● Hat Yai Air Traffic Control Centre

 **Address:** 100 Moo 3, Sanambin Road, Klong La Sub-district, Klong Hoi Kong District, Songkhla 90115

 **Tel** : 0 7425 1051-60

 **Fax** : 0 7425 1339


#### ● Nakhon Ratchasima Air Traffic Service Engineering Operations Centre


 **Address:** Baan Piman, Tha Chang Sub-district, Chalermprakiat District, Nakhon Ratchasima 30230


 **Tel** : 0 4425 7670

 **Fax** : 0 4425 6576


#### ● Phuket Air Traffic Control Centre

 **Address:** 200 Khao Bo Sai, Maikhaow Sub-district, Thalang District, Phuket 83110


 **Tel** : 0 7632 7251-5

 **Fax** : 0 7632 7258-9


#### ● Udon Thani Air Traffic Control Centre


 **Address:** Mak Khaeng Sub-district, Mueang District, Udon Thani 41000


 **Tel** : 0 4224 6803

 **Fax** : 0 4224 9734


#### ● Surat Thani Air Traffic Control Centre

 **Address:** Surat Thani Airport, Huateuy Sub-district, Phunphin District, Surat Thani 84130


 **Tel** : 0 7744 1132

 **Fax** : 0 7744 1133


#### ● Ubon Ratchathani Air Traffic Control Centre


 **Address:** Thepyotee Road, Naimueng Sub-district, Mueang District, Ubon Ratchathani 34000


 **Tel** : 0 4524 0798

 **Fax** : 0 4525 6553


#### ● Chiang Mai Air Traffic Control Centre


 **Address:** 60 Sanambin Road, Suthep Sub-district, Mueang District, Chiang Mai 50200


 **Tel** : 0 5327 0624

 **Fax** : 0 5327 7600

#### ● Hua Hin Air Traffic Control Centre

 **Address:** Mooban Bofai, Hua Hin Sub-district, Hua Hin District, Prachuap Khiri Khan 77110

 **Tel** : 0 3252 0831

 **Fax** : 0 3252 0833





## Summary of the Financial Reports

	2019	2018	2017
<b>Operating Performance (Baht : Million) <sup>1/</sup></b>			
Total Income	13,347.32	13,115.85	12,194.11
Total Expenditure	12,498.96	10,757.41	10,193.64
Overcollection to be refunded to Member Airlines	848.36	2,358.44	2,000.47
Remark <sup>1/</sup> Separated Financial Statements			
<b>Financial Status (Baht : Million) <sup>2/</sup></b>			
Total Assets	17,343.61	15,877.71	14,428.62
Total Liabilities	16,300.91	14,877.73	13,463.86
Total Shareholders' Equity	1,042.70	999.98	964.76
<b>Financial Ratio</b>			
Debt-to-Equity Ratio (times)	15.63	14.88	13.96
Debt-to-Equity Ratio (times) (Not including accumulated)	6.32	5.54	6.31
Fix Charge Coverage Ratio (times)	8.74	2.11	1.64
Remark <sup>2/</sup> Consolidated Financial Statements			

## Factors Impacting Performance

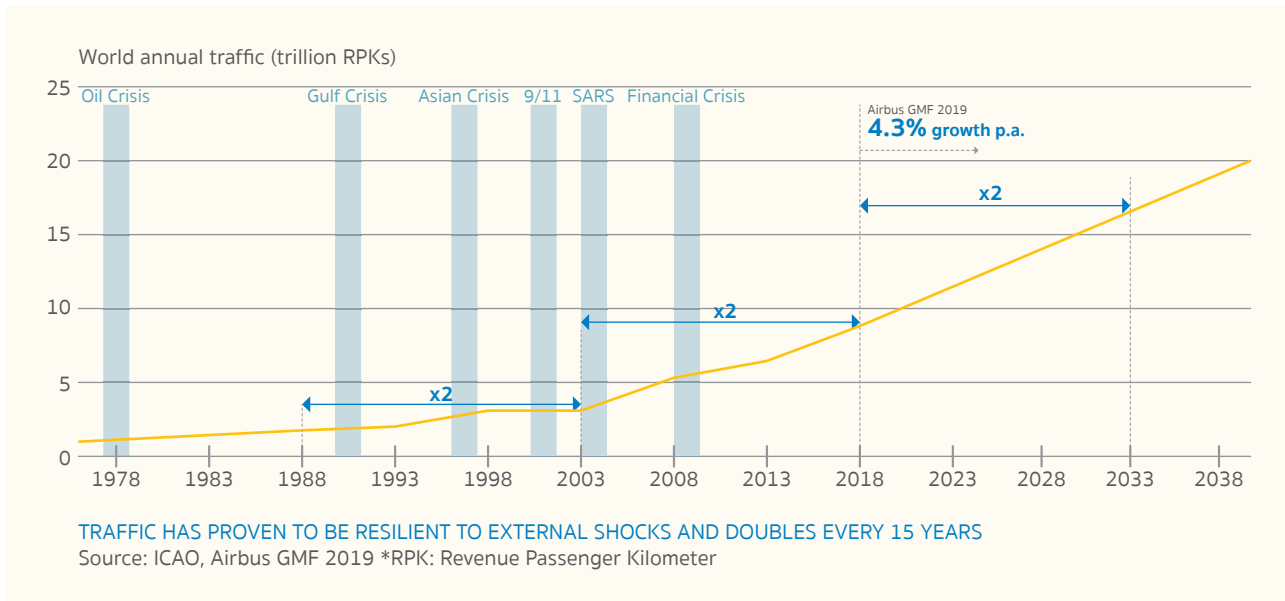
### ASEAN Economic Community (AEC)

In 2019, Thailand assumed the ASEAN Chairmanship after Singapore, under the ASEAN framework, namely the ASEAN Air Transport Working Group (ATWG), the ASEAN Air Transport Technical Cooperation Sub-Working Group (ATTC), ATM Strategic Planning Group (ATM SPG), and the Enhanced ASEAN Regional Integration Support from the European Union (ARISE Plus) Project, accordingly. The ASEAN Economic Community (AEC) was officially established on 31 December 2015. In the area of air transport, ASEAN plans to establish ASEAN Single Aviation Market (ASAM) to support AEC's objective in harmonizing airspace of member states to ensure safe, secure, and efficient air transport within ASEAN and beyond. To support the ASAM Roadmap, the ASEAN Transport Strategic Plan 2016-2025 (also known as Kuala Lumpur Transport Strategy Plan: KLTSP) has addressed specific goals, actions, and milestones, particularly, in the area of Air Traffic Management (AT-4 Enhance Air Traffic Management Efficiency and Capacity through a Seamless ASEAN Sky). AEROTHAI as part of the Thailand delegation, has participated in various ASEAN forums in order to push forward the actions and milestones of supporting ICAO's efforts and implementation plan for ATM in the APAC region, developing and implementing the ASEAN Air Traffic Management (ATM) Master Plan in accordance with ICAO's Asia Pacific Seamless ATM Plan and the Global Air Navigation Plan's ASBU Framework, and exchanging information on ASEAN air navigation infrastructure and services.



## Outlook of Aviation Industry and Trends in Air Traffic

The outlook of aviation industry and future trends of air traffic illustrates that the aviation industry is one of the industries with increasing growth and value. Airbus forecasts that air traffic will grow at the estimated annual growth rate of 4.3% during the period of 2019-2038 (the next 20 years), and air traffic will double itself every 15 years. In fact, the forecast also indicates that Asia/Pacific region will experience the highest annual growth rate at the rate of 5.4%, with a three-fold increase in this region.



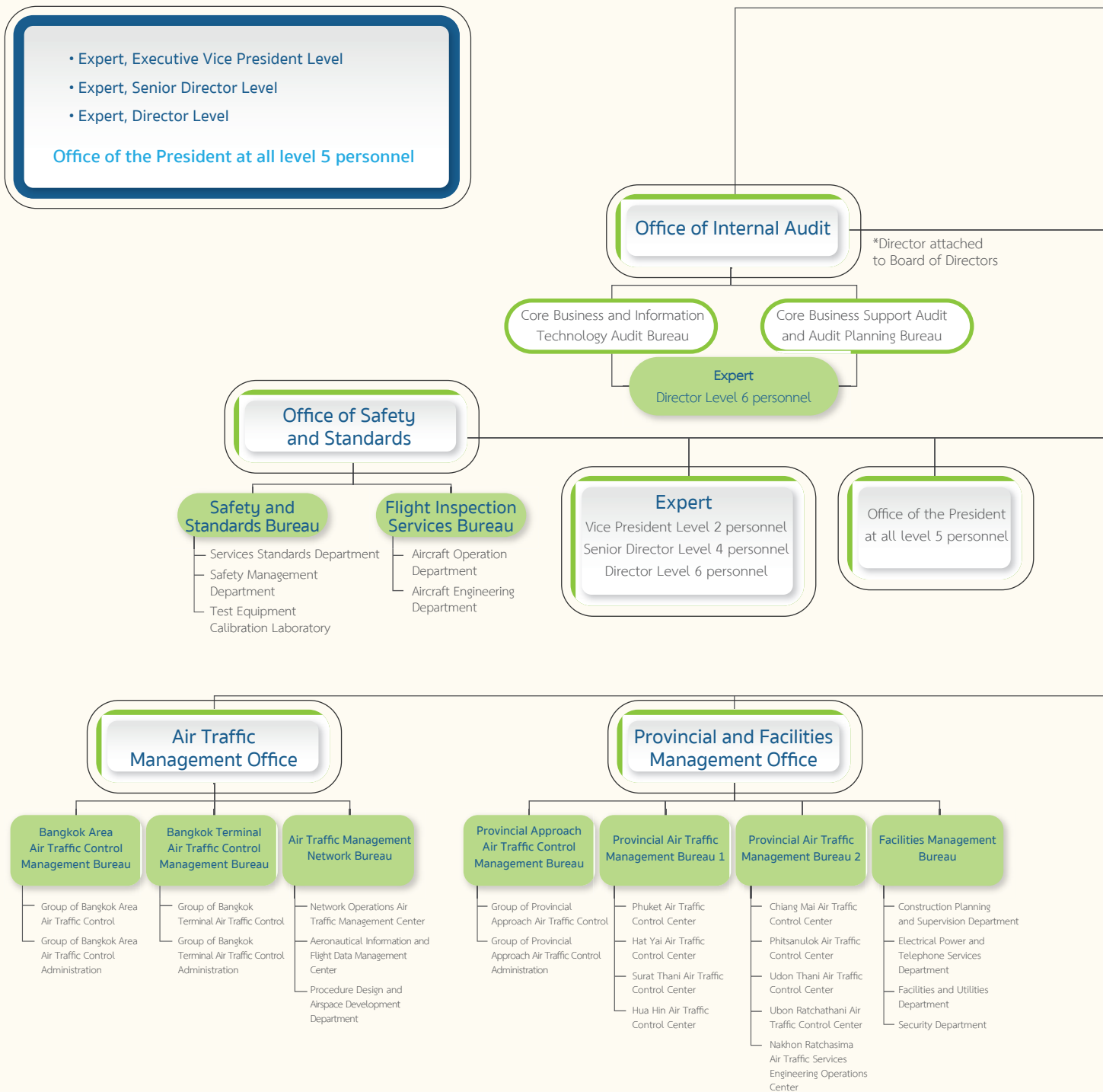
For Bangkok FIR, traffic has continued to grow, despite several events or factors which have caused short term effects on traffic volume from time to time. In 2019, total air traffic in Bangkok FIR was 1.05 million flights, a 1.8% increase from the previous year. Over the past 10 years, traffic grew at the annual growth rate of 10% (CAGR), amounting to 2.5 times increase (2019 compared to 2009). Air traffic for Bangkok FIR is expected to reach 1.1 million flights in 2020.

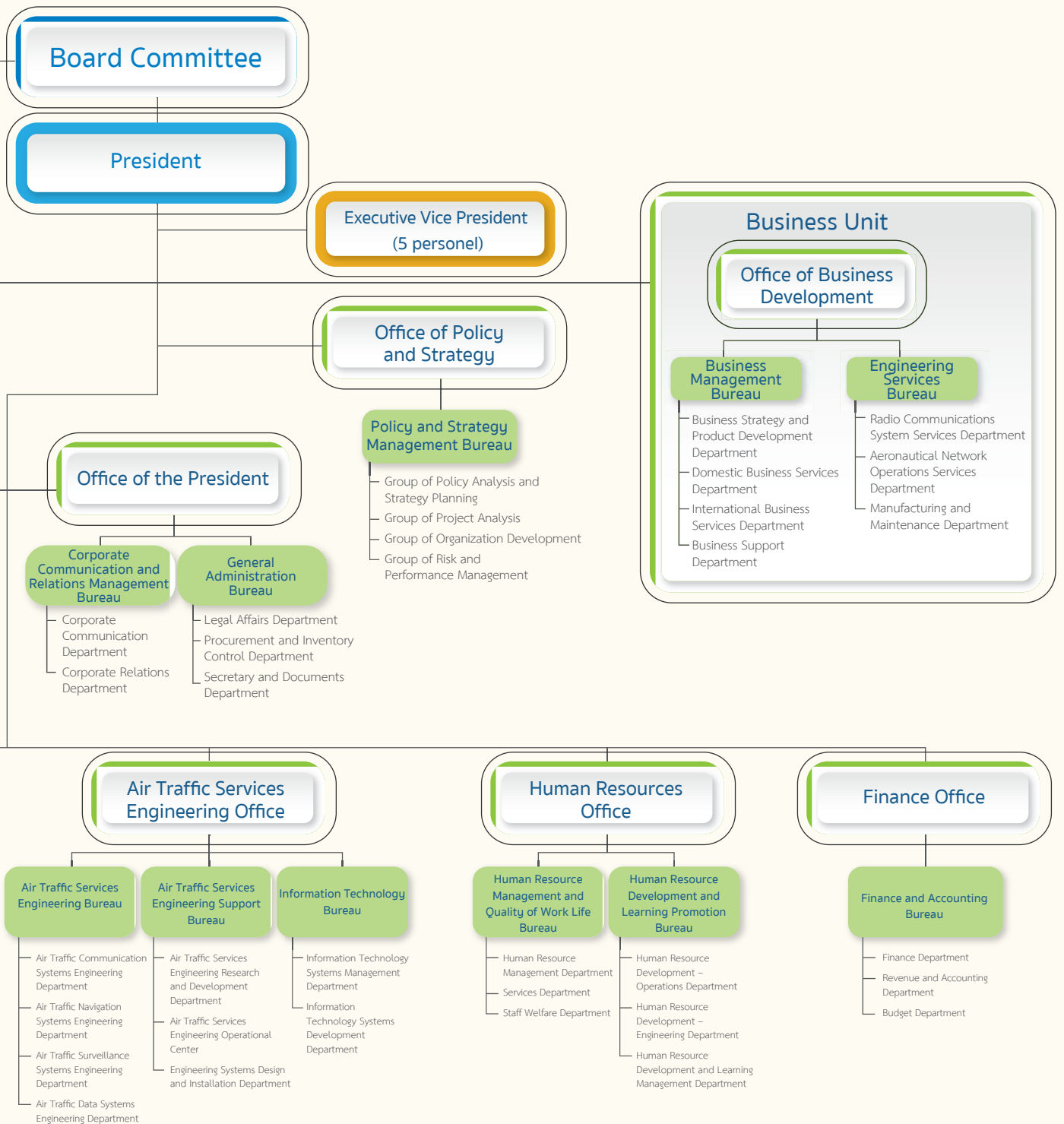
In 2019, the overall growth rate was increasing at a slower pace due to many factors such as decreased number of Chinese tourists, Pakistan airspace closure, groundings of Boeing 737 Max 8 and Max 9. However, there are positive factors include Government policy to support the aviation industry as one of the five industries under the “New S-curve” target to drive Thailand’s economy, and the positive impact induced by mitigation measures to address the Significant Safety Concerns (SSCs), gaining consumers’ confidence on international air travels and creating opportunities for Thai-registered airlines to resume/increase routes to/from destinations that were banned due to the SSCs.



# Company's structure

## Organization Chart







## The Committees

There are Committees as follows:

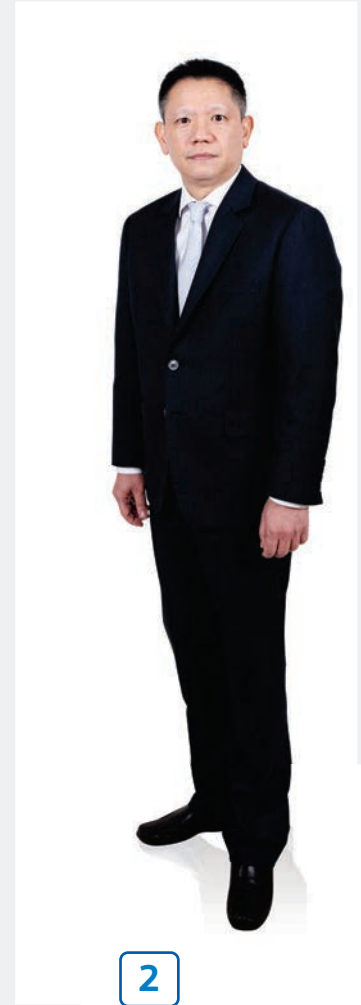
- The Board of Directors
- The Executive Committee
- The Audit Committee
- The Risk Management Committee
- The Remuneration Committee
- The Corporate Governance and Corporate Social Responsibility Committee
- The Legal Committee
- The Dependent Directors
- The Labour Relations Committee



The composition of the Board of Directors at the end of fiscal year 2019 was as follows: (names and details of Directors and the changes during the year in accordance with Section 2)

- |                               |                   |               |
|-------------------------------|-------------------|---------------|
| 1. Air Chief Marshal Siwakiat | Jayema            | Chairman      |
| 2. Mr. Lavaron                | Sangsnit          | Vice Chairman |
| 3. Mr. Puttipong              | Prasarttong-Osoth | Director      |
| 4. Squadron Leader Pongtorn   | Thepkanjana       | Director      |
| 5. Mrs. Phongsaward           | Guyaroonsuith     | Director      |
| 6. Professor Dr. Amorn        | Pimanmas          | Director      |
| 7. Mr. Somnuk                 | Rongthong         | Director      |

## The Board of Directors



**1. Air Chief Marshal Siwakiat Jayema**

Chairman

**2. Mr. Lavaron Sangsrit**

Vice Chairman

**3. Mr. Puttipong Prasarttong-Osoth**

Director





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**4. Squadron Leader Pongtorn Thepkanjana**

Director

**6. Professor Dr. Amorn Pimanmas**

Director

**5. Mrs. Phongsaward Guyroonsuith**

Director

**7. Mr. Somnuk Rongthong**

Director

## Company's Senior Management



**Mr. Somnuk Rongthong**

President



**Mr. Tinnagorn Choowong**

Executive Vice President  
(Operations)



**Mr. Suttipong Kongpool**

Executive Vice President  
(Safety and Standards)



**Mr. Nuttawat Supanundha**

Executive Vice President  
(Engineering)



**Miss Duangta Samitsuwan**

Executive Vice President  
(Administration)



**Mr. Sukluer Chiawarcheep**

Executive Vice President  
(Policy and Human Resources)



**Mrs. Sirikes Niemloy**

Vice President (Air Traffic Management)



**Miss Tipaporn Nippakakorn**

Vice President (Office of Policy and Strategy)



**Mr. Channarong Chuacharoen**

Vice President (Air Traffic Service Engineering)



**Mrs. Chidkamol Soonthornsit**

Vice President (Finance)



**Mr. Chatri Sasipayungsak**

Vice President (office of Standards and Safety)



**Mr. Chumnan Ruechai**

Vice President (Provincial and Facilities Administration)



**Mr. Teekayu Muratha**

Vice President (Office of Internal Audit)



**Miss Voraporn Rhodyoo**

Expert, Vice President Level



**Mrs. Thaniya Suntharasantic**

Vice President (Office of the President)



**Mr. Surachai Nuprom**

Vice President (Office of Business Development)



**Mr. Chana Tadtasai**

Vice President (Human Resource)



**Mr. Paisan Praneetpongtrang**

Expert, Vice President Level

# Company's Senior Management



**Mr. Somnuk Rongthong**

**Present Position:**

President

**Date of Birth:** 7 July 1961

**Age:** 58

**Starting Work at AEROTHAI:** 15 May 1984

**Date to Become AEROTHAI President:** 1 August 2018

**Education:**

- Bachelor of Engineering, Kasetsart University

**Additional Education Qualifications:**

- National Defence College (Class of 56)
- Air War College (Class of 36 in 2002)
- Advanced Management Program (AMP), Wharton, University of Pennsylvania (Year 2013)
- Diploma, Joint State-Private Sector Course, National Defence College, National Defence Studies Institute (Class of 26 in 2014)

**Work Experiences:**

Years 2018-2019	President
Years 2012-2018	Executive Vice President
Years 2010-2012	Vice President (Air Traffic Services Engineering)



**Mr. Tinnagorn Choowong**

**Present Position:**

Executive Vice President  
(Operations)

**Date of Birth:** 19 September 1962

**Age:** 57

**Starting Work at AEROTHAI:** 1 July 1986

**Education:**

- Diploma in Aviation Communication, Civil Aviation Training Center (Thailand)
- Bachelor of Political Science, Ramkhamhaeng University

**Additional Education Qualifications:**

- Air War College (Class of 47 in 2013)
- Leadership Succession Program (LSP), IRDP (Class of 3 in 2015)

**Work Experiences:**

Years 2018-2019	Executive Vice President (Operations)
Years 2015-2018	Executive Vice President
Years 2012-2015	Vice President (Air Traffic Management)



### Mr. Suttipong Kongpool

#### Present Position:

Executive Vice President  
(Safety and Standards)

**Date of Birth:** 14 January 1966

**Age:** 53

**Starting Work at AEROTHAI:** 1 July 1990

#### Education:

- Bachelor of Communication Arts, Bangkok University

#### Additional Education Qualifications:

- Air War College (Class of 46 in 2012)
- Leadership Succession Program (LSP), IRDP (Class of 2 in 2014)
- Advanced Executive Program (AEP), Northwestern University (Class of 2 in 2014)

#### Work Experiences:

Years 2018-2019 Executive Vice President  
(Safety and Standards)

Years 2017-2018 Executive Vice President

Years 2015-2017 Expert,  
Executive Vice President Level



### Mr. Nuttawat Supanundha

#### Present Position:

Executive Vice President  
(Engineering)

**Date of Birth:** 2 November 1959

**Age:** 59

**Starting Work at AEROTHAI:** 2 May 1985

#### Education:

- Bachelor of Engineering (Computer Engineering), King Mongkut's Institute of Technology Ladkrabang

#### Additional Education Qualifications:

- Royal Thai Army War College (Class of 58 in 2013)
- Leadership Succession Program (LSP), IRDP (Class of 4 in 2015)

#### Work Experiences:

Years 2018-2019 Executive Vice President (Engineering)

Years 2016-2018 Vice President  
(Office of Business Development)



### Ms. Duangta Samitsuwan

#### Present Position:

Executive Vice President  
(Administration)

**Date of Birth:** 14 November 1963

**Age:** 56

**Starting Work at AEROTHAI:** 1 January 1995

#### Education:

- Bachelor of Laws, Ramkhamhaeng University
- Master of Arts Program in Political Science (Public Administration), Thammasat University

#### Additional Education Qualifications:

- Advanced Certificate Course in Public Economics Management for Executives, King Prajadhipok's Institute (Class of 11 in 2013)
- Leadership Succession Program (LSP), IRDP (Class of 2 in 2014)

#### Work Experiences:

Years 2018-2019 Executive Vice President  
(Administration)

Years 2016-2018 Vice President  
(Office of Internal Audit)



### Mr. Sukkuer Chiawarcheep

#### Present Position:

Executive Vice President  
(Policy and Human Resources)

**Date of Birth:** 10 March 1963

**Age:** 56

**Starting Work at AEROTHAI:** 1 July 1986

#### Education:

- Bachelor of Engineering (Electrical Engineering), Kasetsart University
- Master of Business Administration (Business Administration), Kasetsart University

#### Additional Education Qualifications:

- Leadership Succession Program (LSP), IRDP (Class of 5 in 2015)
- Air War College (Class of 40 in 2006)

#### Work Experiences:

Year 2019 Executive Vice President  
(Policy and Human Resources)

Years 2017-2019 Expert,  
Executive Vice President Level

## Human Resource and Organization Development

At the end of the fiscal year 2019 (30 September 2019), the total number of staff employed by AEROTHAI was 3,214 distributed as follows:

• Head Office	1,787
• Suvarnabhumi Airport	446
• Don Mueang International Airport	197
• Phuket Air Traffic Control Centre	151
• Hat Yai Air Traffic Control Centre	120
• Surat Thani Air Traffic Control Centre	89
• Hua Hin Air Control Centre	42
• Chiang Mai Air Traffic Control Centre	139
• Phitsanulok Air Traffic Control Centre	97
• Udon Thani Air Traffic Control Centre	74
• Ubon Ratchathani Air Traffic Control Centre	37
• Nakhon Ratchasima Air Traffic Services Engineering Operations Centre	35
<b>Total</b>	<b>3,214</b>

### Total of Number of Contracted Employees

As at 30 September 2019, the total number of contracted employees employed by AEROTHAI was 32 distributed as follows:

• Male	10
• Female	22

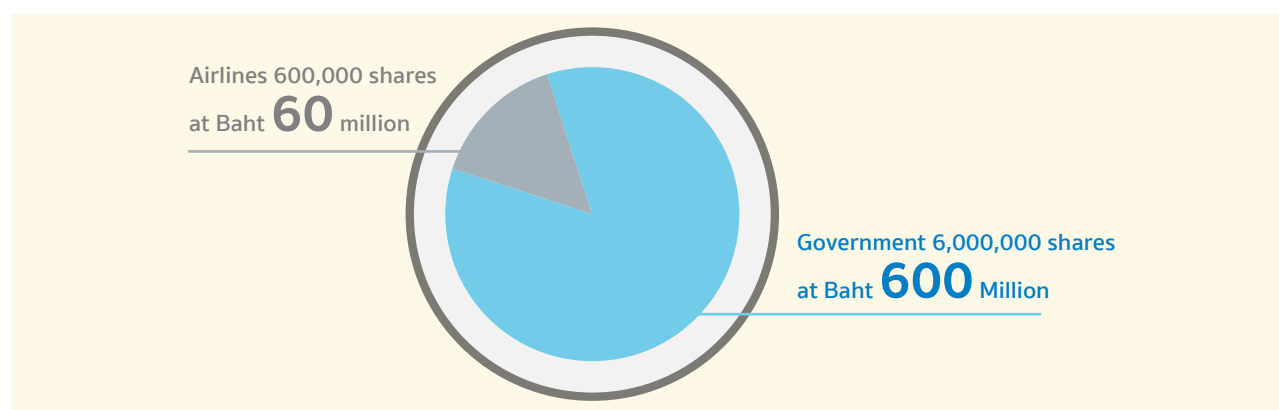
### Total Staff and Contracted Employees Expenditure

Unit : Million Baht

Description	2019	2018	2017
Staff's Expenditures and Benefits	9,612.41	7,630.23	7,592.85
Temporary Employees Expenditures	10.85	10.66	10.26

## Share Capital and Shareholders Structure

Airlines Shareholders 112 (as at 1 August 2019)



In the fiscal year 2019, the A Shareholders and B Shareholders were as follows:

The A Shareholders	Number of shares
The Ministry of Finance	6,000,000

#### The B Shareholders (Airlines) and the Top 10 Highest Number of Shares

B Shareholders	No. of Shares
1. THAI AIRASIA COMPANY LIMITED	117,322
2. THAI AIRWAYS INTERNATIONAL PUBLIC COMPANY LIMITED	57,389
3. BANGKOK AIRWAYS PUBLIC COMPANY LIMITED	52,709
4. NOK AIRLINES PUBLIC COMPANY LIMITED	51,642
5. THAI LION MENTARI COMPANY LIMITED	50,575
6. THAI SMILE AIRWAYS COMPANY LIMITED	32,348
7. CHINA SOUTHERN AIRLINES COMPANY LIMITED	13,793
8. AIR ASIA SDN BHD	12,726
9. SPRING AIRLINES COMPANY LIMITED	10,016
10. THAI VIETJET AIR JOINT STOCK COMPANY LIMITED	9,442
11. Other 102 airlines	192,038
<b>Total B Shareholders</b>	<b>600,000</b>

Remark: Names of Shareholders allocated shares on 1 August 2019.

### State Enterprise's Loans

Unit : Million Baht

Bank	Credit Limit	Balance as at 30 September			Type of Guarantee
		2019	2018	2017	
Government Savings	1,650.00	444.07	571.01	697.95	none
Government Savings	3,480.00	-	-	1.00	none
Bank of Ayudhya PLC	2,075.43	-	-	660.34	none
<b>Total</b>	<b>7,205.43</b>	<b>444.07</b>	<b>571.01</b>	<b>1,359.29</b>	





## Major Plans and Projects

### Plans and Projects Completed in 2019

#### 1. Establishment of ATM Network Management Centre (ATM NMC)

(Implementing Years 2014-2019 with an investment budget of Baht 438.42 million)

The Company established the ATM Network Management Centre parallel to the provision of Air Traffic Management Services to improve the efficiency of air traffic flow and airspace management under the concept of Flexible Use of Airspace (FUA). The Company systematically managed the use of relevant flight data from all concerned units to increase capacity and efficiency of airspace management to achieve airspace capacity optimization, increase level of safety and reduce air traffic controllers' workload.

#### 2. Construction of New Air Traffic Control Tower (Replacement) and Implementation of New Air Traffic Management System at Don Mueang International Airport

(Implementing Years 2011-2019 with investment budget of Baht 286.53 million)

AEROTHAI has been providing air traffic services at Don Mueang International Airport by renting office space and an air traffic control tower from the Airports of Thailand PLC (AOT). Later on AOT has started to change and improve the use of various buildings in Don Mueang International Airport, which led AEROTHAI to reevaluate the use of space at the Airport. The conclusion was that the rented control tower building had limited space and could not accommodate the upgrade of the air traffic control systems/equipment in the near future.

In addition, to commemorate the 7<sup>th</sup> cycle Royal Birthday Anniversary of His Majesty King Bhumibol Adulyadej, 5 December 2011, the Company underwent a construction of a new air traffic control tower at the Airport to replace the existing tower, with the installation of the new and modern air traffic control systems/equipment in order to provide information for use in air traffic control, as well as providing situational awareness on aircraft and vehicles in the Airport to increase the safety in airport surface operation and exchange information automatically and interoperate with both the air traffic control tower at Suvarnabhumi Airport and Bangkok Area Control Centre. AEROTHAI will continue to use the existing tower together with a new one to improve visibility in air traffic control, and use as contingency unit in a distant location (Offsite Backup) in case of emergency. The construction of the tower was completed in February 2014, with Voice Communication Control System (VCCS) successfully procured and installed in 2015. In 2016, AEROTHAI has completed the installation as well as system integration of the new air traffic management system under the Air Navigation Service Infrastructure Development Project. In 2019, the new system has started to be used as the main system.



### 3. Acquisition of Doppler Very High Frequency Omni-directional Range/Distance Measuring Equipment (DVOR/DME) at Chumphon, Mae Sot, Buri Ram, and Krabi Airports and Construction of DVOR/DME Station Building at Mae Sot Airport

(Implementing Years 2015-2019 with investment budget of Baht 111.14 million)

DVOR/DME systems that have exceeded 15 years of usage often show signs of degraded performance and require additional emergency corrective maintenance. AEROTHAI needed to acquire new DVOR/DME systems at these 4 airports in order to replace the existing aged systems. Construction of a new DVOR/DME Station Building as a replacement to the existing one was also required at Mae Sot Airport in accordance with the Government's Mae Sot Airport Master Plan. A construction contract for DVOR/DME Station Building at Mae Sot Airport was completed in June 2017. In 2018, equipment procurement, installation and flight checks at Mae Sot and Krabi Airports have been completed. In 2019, equipment installation and flight checks at Chumphon and Buri Ram Airports have been completed.

### 4. Acquisition and Installation of Backup Site for Aeronautical Information at Phitsanulok Air Traffic Control Centre

(Implementing Years 2018-2019 with investment budget of Baht 39.17 million)

AEROTHAI has set up a backup site of the flight information system, which is an air service support system, outside the head office, Tung Mahamek, in the case of an emergency, such as natural disasters, terrorism or others disasters, that may disrupt the flight information service.

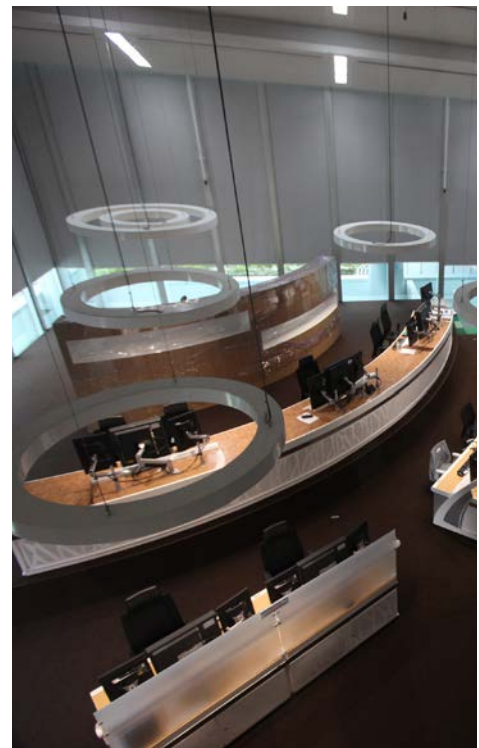
AEROTHAI installed an additional backup site at Phitsanulok Air Traffic Control Centre. The area is suitable because the distance between the main system and installation area is not far, the risk of natural disasters is quite low, and it is in the area under the surveillance of terror threats. Moreover, the Phitsanulok Backup Site also has the satellite standby hub available for communicating with the communication stations abroad and operating with flexibility, efficiency and effectiveness. The Backup Site is also a flight information system training centre for building skills and expertise of the system administrators. The installation/testing was completed in 2019.

## Plans and Projects Being Implemented

### 1. Air Navigation Service Infrastructure Development Project

(Implementing Years 2012-2020 with an investment budget of Baht 4,460.31 million)

In 2019, AEROTHAI has started to use the new air traffic control system (Thailand Modernization CNS/ATM System: TMCS) as the main system at Chiang Mai Air Traffic Control Centre, Phitsanulok Air Traffic Control Centre, Udon Thani Air Traffic Control Centre, Phuket Air Traffic Control Centre, Hat Yai Air Traffic Control Centre, Bangkok Aerodrome Control Centre, Bangkok Approach Control Centre and the Air Traffic Control Towers throughout the Country, except for the Bangkok Area Control Centre, which is in the process of reviewing the training plan for more operators and the contingency and manpower plan in accordance with the recommendations of the Civil Aviation Authority of Thailand. It is expected to be able to fully use the new system in 2020.





## 2. Acquisition and Installation of Multilateration (MLAT) Systems at Chiang Mai and Phuket Airports (Implementing Years 2017-2022 with investment budget of Baht 240.90 million)

In order to increase safety in the ground surveillance efficiency, the Company has chosen to implement the Multilateration System (MLAT) at high density regional airports. The MLAT System utilizes new technology to provide surveillance data that includes aircraft and vehicles identification as well as highly accurate positioning to gain ground surveillance on runways, taxiways, and gate areas, as well as an ability to better detect runway incursions. In 2017, suitable MLAT coverage areas were evaluated in accordance with airport development plans for these 2 Airports. In 2018-2019, the drafting of details and technical specifications for procuring the equipment has been carried out parallel to the requests for the sites for installation of the Systems at both Airports. It is expected that contract can be signed in 2020 and installation/test of the Systems can be completed in 2022.

## 3. Acquisition and Installation of Network Equipment to Support Multilateration (MLAT) Systems at Chiang Mai and Phuket Airports

(Implementing Years 2019-2021 with investment budget of Baht 38.40 million)

MLAT system is implemented to provide ground surveillance as required for high density traffic movements at Phuket and Chiang Mai Airports. Such MLAT installation requires an appropriate communication network infrastructure in order to support an efficient air traffic service. Suitable MLAT coverage areas were evaluated in accordance with airport development plans for these 2 Airports. In 2019, the Company was in a process of drafting details and technical specifications for procuring the equipment in line with the MLAT installation sites. The procurement and installation process will be completed in 2020-2021.

## 4. Strategic Work to Support ATM Activities under ASEAN Single Aviation Market Establishment Plan and Seamless ASEAN Sky Concept

(Implementing Years 2016-2020)

As the work on ASEAN Single Aviation Market (ASAM) and Air Traffic Management (ATM) were prioritized as one of the top technical works, AEROTHAI has continuously participated in ASEAN Air Transportation Working Group (ATWG) meetings since 2009 as Thailand delegation's supporting representatives, who have played important roles in considering/proposing/executing in ATWG to support the work under the ASAM Roadmap. In 2018, AEROTHAI together with ASEAN Member States finished developing an ASEAN ATM Master Plan as part of the key activity under the ASEAN Transport Strategic Plan (ATSP) 2016-2025. Since 2018, AEROTHAI has taken proactive actions to support other important activities under ASEAN ATM Master Plan by attending meetings of ASEAN Air Transport Technical Cooperation Sub-Working Group (ATTC), ATM Strategic Planning Group (ATM SPG) and participating in ASEAN collaboration activities such as Enhanced ASEAN Regional Integration Support from the European Union (ARISE Plus) project. AEROTHAI will also send representatives to observe meetings of high level ASEAN as appropriate and continue to implement and/or support work of the Civil Aviation Authority of Thailand under the ASEAN Air Traffic Management Plan.

## 5. Acquisition and Installation of Aeronautical Information Management (AIM)

(Implementing Years 2018-2020 with investment budget of Baht 59.05 million)

The Project is implemented to increase the efficiency in Aeronautical Information Management (AIM) from modern technology standards that focus on the use of electronic technology in accordance with Roadmap for the Transition from AIS (aeronautical information services) to AIM by the International Civil Aviation Organization (ICAO). In 2019, the contract has been signed and it is expected that the system installation and testing will be completed in 2020.

## 6. Developing Approach Control Service at Hua Hin Air Traffic Control Centre

(Implementing Years 2018-2020 with investment budget of Baht 134.72 million)

During the Company's TMCS transition, Hua Hin Air Traffic Control Centre has developed its approach control service to be ready for the expansion of air navigation service capacities and capabilities to support traffic growth in the future. Moreover, to be in line with the Government's policy on Hua Hin Airport's development to fully support commercial aviation, in 2019, the equipment and system supply contract has been signed and the system/equipment has been delivered. It is expected that the system installation and testing will be completed in 2020.





## Important Investment Projects for the Next 3 Years

### 1. Construction of a New Office Building (AEROTHAI Complex) at Headquarters, Tung Mahamek

(Implementing Years 2014-2023 with investment budget of Baht 1,097.41 million)

Due to the limitation of working space within the headquarters, Tung Mahamek, as well as the Company's future policy to increase the country's competitiveness and capability both in personnel and innovation, the Company has planned to establish an ATM Professional Centre. This place will have spaces, equipment, and systems supporting the development of aviation personnel and research to meet international standards and to solve the Company's problems as well as developing working systems for the future. A new office building at Headquarters is needed to provide additional working space for the Company's staff. When the new Air Traffic Management Centre (ATMC) is in operation, working space has to be suitably allocated and rearranged according to international security standards and the Company's policy. In 2018, AEROTHAI reviewed requirements for the building based on the current situation and needs by hiring a consultancy service to design and produce a construction plan of the AEROTHAI Complex Building. In 2019, AEROTHAI procured contractor for the design of AEROTHAI Complex Building at Tung Mahamek Headquarters, but due to the need of reviewing the Term of Reference (TOR), the bidding process has to be terminated for the time being. It is expected that the revised contract will be signed and the building plan will be designed in 2020.

### 2. Acquisition of Doppler Very High Frequency Omni-directional Range/Distance Measuring Equipment (DVOR/DME) at Lampang, Narathiwat, Phetchabun, Roi Et, Nakhon Si Thammarat, and Surat Thani Airports

(Implementing Years 2017-2021 with investment budget of Baht 147.47 million)

DVOR/DME systems that have exceeded 15 years of usage are showing signs of degraded performance and need for additional emergency corrective maintenance. AEROTHAI needs to acquire new DVOR/DME systems at Lampang, Narathiwat, Phetchabun, Roi Et, Nakhon Si Thammarat, and Surat Thani Airports in order to replace the existing aged systems. In 2018, the procurement process has begun but there was no candidate who met the technical criteria. In 2019 the Company has started a new procurement process and is considering the result and contract is expected to be signed in 2020.

### 3. Construction of an Air Traffic Control Tower, the DVOR/DME Station and Staff Accommodation Building at Betong Airport

(Implementing Years 2018-2021 with investment budget of Baht 130.26 million)

As the Cabinet approved the project to construct Betong Airport in Yala (under the Department of Airports), AEROTHAI is required to construct an Air Traffic Control Tower, the DVOR/DME station and Staff Accommodation Building at Betong Airport to accommodate the operations of Betong Airport. In 2018, AEROTHAI has coordinated with the Department of Airports to consider the construction sites. In addition, AEROTHAI is in the process of exploring the alternative area for the construction of the DVOR/DME station. In 2019, AEROTHAI has signed a contract for the construction of an Air Traffic Control Tower and Supporting Building. The contractor is working according to the contract and it is expected to be completed in mid-2020 and will be ready for the airport to be opened in June 2020.



## Important Role in the Global, Regional Forum and others



CANSO Global Safety Work Group under CANSO Safety Standing Committee

### 1. CANSO Global Safety Workgroup under CANSO Safety Standing Committee (SSC); Safety Performance Measurement Workgroup (SPMWG) and Future Safety Development Workgroup (FSDWG)

During 29 April–3 May 2019, AEROTHAI hosted the Civil Air Navigation Services Organization (CANSO) Safety Performance Measurement Workgroup (SPMWG) and Future Safety Development Workgroup (FSDWG) Meetings at Renaissance Bangkok Ratchaprasong Hotel. Both Meetings are Working Groups under CANSO Safety Standing Committee (SSC).

The objective of the 2 Workgroups was for the members to exchange information on ATM Safety which consequently will be presented in the SSC accordingly.

#### Progress/Achievements

The Meeting achieved its goal in ATM Safety information exchange, followed up on strategic safety development's Best Practices via members' Safety experts from each region, identified safety strategy which included the composition of the Safety Standing Committee Work plan, and finally adopted the Meetings' useful knowledge for AEROTHAI's future Safety Management.

### 2. The Twenty-Eighth Aviation Consultative Committee (Malaysia–Thailand) Meeting (ACC/28)

AEROTHAI hosted the 28<sup>th</sup> ACC Meeting during 12-15 November 2018 at the Holliday Inn Resort, Krabi Province. The Meeting was jointly held by AEROTHAI and the Civil Aviation Authority of Malaysia. ACC Meeting was established as a standing committee which would be hosted twice a year or on special occasions. This floor was served to ensure mutual understanding and cooperation on Air Traffic Management (ATM) between the two neighboring countries. This Meeting paved the way for the Seamless ATM collaboration between Malaysia and Thailand. The Meeting also discussed the continuation of the activities of the previous Meetings which based on mutual benefits of the two agencies according to the agreement of both parties.

### Progress/Achievements

This Meeting derived the exclusive exchange of ideas in the operational level, preparation and the utilization of flight routes to create Uni-Directional, the arrangement on Operational Procedures, progress plan ATS Inter-Facility Data Communication (AIDC), drafting of Air Traffic Service Coordination Procedure (ATSCP), progress report on radar data exchange and revision of various agreements that were beneficial to air traffic operations and increased air traffic management capabilities.



The Twenty-Eighth Aviation Consultative Committee (Malaysia-Thailand) Meeting (ACC/28)

### **3. The Seventh Meeting of Air Traffic Management Operations Panel Working Group (ATMOPSP WG/7)**

AEROTHAI hosted the Seventh Meeting of Air Traffic Management Operations Panel Working Group (ATMOPSP WG/7) during 29 April–3 May 2019 at St. Regis Hotel, Bangkok. Air Traffic Management Operations Panel (ATMOPSP) is established to undertake specific studies and develop and/or review technical and operational ICAO provisions for improving Air Traffic Management Operations as entrusted by ICAO Air Navigation Commissioner (ANC). The Meeting is held twice a year and the outcome will be submitted to the ANC. Once approved by ANC, the work would then be brought up for discussion/information at the 40<sup>th</sup> ICAO Assembly in October 2019.

### Progress/Achievements

The Meeting has revised and undergone numerous in-depth discussions regarding the ongoing ATM matters from all across the regions which were previously appointed by the ANC. The conclusions, recommendations and any concerns made in this Meeting would be reviewed by the ANC prior to the publication in the 40<sup>th</sup> ICAO Assembly to seek an approval or an acknowledgement from all the states and related organizations.



The Seventh Meeting of Air Traffic Management Operations Panel Working Group (ATMOPSP WG/7)





The Sixth Meeting of Aeronautical Communication System Implementation Coordination Group of APANPIRG (ACSICG/6)

#### 4. The Sixth Meeting of Aeronautical Communication System Implementation Coordination Group of APANPIRG (ACSICG/6)

AEROTHAI hosted the Sixth Meeting of Aeronautical Communication System Implementation Coordination Group of APANPIRG (ACSICG/6) during 13–15 May 2019 at Marriott Marquis Queen’s Park hotel, Bangkok.

##### Progress/Achievements

The Meeting aimed to complete implementation of Asia and Pacific (APAC) Aeronautical Communication Network (ATN) and ensure the underlying communications backbone which continues to support the evolving ICAO operational requirements for the exchange and management of aeronautical information and data. In addition, the Meeting updated the progress of implementation plan regarding Ground/Ground Communication Infrastructure in Asia/Pacific region. The Meeting would present its report to APANPIRG through the CNS Sub-group to APANPIRG.

Also, AEROTHAI played an active and leading role regarding Aeronautical Communication implementation such as AMHS/ATN and CRV.

#### 5. The Third Technical Interchange Meeting (TIM/3) under SWIM in ASEAN Demonstration

AEROTHAI hosted the Third Technical Interchange Meeting (TIM/3) during 25-30 August 2019 at Mövenpick Bangkok Hotel, Bangkok, Thailand.

SWIM in ASEAN Demonstration is the project under the cooperation framework between ASEAN and USA, aiming at demonstrating the principles of SWIM, showing its potential operational benefits, and demonstrating a model of SWIM implementation for ASEAN and Asia/Pacific region. To ensure the timely preparation of all participating States/Organizations to achieve the set goals of the demonstration and, importantly, to be able to hold the demonstrations in November 2019, TIM is one of the crucial activities providing a good opportunity to exchange viewpoints as well as gain knowledge and understanding on both technical and operational aspects required for the conduct of the

demonstration. Particularly for TIM/3, it is considered vital to the success of the demonstration as it is the platform for final face-to-face discussion of challenges and feasible solutions among participating States/Organizations. The objectives of TIM/3 are as follows:

- To conduct the system tests based on the agreed operational scenarios concerning all participating States/Organizations;
- To discuss, share, and exchange knowledge and experiences in developing the software modules and/or support systems as well as materials required for the demonstration;
- To gauge readiness for the demonstration of each participating State/Organization
- To reach a conclusion on operational scenarios to be demonstrated.

AEROTHAI played a co-leading role with Civil Aviation Authority of Singapore (CAAS), Singapore, regarding SWIM implementation in ASEAN and Asia/Pacific region in accordance with Aviation System Block Upgrades (ASBUs) which is a part of International Civil Aviation Organization (ICAO) Global Air Navigation Plan (GANP).



The Third Technical Interchange Meeting (TIM/3) under SWIM in ASEAN Demonstration

## 6. The Seminar on Meteorological Data & Aeronautical Meteorology Services of Thailand (as Thailand NOC and Bangkok ROC & RODB)

AEROTHAI hosted the Seminar on Meteorological Data & Aeronautical Meteorology Services of Thailand as Thailand National OPMET Centre (NOC) and Bangkok Regional OPMET Centre (ROC) & Regional OPMET Data Bank (RODB) on 5 September 2019, with its objectives to develop Thailand's Meteorological Data & Aeronautical Meteorology Services of Thailand to meet international standards, to create better understanding among stakeholders in Meteorological Data & Aviation Meteorology Services and related service providers; as well as building sustainable relationships among agencies involved in Aeronautical Meteorology Services. The participants included representatives from the Civil Aviation Authority of Thailand (CAAT), Directorate of Air Operations Control, Royal Thai Naval Air Division - Royal Thai Navy and agencies related to Meteorological Data, and also participants from the Thai Meteorological Department nationwide attended the Meeting for the first time, setting a milestone for extending national meteorological cooperation.



The Seminar on Meteorological Data & Aeronautical Meteorology Services of Thailand (as Thailand NOC and Bangkok ROC & RODB)

### 7. The Signing of Memorandum of Agreement between the Royal Thai Air Force (RTAF) and AEROTHAI for 2018

This Memorandum of Agreement creates a path for the Royal Thai Air Force (RTAF) and AEROTHAI to further work together in Operational Methodology of Aviation Practices, Technology and Human Resource Development. Both organizations aim at maximizing efficiency and safety, as well as the protection of the sovereignty of Thailand. RTAF and AEROTHAI also help support the development of commercial air navigation safety, in accordance with international standards. This Memorandum of Agreement is reviewed and signed once a year, in order to be consistent with current practices.



Air Chief Marshal Chaiyapruerk Tishyasarin, Air Force Commander-in-Chief and Mr. Somnuk Rongthong, AEROTHAI President signed the revised Memorandum of Agreement on 13 November 2018 at the Royal Thai Air Force Headquarters

# Company Operating Performance

## Air Navigation Services

### Air Traffic Service within Bangkok FIR

Type of flight	Traffic Movement (Fiscal Year)		Change	
	2018	2019	Increase (+) Decrease (-)	Increase (+) % Decrease (-) %
International Flights	486,077	510,451	24,374	5.0
Domestic Flights	434,947	427,255	(7,692)	(1.8)
Overfly Flights	106,665	108,035	1,370	1.3
<b>Overall Flights</b>	<b>1,027,689</b>	<b>1,045,741</b>	<b>18,052</b>	<b>1.8</b>

Traffic volume in Bangkok FIR in 2019 totaled at 1,045,741 flights, an increase of 1.8 % from the previous year, which is an increase of 18,052 flights, equivalent to an average of 49 flights per day.

### Airport Movements (Top Four Airports)

Airport Movements	Suvarnabhumi	Don Mueang	Phuket	Chiang Mai
<b>Flight Type</b>				
International	287,727	106,597	62,537	25,125
Domestic	91,389	181,299	54,296	59,341
<b>Type of Operation</b>				
S : Schedule	374,209	264,644	110,497	79,015
N : Non-Schedule	2,743	2,657	3,899	1,184
G : General	2,115	6,407	1,185	391
M : Military	28	13,227	1,106	2,745
X : Others	21	961	146	1,131
Overall Flights	379,116	287,896	116,833	84,466
Average per day	1,039	789	320	231
<b>Changes percentage average per day (Fiscal Years 2019/2018)</b>	<b>4.1</b>	<b>0.6</b>	<b>(0.9)</b>	<b>6.2</b>

## Air Traffic Flow Management Service (ATFM Service)

Bangkok Air Traffic Flow Management Unit (Bangkok ATFMU) provides Air Traffic Flow Management (ATFM) service for domestic and international flights operating into constraint/congested airports and airspace in Thailand and the Distributed Multi-Nodal ATFM Network (Southeast Asia, Southern China, Hong Kong and Macau).

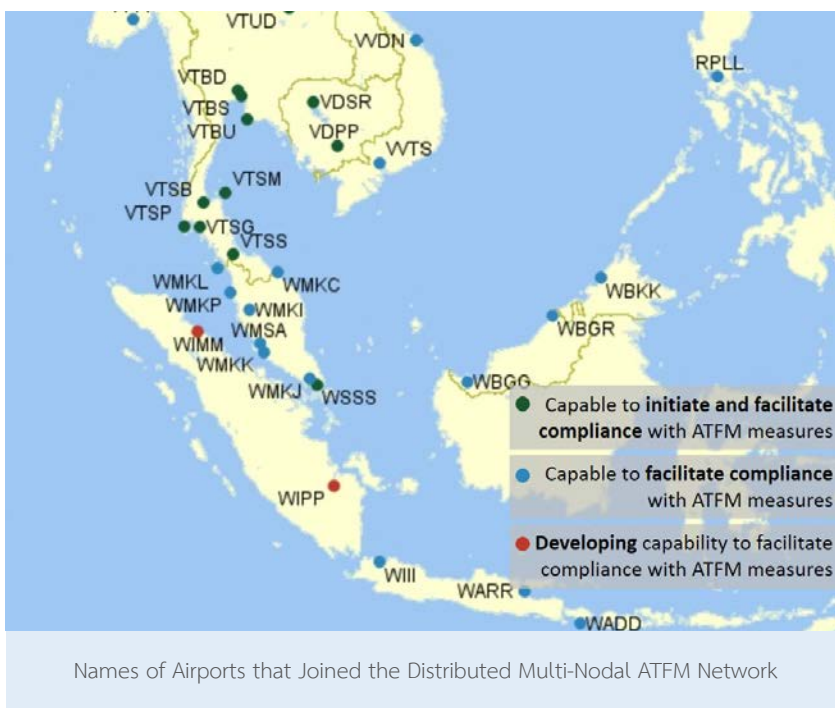
In addition, Bangkok ATFMU provides ATFM service on behalf of Air Navigation Service Providers (ANSPs) involved for all flights planning to enter the Afghanistan airspace westbound during the busy night time period from South/Southeast Asia to Europe or from South Asia to North America using the Bay of Bengal Cooperative ATFM System (BOBCAT).

ATFM service is provided using systems developed internally by AEROTHAI, with operations reported to ICAO Asia-Pacific ATFM Steering Group.

In November 2018, Bangkok ATFMU moved operations into Air Traffic Management Network Management Centre (ATM NMC), which co-located ATFMU with Airspace Management Cell, International NOTAM Office, Flight Data Management Centre, Regional Operational Meteorology Data Exchange (ROBEX) Centre and Aeronautical Communication Centre, to enhance pre-tactical Air Traffic Management operated by AEROTHAI, pre-planning air traffic prior to receiving Air Traffic Services also provided by AEROTHAI.

### 1. Distributed Multi-Nodal ATFM Network

The Company has been playing a joint leadership role in the Distributed Multi-Nodal ATFM Network Project with the People’s Republic of China, Hong Kong, Singapore, Thailand, Australia and supported by other ASEAN member states in developing ATFM service addressing international air traffic volume, also known as Cross-Border ATFM Service. AEROTHAI joint leadership in the project is consistent with air traffic movement in Thailand, which consists of high proportion of international traffic, while Suvarnabhumi Airport services majority international traffic volume of approximately 80%



In 2019, the Distributed Multi-Nodal ATFM Network has expanded the coverage to be joined by 40 international airports as shown above. Apart from the said international airports, 26 domestic airports also provide ATFM services. At present, the Project has been developed to link with the ATFM information linkage under System-Wide Information Management (SWIM) which was displayed in the SWIM in ASEAN Demonstration in November 2019 in Thailand and Singapore.

The Company has been providing ATFM services in case airports and/or Thai airspace have congested air traffic volume as well as supporting all events either planned or emergency such as military maneuvers, runway closed for repair, flight inspection and overcast sky. In addition, the Company has also been providing ATFM to support the transition of ATM under the Thailand Modernization CNS/ATM System Project.

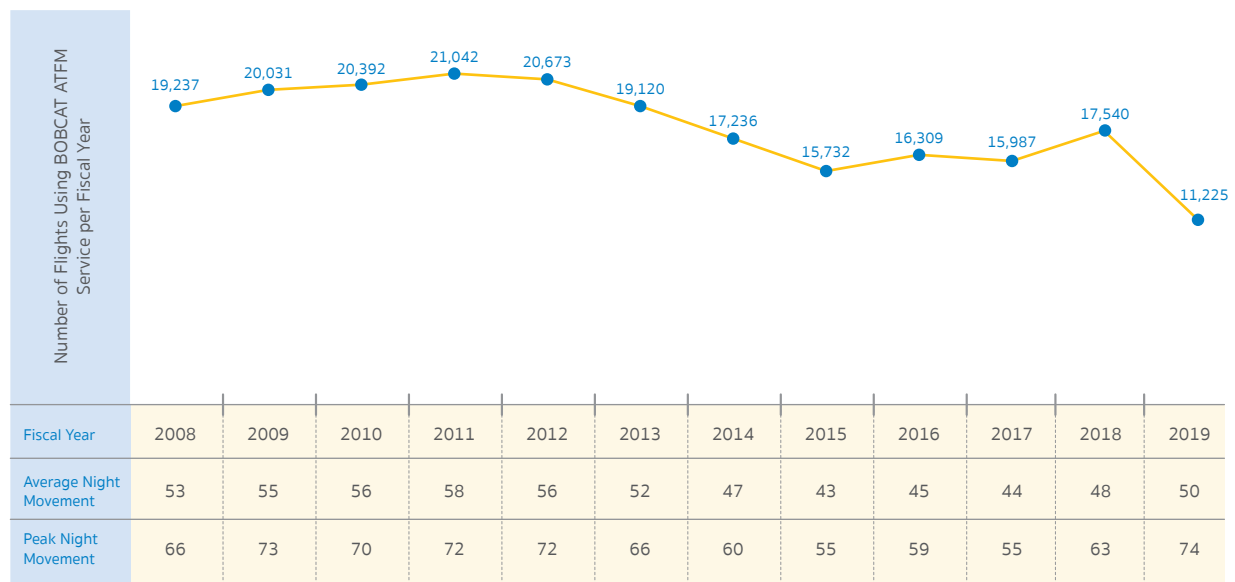
AEROTHAI provides ATFM Services to support the suitable flight planning to accommodate air traffic volumes for neighbouring countries that join the Distributed Multi-Nodal ATFM Network and support the air traffic flow management under restrictions as requested and expected by ICAO.

The provision of ATFM Services will reduce the time aircraft have to circle in order to increase aviation safety and increase the capability of concerned units to make flight plans.

## 2. Bay of Bengal Cooperative Air Traffic Flow Management System (BOBCAT)

The Bay of Bengal Cooperative Air Traffic Flow Management System (BOBCAT) was developed to streamline Air Traffic Flow Management operations for flights intending to transit the Afghanistan airspace westbound during the busy night time period. This is due to Afghanistan being key gateway for flights from South and Southeast Asia operating to Europe and flights from South Asia operating to North America.

AEROTHAI has been managing operations of the BOBCAT system through the Bangkok Air Traffic Flow Management Unit (Bangkok ATFMU) since 2007 with air traffic using BOBCAT ATFM service in each fiscal year as shown below:



Throughout fiscal year 2019, westbound air traffic through Afghanistan airspace during BOBCAT operation hours decreased 36% when compared to fiscal year 2018. The reduction is largely accountable to closure of Pakistan airspace to overfly flights between 28 February–15 July 2019, which effectively forced airlines to re-route around Pakistan and Afghanistan airspaces, increasing flight times by approximately one hour, or effectively rendering certain city pairs uneconomical to operate. Based on IATA information, airlines industry absorbed extra operational cost of at least US\$ 400,000 per day of closure, or approximately US\$ 55 million for the entire closure period.

## Aeronautical Communication Services

In the fiscal year 2019, 244,353,230 AFTN/ATN messages were handled by Bangkok Aeronautical Communication Centre. A total of decrease 2,357,042 messages or 0.96% in comparison to the last fiscal year.

## Aeronautical Information Services (AIS)

AEROTHAI is responsible for the provision of Aeronautical Information Services such as flight plans, flight schedules, flight movement, aviation weather, Notices to Airmen (NOTAM) and others which are necessary for flight operations. The information is distributed to air navigation services providers, airlines, military airports and other government agencies in the Bangkok Flight Information Region and overseas. Details are as follows:

### 1. Notice to Airmen (NOTAM)

1.1 NOTAMs are issued by AEROTHAI as the International NOTAM Office and are distributed through AFTN and/or ATN network according to ICAO Annex 15. NOTAM database provides NOTAM information through automatic request and reply service.

1.2 During the fiscal year 2019, AEROTHAI processed a total of 18,757 NOTAMs which is a decrease of 2,325 NOTAMs or 11.03 % in comparison to the last fiscal year.

### 2. Flight Plan and Air Traffic Service Messages

2.1 AEROTHAI main responsibility includes the management of flight plan and air traffic service messages according to ICAO Document 4444

2.2 During the fiscal year 2019, AEROTHAI processed a total of 2,564,310 messages which are 873,838 Flight Plan messages.

### 3. Operational Meteorological (OPMET) Data Services

AEROTHAI is a designated Operational Meteorological Bulletin Exchange (ROBEX) Centre as well as Regional OPMETs Databank (RODB) according to ICAO Annex 3 and ROBEX Handbook.



## Business Related Service

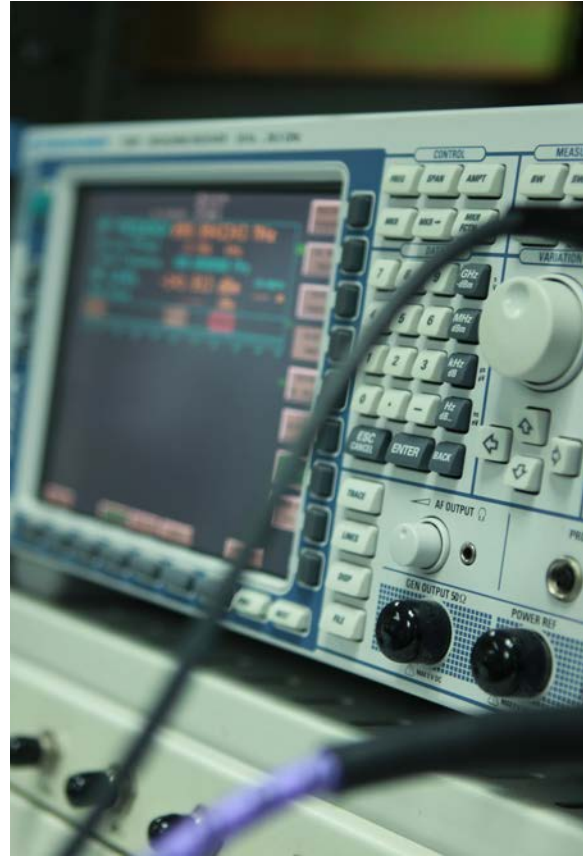
In the fiscal year 2019, AEROTHAI provided services in many projects in the fields of production, provision, installation, maintenance, survey, inspection, calibration, training for domestic and oversea organizations as follows:

### 1. Production, Provision and Corrective Maintenance Service

The Company provided services for the manufacture/ procurement and maintenance of equipment to overseas aviation organizations in 4 countries, i.e. Kingdom of Bhutan, Republic of the Union of Myanmar, Socialist Republic of Vietnam and Federal Democratic Republic of Nepal and domestic organizations, i.e. Office of the Election Commission of Thailand, PTT Public Co., Ltd., Directorate of Communications and Electronics, Royal Thai Air Force, Naval Communications and Information Technology Department, Royal Thai Navy.

### 2. Flight Inspection Service

AEROTHAI provided flight inspection and validation service for various Navigation Aids to overseas aviation organizations in 5 countries, i.e. Lao People's Democratic Republic, Republic of the Union of Myanmar, Federal Democratic Republic of Nepal, Kingdom of Bhutan and Kingdom of Cambodia and 7 domestic organizations which can be categorized into 6 private companies and 1 state enterprise.



### 3. Readiness Assessment for Implementation of Reduced Vertical Separation Minimum (RVSM) of ATC for Operation Service

AEROTHAI provided the service to 65 aircraft of 44 airlines and freight forwarders in 9 countries, which are Thailand, Kingdom of Cambodia, Malaysia, Islamic Republic of Pakistan, Republic of the Philippines, Mongolia, People's Republic of Bangladesh, Republic of Indonesia and Republic of India.

### 4. Test Equipment Calibration and Maintenance Service

AEROTHAI provided the service to 86 equipment for other 12 organizations as part of Test Equipment Calibration Memorandum of Understanding between Office of the National Broadcasting and Telecommunications Commissions and AEROTHAI. Moreover, AEROTHAI also provided the service to Cambodia Air Traffic Service Co., Ltd.

### 5. Rental of Communication Equipment Service for Airlines and Energy Sectors.

AEROTHAI provided rental of Communication equipment service to airlines, aviation related business sector, petroleum energy business sector and other petroleum energy related business sector. In the fiscal year 2019, a total number of rental equipment amounted to 12,006 sets, an increase of 279 sets or 2.38% compared with those of the previous fiscal year. Moreover, the number of rental Digital Trunked Radio System (DTRS) amounted to 2,621 sets, an increase of 119 sets or 4.76% compared with the previous fiscal year.



## 6. Satellite Communication Services

AEROTHAI provided satellite communication services in order to support air traffic communication via voice and data to aviation organizations in 6 countries, i.e. Lao People's Democratic Republic, Kingdom of Cambodia, Socialist Republic of Vietnam, Republic of the Union of Myanmar, Malaysia and People's Republic of Bangladesh.

## 7. Airlines Operational Communication Services (AOC)

AEROTHAI installed additional 13 remote ground stations (RGS) in 3 countries: Commonwealth of Australia, Republic of Korea and Socialist Republic of Vietnam, totalling 192 stations in 7 countries to service airlines with a coverage of 15 countries which are Thailand, Kingdom of Cambodia, Republic of Korea, Taiwan, New Zealand, Brunei, Republic of the Union of Myanmar, Republic of the Philippines, Mongolia, Malaysia, Socialist Republic of Vietnam, Republic of Singapore, Commonwealth of Australia, Republic of Indonesia and Republic of India. AEROTHAI provided AOC service to 201 airlines. Number of aircraft amounted to 7,483 aircraft. Total number of aviation data was 220.19 million Kb., which was an increase of 44.44 million Kb., or 25.28% from those of the last fiscal year.

## 8. Air Situation Display/Ground Situation Display Service

AEROTHAI provided Air Situation Display/Ground Situation Display service for in-house use in order to strengthen the core business as a strategic arms to Aeronautical Information and Flight Data Management Centre and for other use pursuant to business objectives to other organizations: Bangkok Airways, Airports of Thailand PLC., Bangkok Aviation Centre, and International Aviation College Nakhon Phanom University. The Company also provided flight information for the aircraft sound measurement system at Suvarnabhumi Airport.

In addition, AEROTHAI has provided assistance to develop the aviation system and human resource for domestic organizations and others in neighboring countries. Supporting the aviation organizations in neighboring countries will increase the efficiency of ATS within the region, be prepared for increasing traffic volume according to the economic growth, and encourage Thailand to be the aviation hub in the region. This has followed the AEROTHAI strategy that is not only to create the collaborative air traffic management but also to connect the air routes throughout the Asia region. AEROTHAI provided Change Management of ASBUs and Seamless Sky with international customers in Kingdom of Cambodia, Malaysia, Republic of the Union of Myanmar and Lao People's Democratic Republic.



AEROTHAI has conducted researches to develop new products, services, systems and technologies in order to support core business and expand the business opportunity by carrying on 2 products that have been developed:

### 1. Electronic Ground Planning Board

which is an aircraft management system operating at the parking area, especially in the blind spot area, for aerodrome air traffic controller.

### 2. Aerodrome Control Tower Simulator Laboratory

which is to refresh the aerodrome air traffic controllers' knowledge and practice through the virtual aerodrome control tower simulator.

## Human Resource Management



### Human Resource Management and Quality of Work Life

The year 2019 was the year of transformation for AEROTHAI. The Company has been in the midst of transitioning to Thailand Modernization CNS Systems (TMCS), which required readiness from all of the personnel, especially air traffic controllers. Throughout the year, the air traffic controllers selflessly sacrificed their time to participate in TMCS classroom training, simulation, on-the-job training as well as shadowing and ghosting operations in order to make sure that they would be ready to work with TMCS with high confidence. Additionally, AEROTHAI aims to improve its work processes in every part of the organization, hoping to raise the quality of services and to prepare the organization to be qualified for the Air Navigation Service Certificate issued by the Civil Aviation Authority of Thailand (CAAT).

Regarding the human resource management (HRM), AEROTHAI emphasized on improving efficiency in all of the work processes as well as supporting its core business to operate in a way that aligns with CAAT regulations. With ICAO stress management and fatigue risk management recommendations in mind, AEROTHAI focused on strategically managing the human capital to enable its staff to provide safest level of air navigation services. AEROTHAI also recognized the importance of recruiting and developing its staff, especially those in the field of operations, with the right knowledge and skills.

From these challenging factors that have direct impact on the human capital, AEROTHAI conducted the revision of its 10-year manpower plan (2020-2029), which last revised in 2016, mainly to consider major changes that will happen in Thailand within the next 10 years. With the openings of the new airports such as Betong Airport and U-Tapao Airport as well as the new fatigue regulations by CAAT, AEROTHAI needs to make sure that it will have sufficient number of qualified air traffic controllers for the future. Along with this effort, AEROTHAI studied how to manpower plan its air traffic controllers in a 'Staggered Shift' pattern that would help the Company to be able to manage its air traffic controllers more efficiently. In addition, AEROTHAI revised the job descriptions and job specifications for every single position in the Company in order to clearly identify each position's main responsibilities and qualifications that will result in better recruitment, selection, job assignment and promotion.

In terms of process improvement, AEROTHAI made some changes in its HR work process, especially in the new staff recruitment process. AEROTHAI aimed to heighten its target audiences' awareness and understanding on the Company's mission and responsibilities of jobs opening via the use of social media. With this attempt, AEROTHAI could attract over double amount of qualified applicants to apply for many of the jobs opening this year. The Company also developed an online platform where applicants could submit all their application documents electronically, which was more convenient and cost-saving for both applicants and the Company. Furthermore, AEROTHAI adjusted its testing process to ensure that selected candidates have the right knowledge and skills that fit for the role of air traffic controllers. To prepare for digital transformation, AEROTHAI encouraged the Management and staff to switch to self-service on some HR processes such as a request for electronic certificate in order to effectively reduce paper usage. Moreover, this year AEROTHAI brought in Human Resource Information System (HRIS) that would systematically integrate its human resource management and development processes and increase the HR operational efficiency.

For staff's quality of life, AEROTHAI consistently organized many activities that aimed to help staff achieve work-life balance and promote good health, both physically and mentally. For example, the Developing Quality of Life (DQL) program educated the staff on how to take care of their health on a daily basis in order to prevent them from getting sick. Every year, the Company collects statistics of common sicknesses most staff have problems on, based on medical bills they frequently submit for reimbursement. AEROTHAI analyzes the company-wide health statistics along with staff's annual health examination results, in order to design appropriate health-promoting activities and use it as inputs in redesigning the welfare system. Additionally, AEROTHAI adjusted some of its welfare services to better meet the need of each staff group. This year's new initiatives included the compensation of medical check-up cost of Carotid Artery for staff 50 years old and over, the thorough health examination five years prior to retirement, the provision of blood pressure monitoring equipment for every office location, the increased reimbursement rate for staff's vacation accommodation and various types of scholarships provided for staff's children.

To promote morality and well-being of society and environment, AEROTHAI continued to run "The AEROTHAI Mini Volleyball" for The Royal Cup from Her Royal Highness Princess Maha Chakri Sirindhorn that supported talented youth around the country to play volleyball. This year marked its 20th year anniversary and was still proven a great success: many participants have grown to become national volleyball players, generating fame and positive reputation for AEROTHAI and Thailand. In addition, AEROTHAI received a Certificate of Honor from the Royal Thai Army and Social Innovation Foundation for being one of the organizations that actively hires people with disability, so that the disabled will be able to have job opportunities in their hometown to financially support themselves to have better quality of life and become valuable members within their community.

AEROTHAI continued to highly emphasize on the importance of its personnel, because the Company realized that the Company's overall performance was mainly driven by its engaged staff who were always willing to give their best at work. Therefore, AEROTHAI strived to improve its HR work processes and services in hope for higher level of engagement by the staff. Moreover, the Company was of the opinion that with many changes occurred both internally and externally over the past 10 years, this was the right time to revise the corporate culture. Based on the conclusion from the Executive Management's brainstorming sessions, the revised corporate culture is AEROTeam, which stands for Accountability, Ethics, Result-Oriented, Operational Excellence and Teamwork. AEROTHAI strongly believes that if the Company can encourage its staff to behave in accordance with the value of AEROTeam, the Company will continue to grow to realize its vision in a sustainable manner.

## Development and Learning Promotion

According to the Corporate Plan 2019-2023, AEROTHAI has set the Vision “To be Air Navigation Services Provider with International Standards of Excellence”. There are two of the five strategic issues that are important to human development, namely the second strategic issue “Creating Professionals” (Strategy 3.2 To develop staff through the Individual Development Plan, which based on competency assessment results according to the Country’s Aviation Personnel Development Plan): Development as a guideline for Human Resource Development. In addition, the third strategic issue has been identified to develop into the High-performance Organization (Strategy 7.2 To manage Information, knowledge and digital technology in order to increase number of innovations and inventors as well as promoting investments, research and development in accordance with Thailand 4.0 strategies and the Thailand Digital Economy and Society Development Plan). These 2 strategic issues have been used as a framework for implementation of knowledge management and innovations: Promoting Learning.

### Human Resources Development

AEROTHAI has divided the target groups into two groups which are classified as follows:

1. Leadership development groups: divided into three position levels as follows:
  - 1.1 Senior Executive Vice President and Vice President or equivalent
  - 1.2 Senior Director or equivalent
  - 1.3 Director or equivalent
2. Employee development groups: divided into four areas as follows:
  - 2.1 Air Traffic Operations
  - 2.2 Air Traffic Engineering
  - 2.3 Support
  - 2.4 Business

In 2019, AEROTHAI has implemented leadership development group by providing executive development courses with external agencies both the public and private sectors to enhance specific ideas of academic perspectives in general administration as well as creating a network of Senior Executives in the aviation industry. Details can be summarized as follows:

- **Executive Vice President, Vice President or Equivalent**

Course Name	Number of Trainees (person)
1. Senior Executive Education Program	1
2. Advanced Certificate Course in Politics and Governance in Democratic Systems for Executives	1
3. Advanced Master of Management Program	1
4. Air Force Executive Relations Development Course	1
5. Leadership Succession Program (LSP)	1
6. Development Executive in the Digital Age	1

- **Senior Director or Equivalent**

Course Name	Number of Trainees (person)
1. Air War College	1
2. Naval War College	1
3. Executive Training Program Ministry of Transport	1
4. Public – Private Partnerships for Executives Program: PED	1

- Director or Equivalent

Course Name	Number of Trainees (person)
1. Mid-level Executives Training Program Ministry of Transport	1
2. Aviation Management for Executives Program	1

In the area of Human Resource Development: Air Traffic Services, AEROTHAI considered important factors such as ICAO's Global Air Navigation Plan (GANP), the Civil Aviation Authority of Thailand's (CAAT) Announcement on Air Traffic Services Standards and Communication Navigation and Surveillance Standards (Issue 2), 2019, Thailand Modernization CNS/ATM System (TMCS) and the Company's succession plan as inputs to identify the staff training needs. The Company has developed staff's working potential to make sure that they can perform their tasks according to the CAAT's air traffic services standards. AEROTHAI has submitted 5 curriculums for CAAT to certify and provided the training courses for air traffic controllers as indicated in the table below.

Course Name	Number of Trainees (person)
1. Aerodrome Control Rating	31
2. Approach Control Procedural Rating	8
3. Approach Control Surveillance Rating	5
4. Area Control Procedural Rating	15
5. Area Control Surveillance Rating	15

AEROTHAI has developed the staff's competencies by conducting training courses which provide the air traffic controllers with the necessary skills and knowledge to a level of competence in accordance with the CAAT Manual of Standards. The table below shows the number of staff who achieved ATC licences and rating during the fiscal years 2017-2019.

Centre	Year 2017	Year 2018	Year 2019
Provincial Approach Air Traffic Control Centre	42	29	13
Bangkok Area Air Traffic Control Centre	15	10	15
Bangkok Terminal Air Traffic Control Centre	19	-	0
<b>Number of staff</b>	76	39	28
<b>Number of staff achieved ATC licence/rating</b>	76	39	28
<b>Success Rate Percentage</b>	100	100	100

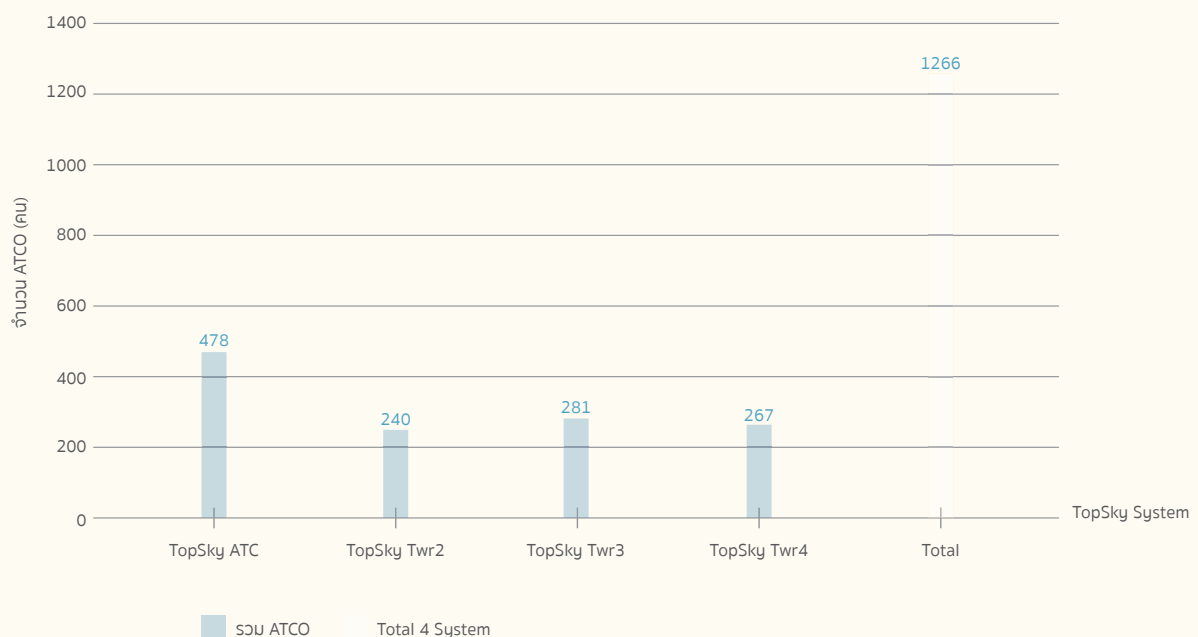
Moreover, AEROTHAI has developed and issued a Unit Training Plan to specify how unit training will be provided so that the staff can obtain ATC licence with an appropriate rating. In order to raise and maintain the quality of service and standards, the Company provided training courses as follows:

Course Name	Number of Trainees (person)
1. OJT-I (On the Job Training Instructor) Refresher Training	180
2. ATM Managers' Performance Phrase 1: Human Performance Training for all ANSP Managers (Fatigue Management)	56

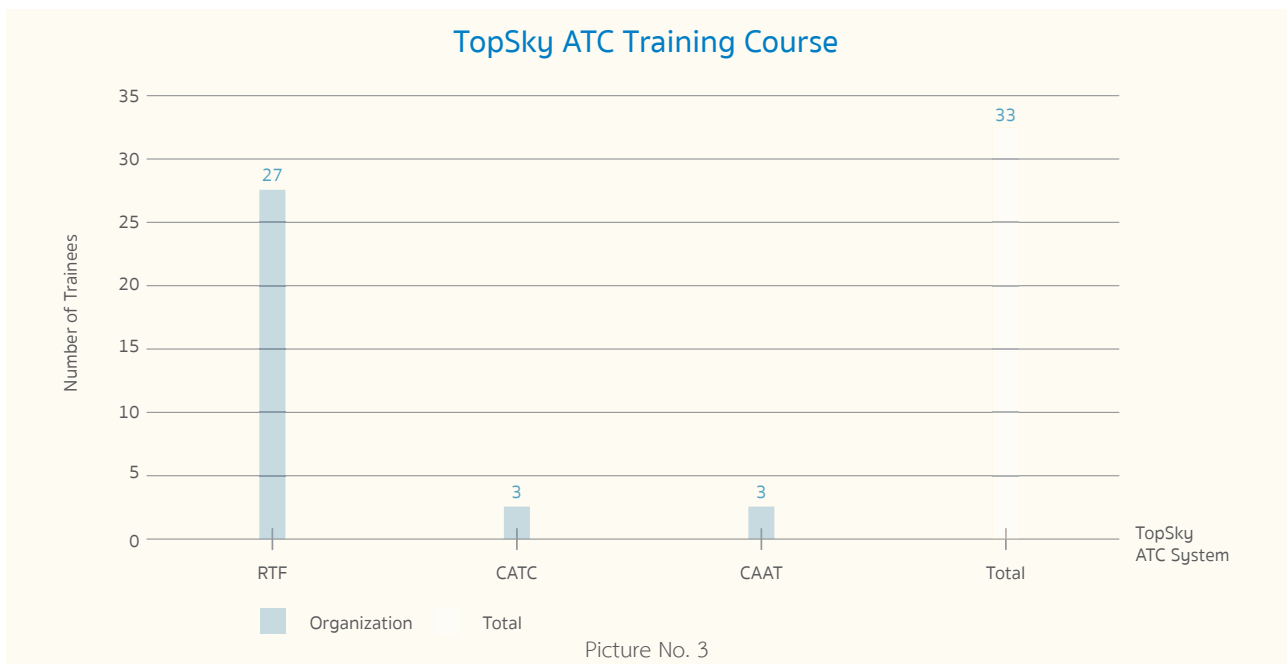
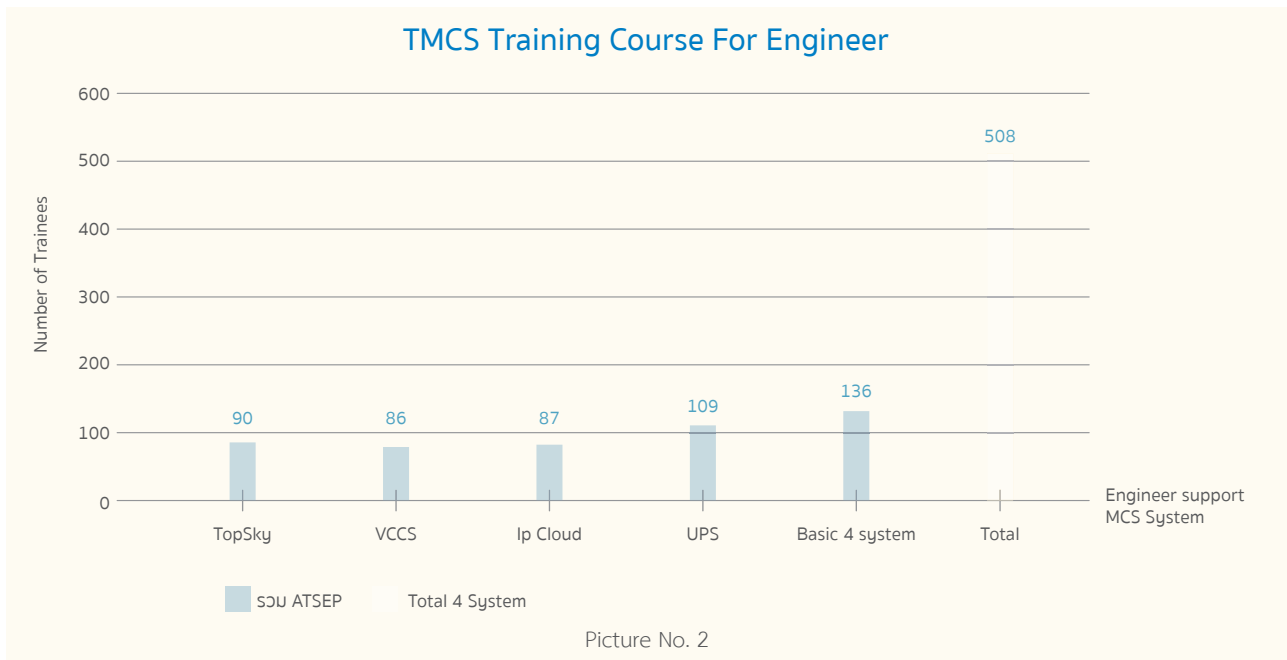
Development of air traffic control personnel was carried out to prepare the air traffic controllers and related personnel for the new system and technology under the Thailand Modernization CNS/ATM Systems (TMCS) Project. In accordance with TMCS Transition Roadmap and a Continuation Training (Conversion) Plan, the Company has arranged training courses for the staff as follows:

Course Name	Number of Trainees (person)
1. TMCS Refresher Training for Air Traffic Controllers	1,266
2. TopSky Maintenance Internal Training	90
3. Voice Communication Control System	86
4. IP Cloud Network	87
5. Power Supply	109
6. TMCS Basic Training for Engineers (Provincial Centres)	136
7. Human Machine Interface (HMI) for TopSky (For Royal Thai Air Force, The Civil Aviation Authority of Thailand (CAAT) and Civil Aviation Training Centre)	33

### TMCS Refresher Training Course for ATCO



Picture No. 1



For the Air Traffic Engineering Development Plan which supports the strategy No. 3.2 of the AEROTHAI’s Corporate Plan, 2019-2023 and also corresponds to the ICAO Training Manual for Engineering Personnel Development as specified in the ICAO Doc.7192 Part E2, 2011, AEROTHAI together with EPN (Entry Point North), Sweden, have organized the Basic ATSEP Training course, On-the-Job-Training Instructor (OJTI) and Assessor course to the relevant engineers in the fiscal years 2018-2019, as follows:

Course Name	Number of Employees Trained Year 2018 (Person)	Number of Employees Trained Year 2019 (Person)
1. Basic ATSEP (AEROTHAI)	4	67
2. Basic ATSEP (EPN)	16	16
3. OJTI & Assessor (EPN)	6	12

For the development of supporting staff group, AEROTHAI has provided training course for staff who were in General Managers position or equivalent, in order to prepare themselves before being selected to be directors. It can be summarized as follows:

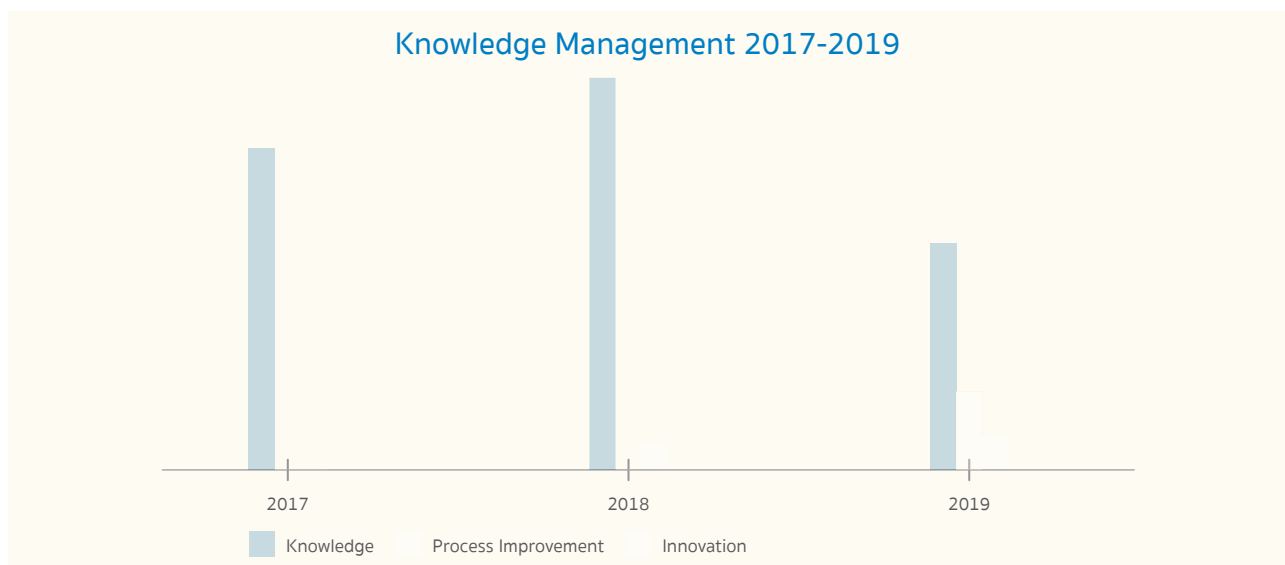
Course	Number of Employees Trained (person)
Succession Development Project (SDPP)	9

For the development of business staff group, AEROTHAI has provided training course to staff who need to develop and expand knowledge to the core business in Air Traffic Services, which would lead them to develop equipment or create innovation in order to add value to the Business Section, as follows:

Course	Number of Employees Trained (person)
ATC for Non ATC	15

## Knowledge Management

AEROTHAI encouraged staff to use their knowledge, potential and experiences for work processes improvement, knowledge management and innovation by collecting and storing additional important knowledge in the areas of Air Traffic Management (ATM), Aeronautical Information Service (AIS), Communications, Navigation and Surveillance (CNS). Moreover, the Company encouraged all departments to create Knowledge Landscape and Knowledge Map as well as applying their knowledge to improve performance or create innovations in order to enhance the organizational ability to the international level. In 2019, AEROTHAI has collected and stored explicit knowledge of 22 topics divided into core knowledge of departments (15 topics), knowledge that can improve work processes (5 topics) and knowledge that can create innovations (2 topics) (as statistical data, picture 4).



Knowledge Management 2017-2019				
Year	Knowledge	Process Improvement	Innovation	Total
2017	21	-	-	21
2018	27	-	1	28
2019	15	5	2	22

Picture No. 4



In addition, AEROTHAI also used KM tool for knowledge sharing and captured lessons learned from the implementation of its important project (Thailand Modernized CNS/ATM Systems: TMCS).

In addition, AEROTHAI has continuously put emphasis on internal innovation promotion by reviewing the concept of the invention development as User Challenge and ICAO Based Performance Guidance (11 KPAs), which were used to set an innovation creation. In 2019, 13 innovations were submitted to join the competition as follows:

Type of Work	Number of Inventions
1. Technological Innovation	4
2. Management Innovation	5
3. Inventions	4

AEROTHAI has submitted innovations that have been selected from the competition to join the National Research Council: Invention Award, and to participate in competitions and exhibitions on an international stage. The results could be summarized as follows:

• National Research Council Award Invention Award: “Honorable Mention Award” in IT and Communication Science Branch



**Name of Innovation**

- Intelligence Monitoring and Control System by Aeronautical Communication Engineering Division

**Name of Innovation**

- The Selectable Threshold RF Field Strength Protection Device



• The International Exhibition of Inventions of Geneva 2019:

- Silver Medal in Class C: Transport–Motor Vehicles–Ships–Aviation Accessories
- Special Prize: FIRI Award from the 1<sup>st</sup> Institute Investors and Researchers in I.R., IRAN, Islamic Republic of Iran

**Name of Innovation**

- Intelligence Monitoring and Control System by Aeronautical Communication Engineering Division



## Information Technology Development

AEROTHAI has developed the information technology under the Government policy, Thailand 4.0, Thailand Digital Economy and Society Development Plan (Digital Economy: DE), Digital Government Development Plan Including the state enterprise strategic plan (Transportation), The Information Technology Master Plan of the Ministry of Transport (Digital Transport 2021), Laws and Act as a key factor in implementing projects and work plans under the strategy of Corporate Plan and action plans (2019-2023) with details as follows:

### 1. Developed the potential of digital architecture and technology infrastructure

for improvement of stability and security levels which include:

#### 1.1 Installed the ICT Network Security System

for the wire and wireless networks covering all the Company's office compound.

#### 1.2 Developed security enhancement services

for the Windows operating systems and Microsoft software.

#### 1.3 Procured Security Information and Event Management (SIEM)

which is a 2-year project to inspect and report any occurrences happened to the Company Information System.

#### 1.4 Installed the Electricity Usage Measurement System and Building Energy Management (BEM)

at the headquarters (Tung Mahamek)

#### 1.5 Procured and provided video conference system service to facilitate the meetings,

including live broadcasting of important meetings from the Headquarter to the Regional Air Traffic Control Centres.

### 2. Determined information, knowledge, and digital technology

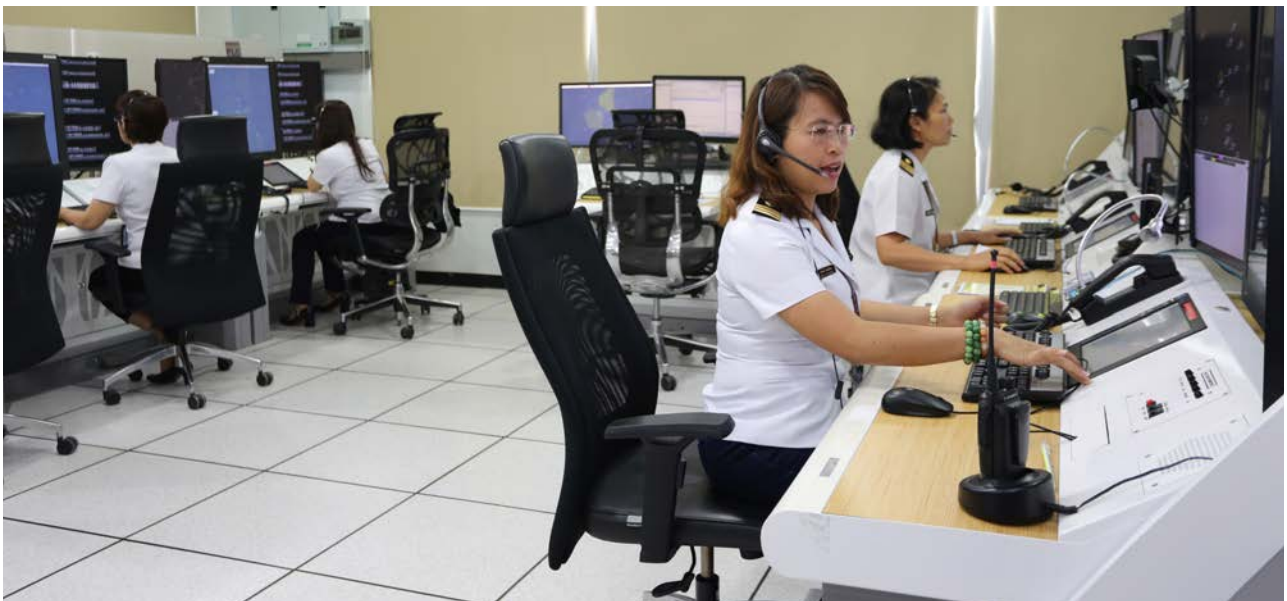
to encourage innovations as well as promote Investment, Research and Development (R&D) in accordance with Thailand 4.0 strategy and digital development plan for economy and society (Digital Economy: DE).

#### 2.1 Developed/improved operations and services using digital technology

through development of the information systems to support the quality of operations in all areas by the internal software development unit of the Company such as:

- Air traffic management Information Supporting System:
  - E-Roster (Bangkok Area Air Traffic Control Management Bureau)
  - E-Roster-BT (Bangkok Terminal Air traffic Control Management Bureau)
  - E-Roster-PT (Provincial Approach Air Traffic Control Management Bureau)

- Engineering Information System:
  - EMS (Engineering Maintenance System) (Phase 2)
  - Engineering Equipment Status Display System
- Human Resources Information System
  - HR Information System
  - Transport Management System on Mobile (MK)
  - Transport Management System (DMK)
  - Accommodation Booking System
- ATC-Productivity System
- Information Management System for Application Development/ Improvement
  - Data Dictionary (Phase 2)
  - Software Quality Assurance System (Phases 1, 2) including procurement of software and hardware to reduce the development time and increase the efficiency of the developed system in accordance with the needs of users in 2019
- Safety Assessment Information System
  - AEROTHAI Calibration Laboratory Management System



#### 2.2 Developed Dashboard System

for presentation of important information of the organization to support Executives decisions making through the AEROTHAI Digitization Project.

#### 2.3 Developed E-Service

to provide service for shareholders and airlines.

### 3. Established a regulatory and evaluation policy framework according

to international standards guidelines and best practices, including the National Strategy for digital development and relevant laws.

#### 3.1 Set digital action plan for a digital organization:

- Digital development plans and digital action plans (2020-2024) to be completed as a framework for the development of digital organization according to Government policy.

### 3.2 Proceeded with Information security according to international laws and guidelines:

- Set Information security policies and guidelines according to electronic transaction law and cyber law, and following IT risk assessment guidelines of ICAO.
- Set Information security practices according to the information security policy and practice.
- Assessed the Information System to improve the IT Security System in lie with international standards ISO 27001.

### 3.3 Upgraded the Information System to comply with relevant digital laws and best practice:

- Studied and ensured Information Systems following the framework of related information laws.
- Studied the implementation of best practices such as Cobit 5.
- Studied evaluation method of digital governance.
- Studied the protection of privacy and important information of the organization to prepare the data governance according to the laws.
- Established a development plan of information technology organization according to the evaluation framework of the new state enterprise system of the State Enterprise Policy Office (SEPO), which uses digital development criteria as one of the principles of evaluation.

### 3.4 Promoted and developed personnel to realize the use of digital technology for benefits and creativity in accordance with good information governance guidelines and compile by digital law.

- Provided training courses to increase digital skills in accordance with international certified courses.
- Provided awareness, knowledge and understanding on how to use digital technology safely for employees.



In this regard, Information and Communication Technology Committee (ICT Steering) was appointed with members from all departments of the organization as the highest committee to establish guidelines and provide information technology policies. As the Chairman of the Committee, Chief Information Officer (CIO) manages through Information and Communication Technology Subcommittee for considering guidelines of supervision, direction and evaluation with specific working groups in order to be implemented and integrated.

## Performance on Investment Expenditure

Since the Government has a policy for the state enterprises to set the target for investment expenditure at more than 95% of the approved budget, in 2019, AEROTHAI's accumulated investment expenditure was Baht 1,185.96 million which was 94.88% compared to the approved budget of Baht 1,250.00 million, which was less than the approved budget at Baht 64.04 million. However, after adjusting the conditions as set by the Ministry of Finances guidelines (for example: the target could be adjusted if the actual expenditure was lower than the approved budget), AEROTHAI's investment expenditure was 100% of the approved budget.

## Performance Appraisal

AEROTHAI performance appraisal was done through performance agreement of state enterprise's operation with the Ministry of Finance with State Enterprise Policy Office (SEPO) as regulatory body. The Government recognizes the importance of creating added value to enable State Enterprises to become more efficient, thereby increasing the competitiveness edge of the enterprise and the creation of added value to the property of the State. The State Enterprise Performance Appraisal (SEPA) is a tool which consists of 3 parts: (1) the assessment and evaluation of Systems and Processes for the 6 categories of corporate management (Leadership, Organizational Strategic Planning, Customer and Market Focus, Measurement/Analysis/Management of Knowledge, Personnel Focus and Operations Focus) (2) Strategic Mission and (3) the organization's performance results of its operations. AEROTHAI yielded an overall performance appraisal of 4.5862 in the fiscal year 2018

SEPA's Performance Appraisal	Fiscal Year 2018		
	Process/System	Strategic Mission	Result
Weight	30	20	50
Weighted Result	1.3950	0.9000	2.2912
<b>Total</b>	<b>4.5862</b>		

## Company's Credit Rating

In the fiscal year 2019, TRIS Rating Company Limited (TRIS Rating) affirmed the company rating of Aeronautical Radio of Thailand Ltd. (AEROTHAI) at "AAA" and the "Stable" outlook. The rating reflects AEROTHAI's monopolistic status, since it is the main provider of air navigation service in the Country. The rating also reflects its good safety record, strong financial standing, and experienced management team. TRIS Rating holds the view that the Company's credit profile is enhanced by its unique and important role to the Thai Government and the likelihood that it would receive extraordinary support from the Government in a stress scenario.

The "stable" outlook reflects TRIS Rating's expectation that AEROTHAI will maintain its status as the main provider of air navigation services in the Country for the foreseeable future and its solid operation track record will continue. In addition, TRIS Rating expects liquidity will remain strong. A rating downgrade may occur, although this is highly unlikely, if AEROTHAI's linkage with the Government weakens to the degree that it changes TRIS Rating's view concerning the likelihood of the Government providing extraordinary support to AEROTHAI.

## Awards Received during the Year

1. AEROTHAI Provident Fund received the Outstanding Development of the 7<sup>th</sup> Provident Fund Award 2019 in the category of Provident Fund for employees of State Enterprise with Fund Size more than 10,000 million Baht hosted by the Association of Provident Funds.
2. "Happy Retirement Company", gold award from the Securities and Exchange Commission and alliances.

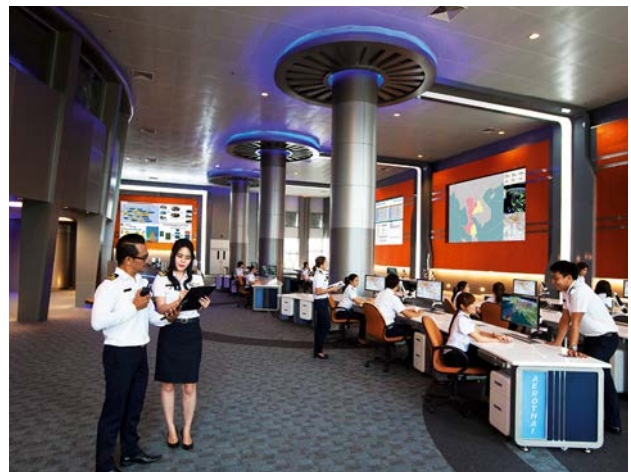
## Highlighted Activities

### 1. Establishment of ATM Network Management Centre

As the volume of air traffic has continued to increase until it exceeds the capacity of the air traffic control service coverage, pre-tactical air traffic flow management is essential to help planning and managing the flight volume to be appropriate for the environment and capacity of serviced areas. The Company planned to establish ATM Network Management Centre (ATM NMC) to improve the efficiency and capability to perform pre-tactical Air Traffic Control Services and Air Traffic Management Service (ATM) in order to increase the capacity to accommodate the flight volume in Thailand and to support the transition of Air Traffic Flow Management Service to TMCS. New equipment have been installed in the ATM NMC Operation Room on the 3<sup>rd</sup> floor of the 60<sup>th</sup> Anniversary Building to accommodate the operations relating to Air Traffic Flow Management (ATFM, Airspace Management (ASM) and Information Management (AIM) with the following details:

1. Air Traffic Flow Management Unit (ATFMU), Room No. 206, Operations Building, 2<sup>nd</sup> floor.
2. Flight Data Management Centre (FDMC), 3<sup>rd</sup> floor, 60<sup>th</sup> Anniversary Building.
3. NOTAM Office, 3<sup>rd</sup> floor, 60<sup>th</sup> Anniversary Building.
4. Communication & OPMET (Aeronautical Information Services), 2<sup>nd</sup> floor, 60<sup>th</sup> Anniversary Building.

The abovementioned operations have been successfully transferred to the locations as planned without any disruption to the operations. All functions can perform their responsible work completely with not less efficiency than the former locations. Official opening ceremony was conducted on 9 November 2018 which was attended by representatives from various organizations, i.e. Civil Aviation Authority of Thailand, International Civil Aviation Organization, Royal Thai Air Force and airlines.



## 2. Air Navigation Service Standards Improvement according to International Standards and Thailand's Regulations

In 2019, AEROTHAI successfully received the ISO 22301:2012 certificate for Business Continuity Management Systems (BCMS) for the three central ATC Centres (Tung Mahamek, Don Mueang, Suvarnabhumi) under the scope of Air Traffic Services (ATS) and Aeronautical Information Services from United Registrar of Systems (Thailand) Limited (URS) on 3 September 2019. AEROTHAI's commitment to meet the required standards ensures its ability to protect against and prepare to respond to disruptive incidents when they arise, thereby enables the Company to provide uninterrupted air navigation service at an acceptable level to the customers.

## 3. VFR Entry and Exit Procedures Project

To ensure the aviation school users' satisfaction, which using Visual Flight Rules (VFR) as the flying operations basis, VFR Entry and Exit Procedures Project has been developed in 2 procedures to create the entry and exit procedures for VFR flights at flight training based aviation school airports

### Phase I (2019)

- Hua Hin (VTPH)
- Khon Kaen (VTUK)

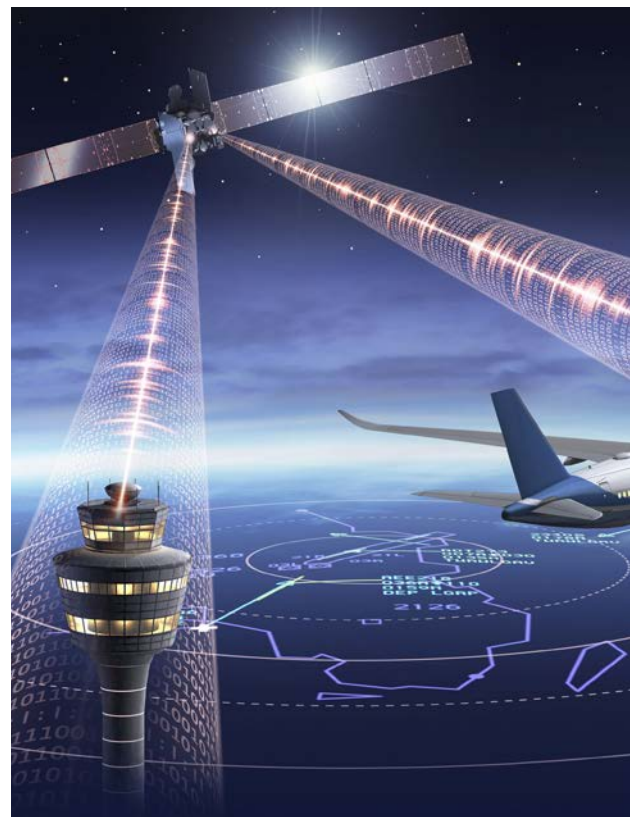
### Phase II (2020)

- Nakhon Ratchasima (VTUQ)
- Chumphon (VTSE)
- Nakhon Phanom (VTUW)

## 4. RNAV2 (GNSS) En-route Development Project

To develop national air navigation system according to International Civil Aviation Organization (ICAO) Plan, 33 routes have been emerged with using Global Navigation Satellite System (GNSS), which increases accuracy in aviation system. The route navigation specification is RNAV2 (GNSS) which lateral deviation less than 2 NM.

The RNAV2 (GNSS) En-route Development Project will reduce the width of each route which enhances capacity in airspace system.



## 5. Runway Capacity Analysis Project

Nowadays the increase of air traffic volume leads to the congestion in aviation system. Therefore, in order to develop the air traffic services more efficiently, Department of Airports, Airports of Thailand Public Company Limited, Bangkok Airways Public Company Limited, and U-Tapao Rayong Pattaya International Airport have to cooperate and jointly operate to analyze the current runway capacity for the main 15 commercial airports

Airport Management Units	Airports	Runway Capacity Flight/Hour
Department of Airports	Phitsanulok	19
	Udon Thani	15
	Khon Kaen	11
	Krabi	9
	Surat Thani	9
	Ubon Ratchathani	11
	Nakhon Si Thammarat	7
Airports of Thailand Public Company Limited	Suvarnabhumi	68
	Don Mueang	07:00-10:59 = 40 11:00-16:59 = 45 17:00-06:59 = 48
	Phuket	20
	Chiang Mai	24
	Hat Yai	11
	Chiang Rai	11
	U-Tapao Rayong Pattaya International Airport	U-Tapao
Bangkok Airways Public Company Limited	Samui	15





# Organization Management



## Risk Management and Internal Control

AEROTHAI has implemented Corporate Risk Management (CRM) and Internal Control in accordance with the Risk Management and Internal Control Guidelines and Procedures, 2012 as outlined by the State Enterprise Policy Office (SEPO), the Standards and Guidelines for Internal Control of Government's Agencies, 2018, and the Standards and Guidelines for Risk Management of Government's Agencies, 2019, both of the latter set by the Ministry of Finance. The guidelines and procedures are based on the concept developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In the fiscal year 2019, AEROTHAI has carried out risk management undertakings according to its Risk Management and Internal Control Master Plan in the following areas:

### 1. Strategic Risk

AEROTHAI has managed strategic risks by using the target of investment expenditure set out by the Government's policy and the accomplishment of projects under its corporate plan. In the area of investment expenditure, there existed risks to be managed by project management and accelerating budget disbursements, while for the area of government policy projects, there existed low risks in radio frequency interference that could be mitigated using reserved frequencies. Thus, AEROTHAI's strategic risk was relatively low.

### 2. Operational Risk

Operational risks focused on the safe and efficient air navigation services, the availability of equipment and systems, and the capability of personnel and manpower. Overall, operational risks was at an acceptable level between low to relatively low; these risks include 1) limitation on personnel capability, 2) the ability of technology/equipment systems to support users' needs (Communications, Navigation, Surveillance and Data-Network), and 3) imbalance of traffic demand and airspace capacity. Risk management measures needed to be monitored and reviewed. Additional measures of short, medium, and long-terms may need to be issued for ongoing operational improvements in the fiscal year 2019.

### 3. Financial Risk

AEROTHAI continuously monitored risks arising from external factors affecting air traffic demand and income. In the fiscal year 2019, decline in air traffic growth caused by the external factors exceeded short-term forecasts. To mitigate financial risks, AEROTHAI has continually evaluated and monitored the events that might impact its financial status and prepare mitigation measures. Additionally, with high financial liquidity and the positive difference of income over accumulated expense, AEROTHAI's financial risk was low.

### 4. Compliance Risk

In the fiscal year 2019, AEROTHAI acted on the good governance concept and related legislations/laws, notably in the following three dimensions:

1. Corporate Governance (CG) - reviewing performance audit results, complaints, and findings related to CG concept;
2. General Legislations/Laws - reviewing litigation and litigation compensation;
3. Aviation laws - reviewing performance audit results, complaints, and findings related to aviation laws.

According to the three risk criteria, the result of risk assessment was at low level.



## Board of Directors and Responsibilities

### Board of Directors

Article 33 of the Company's Articles of Association stipulates that the Company's Board of Directors consists of not less than three Directors and Article 39 stipulates the nomination of Directors by both A and B shareholders as follows:

1. The Thai Government shall be entitled to nominate Directors of the Company and the Thai Government's nominees shall be appointed Directors. One of these Directors, as nominated by the Thai Government, shall be the Chairman of the Board of Directors of the Company.
2. The holders of B shares shall be entitled to nominate two Directors and these nominees shall be appointed Directors.

At the ordinary general meeting in every subsequent year, one third of the Directors must retire from office. A retiring Director is eligible for re-election. A Director can be appointed only by a general meeting. If a vacancy occurs in the Board of Directors otherwise than by rotation it may be filled by the remaining Directors, but any person so appointed shall retain his office during such time only as the vacating Director was entitled to retain the same.

### The Board Of Directors In The Fiscal Year 2019

As of 30 September 2019 in the fiscal year 2019, the Board of Directors consisted of the following 7 Directors:

#### 1. Air Chief Marshal Siwakiat Jayema

<b>Chairman</b>	(Appointed as the Director and Vice Chairman on 30 April 2017 and appointed as Chairman on 24 January 2018)
<b>Age:</b>	62
<b>Position:</b>	Retired Officer, Ministry of Defence
<b>Education:</b>	<ul style="list-style-type: none"> <li>• Armed Forces Academies Preparatory School (Class of 16)</li> <li>• Royal Thai Air Force Academy School (Class of 23)</li> <li>• Air Force Staff School (Class of 35)</li> <li>• Joint War College (Class of 38)</li> <li>• Master of Business Administration, Kasetsart University</li> </ul>
<b>Work Experiences:</b>	<ul style="list-style-type: none"> <li>• Director of Thai Airways International Public Company Limited</li> <li>• Acting President, Thai Airways International Public Company Limited</li> <li>• Deputy Permanent Secretary for Defence</li> <li>• Assistant Air Command of Staff</li> <li>• Deputy Chief of Air Staff</li> <li>• Assistant Chief of Air Staff</li> </ul>
<b>Training:</b>	<ul style="list-style-type: none"> <li>• Diploma, National Defence College, The National Defence Course (Class of 51)</li> <li>• Diploma, National Defence College, The Joint State - Private Sector Course (Class of 21)</li> <li>• Director Certification Program (DCP) Class of 227, Thai Institute of Directors Association</li> <li>• Executive Course, Class of 24 of Capital Market Academy</li> <li>• Political course of government in the monarchy for senior executives (Class of 21)</li> </ul>

- Role of the Chairman Program (RCP) Class of 41, Thai Institute of Directors Association
  - Corporate Governance in Digital Era Course, Fiscal Policy Research Institute Foundation
  - Corporate Governance for Directors and Senior Executives of Regulator Class of 19, State Enterprises and Public Organizations of Public Director Institute
  - The Executive Program in Energy Literacy for a Sustainable Future (Class of 13), Thailand Energy Academy
- Fields of Competence:**
- Organization Management
  - Transportation and Air Transport
  - Security
- Other Positions:**
- Advisor, Defence Technology Institute

## 2. Mr. Lavaron Sangsnit

### Vice Chairman

(Appointed as the Director on 1 December 2018 and appointed as Vice Chairman on 1 July 2019)

**Age:**

52

**Position:**

Director General, Fiscal Policy office, Ministry of Finance

**Education:**

- Bachelor of Economics, Chulalongkorn University
- Master of Economics (Policy and Planning), Northeastern University, USA

**Work Experiences:**

- Inspector General, Ministry of Finance
- Financial Policy Advisor, Fiscal Policy Office
- Deputy Director-General, Fiscal Policy office

**Training:**

- Diploma, National Defence College, the National Defence Course (Class of 58)
- Top Executive Program (Class of 25), Capital Market Academy (CMA)
- The Executive Program in Energy Literacy for a Sustainable Future (Class of 12), Thailand Energy Academy

**Fields of Competence:**

- Organization Management
- Economics and finance

**Other Positions:**

- Director of Bank of Thailand
- Director of Tobacco Authority of Thailand
- Director of Krung Thai Asset Management Public Company Limited
- Name listed in the Directors' Pool of State Owned Enterprise in Economics, Finance (Financial and Budget)

## 3. Mr. Puttipong Prasarttong-Osoth

### Director

(Appointed on 17 March 2015, resigned on 23 January 2018 and reappointed on 17 April 2018)

**Age:**

54

**Position:**

Chairman of the Board of Directors, Bangkok Airways Public Company Limited

**Education:**

- Bachelor of Commerce and Accountancy, Chulalongkorn University

**Work Experiences:**

- Senior Vice President Operations, Bangkok Airways Company Limited
- Vice President Operations, Bangkok Airways Company Limited

**Training:**

- SASIN Senior Executive Program, SASIN Graduate Institute of Business Administration of Chulalongkorn University

**Fields of Competence:**

- Diploma, National Defence College, The Joint State - Private Sector Course (Class of 24)
- The Program for Senior Executives on Justice Administration (Batch 13), Judicial Training Institute
- Certificate of Commercial Pilot Licence
- Organization Management
- Transportation and Air Transport

**Other Positions:**

- Chairman of Bangkok Air Catering Company Limited
- Chairman of Bangkok Air Catering Samui Company Limited
- Chairman of Bangkok Air Catering Phuket Company Limited
- Chairman of Bangkok Air Catering Chiang Mai Company Limited
- Chairman of BAC Gourmet House Company Limited
- Chairman of Gourmet Primo Company Limited
- Chairman of Bangkok International Airport Flight Services Company Limited
- Chairman of Bangkok Airways Ground Services Company Limited
- Chairman of Bangkok Dusit Medical Services Public Company Limited
- Direct Director of WFS-PG Cargo Company Limited
- Director of Sahakol Estate Company Limited
- Director of Bangkok Media and Broadcasting Company Limited
- Director of Fuel Pipeline Transportation Company Limited
- Director of Bangkok Airways Holding Company Limited
- Director of More Than Free Company Limited
- Director of Bangkok Aviation Fuel Services Public Company Limited
- Pilot of Airbus 319/320 fleet, Bangkok Airways Public Company Limited
- Advisor, Bangkok Christian College Alumni Association
- Senior Advisor, Nakorn Ratchasima's Municipality

**4. Squadron Leader Pongtorn Thepkanjana****Director**

(Appointed on 18 December 2017, resigned on 23 January 2018 and reappointed on 17 April 2018)

**Age:**

61

**Position:**

Executive Vice President Operations,  
Thai Airways International Public Company Limited

**Education:**

- Aeronautical Engineering, Royal Thai Air Force Academy

**Work Experiences:**

- Vice President Flight Operations Department, Thai Airways International Public Company Limited
- Vice President Aviation Resources Development, Thai Airways International Public Company Limited
- Mission Commander, Thai Airways International Public Company Limited
- Director of Flight Test & Development Department, Thai Airways International Public Company Limited

**Training:**

- Director Certification Program (DCP), Thai Institute of Directors Association
- Corporate Governance for Directors and Senior Executives of Regulator of State Enterprises and Public Director Institute, Class of 19, King Prajadhipok's Institute

- Fields of Competence:**
- Organization Management
  - Telecommunication and Technology
  - Transportation and Air Transport
  - Laws
  - Engineering
- Other Positions:**
- Director of Bangkok Aviation Fuel Services Public Company Limited
  - Director of Thai Flight Training Company Limited

## 5. Mrs. Phongsaward Guyaroonsuith

- Director** (Appointed on 31 October 2016, resigned and reappointed on 23 January 2019)
- Age:** 52
- Position:**
- Deputy Secretary-General of the Council of State, Office of the Council of State
  - Councillor of State of the 2<sup>nd</sup> Committee
- Education:**
- Bachelor of Laws, Thammasat University
- Work Experiences:**
- Permanent Law Councillor
  - Director, Bureau of Administrative Law
- Training:**
- Draft Law and Legal Opinions Course, Office of the Supreme Court
  - Middle Management Course with Preparation for ASEAN Community, Office of the Civil Service Commission
  - Executive Development Program (EDP 1) (Class of 82), Office of the Civil Service Commission
  - AEC Economic Development Zone, Office of the Civil Service Commission
  - Life Style Development, Office of the Civil Service Commission
  - Executive Course (Class of 5), Office of the Civil Service Commission
  - Ministry Spokesman Course, Office of the Prime Minister
  - Advanced Budget Management Program (Class of 6), Budget Bureau
- Fields of Competence:**
- Laws
- Other Positions:**
- Director of Expressway Authority of Thailand
  - Name listed in the Directors' Pool of State Owned Enterprise in Politics and Governance (Governance), Laws (Administrative Law) and Security (Security Laws and Government Administration)

## 6. Professor Dr. Amorn Pimanmas

- Director** (Appointed on 23 January 2018)
- Age:** 46
- Position:** Professor of Department of Civil Engineering, Kasetsart University
- Education:**
- Bachelor of Civil Engineering (First Class Honor) Chulalongkorn University
  - Master of Civil Engineering, University of Tokyo, Japan
  - Master of Management, College of Management, Mahidol University
  - Doctor of Civil Engineering, University of Tokyo, Japan
- Work Experiences:**
- President of Thai Structural Engineers Association
  - President of Thai Building Information Modeling Association
  - Director of Military Education Council
  - Director of Mass Rapid Transit Authority of Thailand
  - Director of Thai Technical Volunteer Foundation

- Training:**
- Director Certification Program (DCP), Class of 276, Thai Institute of Directors Association
  - Risk Management Program for Corporate Leaders (RCL), Class of 16, Thai Institute of Directors Association
  - Strategic Board Master Class (SBM), Class of 6, Thai Institute of Directors Association
  - Financial Statement for Directors (FSD), Class of 39, Thai Institute of Directors Association
  - Advanced Audit Committee Program (AACP), Class of 34, Thai Institute of Directors Association
- Fields of Competence:**
- Organization Management
  - Civil Engineering
  - Data Analysis

## 7. Mr. Somnuk Rongthong

- Director** (Appointed on 26 September 2018, resigned and reappointed on 23 January 2019)
- Age:** 58
- Position:** President, Aeronautical Radio of Thailand Limited
- Education:**
- Bachelor of Electrical Engineering, Kasetsart University
- Work Experiences:**
- Executive Vice President, Aeronautical Radio of Thailand Limited
  - Vice President (Air Traffic Services Engineering), Aeronautical Radio of Thailand Limited
- Training:**
- Diploma, National Defence College, The Joint State - Private Sector Course (Class of 26)
  - Air War College (Class of 36)
  - Advanced Management Program, Wharton School, University of Pennsylvania, USA
- Fields of Competence:**
- Organization Management
  - Engineering
  - Information Technology

## Director Retiring During The Fiscal Year 2019

### 1. Police General Dechnarong Sutticharnbancha

- Vice Chairman** (Appointed on 23 January 2017 and resigned on 1 May 2019)
- Age:** 61
- Position:** Senator
- Education:**
- Bachelor of Public Administration, Police Cadet
  - Master of Business Administration, National Institute of Development Administration
- Work Experiences:**
- Advisor to Royal Thai Police (RTP 10)
  - Assistant Commissioner of National Police
  - Acting Provincial Police Commander, Region 4
- Training:**
- Diploma, National Defence College, the National Defence Course (Class of 55)

- Fields of Competence:**
- Organization Management
  - Telecommunications and Technology
  - Security
  - Laws

## 2. Mrs. Amphawan Wannako

- Director** (Appointed on 23 January 2019 and resigned on 5 August 2019)
- Age:** 59
- Position:** Director General, Department of Airports
- Education:**
- Bachelor of Arts (Major in History), Chulalongkorn University
  - Master of Business Administration, National Institute of Development Administration
- Work Experiences:**
- Deputy Director General, Department of Airports
  - Inspector General, Ministry of Transport
- Training:**
- Director Certification Program (DCP), Class of 275, Thai Institute of Directors Association
  - Risk Management Program for Corporate Leaders (RCL), Class of 16, Thai Institute of Directors Association
- Fields of Competence:**
- Organization Management and Air Transport
  - Safety and security in civil aviation
  - Airport management
- Other Positions:**
- Name listed in the Directors' Pool of State Owned Enterprise in Transport and Transportation

## 3. Police Lieutenant General Surachate Hakparn

- Director** (Appointed on 31 October 2016 and resigned on 9 April 2019)
- Age:** 49
- Position:** Special Advisor to the Office of the Prime Minister
- Education:**
- Bachelor of Public Administration, Police Cadet
  - Master of Social Science Criminology and Justice Administration, Mahidol University
  - Doctor of Public Administration, University of Eastern Asia
- Work Experiences:**
- Deputy Commissioner Tourist Police
  - Commander, Patrol and Special Operation Division
  - Tourist Police Commander
  - Commander of the Office Of the Commissioner of Police (Coordinating Policies with the Prime Minister)
  - Deputy Commander, Patrol and Special Operation Division
  - Superintendent of Hat Yai Police Station
- Training:**
- High-Level Justice Administration (TCG) Class of 20, Judicial Training Institute of Thailand
  - Ravens Challenge ASEAN 2017 Workshop 4, Royal Thai Police
- Fields of Competence:**
- Organization Management
  - Security
  - Laws



- Other Positions:**
- Director of Expressway Authority of Thailand
  - Director of Security Krungthai Business Services Co., Ltd.

#### 4. Colonel DR. Peerawat Promkladpanao

- Director** (Appointed on 15 August 2014, resigned and reappointed on 23 January 2017 and resigned on 23 March 2019)
- Age:** 49
- Position:** Committee for Monitoring and Evaluation of Performance of the Office of the National Broadcasting and Telecommunications Commission (NBTC)
- Education:**
- Bachelor of Electrical Engineering (Communication Engineering), Chulachomkhalo Royal Military Academy
  - Master of Public Administration (MPA), Burapha University
  - Doctor of Philosophy (Public Administration), Western University
- Work Experiences:**
- Officer attached to Directorate of Joint Affairs, Royal Thai Armed Forces Headquarters, assisting the work of the Office of the National Broadcasting and Telecommunications Commission (NBTC) under the Vice Chairman, NBTC and Chairman, National Telecommunications Commission (NTC)
  - Assistant Director of Civil Affairs Department, Directorate of Joint Affairs, Royal Thai Armed Forces Headquarters
  - Chief of Civil Affairs Department, Royal Thai Armed Forces Headquarters
  - Staff Officer of Deputy Supreme Commander Office, Royal Thai Armed Forces Headquarters
  - Staff Office of the Army Chief, Royal Thai Army
  - Staff Officer of Budget Division, Signal Department, Royal Thai Army
  - Executive Officer of Signal Battalion, 2<sup>nd</sup> Cavalry Regiment Royal Guard
  - Operation and Intelligence Division Officer, 12<sup>th</sup> Signal Battalion Royal Guard, 2<sup>nd</sup> Cavalry Regiment Royal Guard
  - Service Company Executive Officer, 12<sup>th</sup> Signal Battalion Royal Guard, 2<sup>nd</sup> Cavalry Regiment Royal Guard
  - Service Company Commander, 12<sup>th</sup> Signal Battalion Royal Guard, 2<sup>nd</sup> Cavalry Regiment Royal Guard
  - Artificer Staff Officer, 12<sup>th</sup> Signal Battalion Royal Guard, 2<sup>nd</sup> Cavalry Regiment Royal Guard
  - Commander of Fiber Optic Set Up Team from Prachin Buri railway station to Aranyaprathet railway Station
  - Assistant Secretary of CAT Telecom Public Company Limited
  - Corporate Governance Committee of CAT Telecom Public Company Limited
  - Public Relations Committee of CAT Telecom Public Company Limited
  - Corporate Governance Committee of TRUE-Move, Total Access Communication Public Company Limited and Digital Phone issue according to legal problems of “Draft Act on Private Participation in State Undertaking B.E. 2535 (Section 22)”, CAT Telecom Public Company Limited
  - Public Affairs Expert of TOT Public Company Limited
  - Working Group of National Council for Peace and Order

**Training:**

- New Infantry Officer Orientation Course: Signal
- Electronic System Engineering Course: Signal (Class of 8)
- Infantry Officer Basic Course: Signal (Class of 42)
- Infantry Officer Advance Course: Signal (Class of 37)
- Infantry Chief of Staff Course (Class of 84)
- Comptroller of the Army Course (Class of 26)
- Public Director Certification Program (PDI), Class of 13, King Prajadhipok's Institute
- Director Certification Program (DCP), Class of 201, Thai Institute of Directors
- Boards that Make a Difference (BMD), Class of 1, Thai Institute of Directors
- Board Matters & Trends (BMT), Class of 1, Thai Institute of Directors
- Advanced Audit Committee Program (ACCP), Class of 26, Thai Institute of Directors
- Driving Company Success with IT Governance (ITG), Class of 5, Thai Institute of Directors
- Board Nomination & Compensation Program (BNCP), Class of 2, Thai Institute of Directors
- Role of the Chairman Program (RCP), Class of 43, Thai Institute of Directors
- Private Pilot Ground Training Course (PPL), Class of 56, Thai General Aviation Technology Company Limited
- Basic Airport Management Course (BAM), Class of 5, Thai General Aviation Technology Company Limited

**Fields of Competence:**

- Organization Management
- Engineering
- Telecommunication and Technology
- Security
- Air Transport
- Name listed in the Directors' Pool of State Owned Enterprise In Management and Business Management (Organization Management), Security (Government Agencies Coordination)

## Roles And Responsibility Of Board Of Directors

The Board of Directors set the policies and oversaw the Company's operations. They also played an important part to set up the strategic plan for organization development in accordance with State Enterprise's practices and the Company's vision stated that "A Sustainable Quality Excellent Air Navigation Service Provider". The Board of Directors appointed knowledgeable and experienced Directors to Sub-Committees for screening any necessary matters as follows:

1. The Executive Committee
2. The Audit Committee
3. The Risk Management Committee
4. The Remuneration Committee
5. The Corporate Governance and Corporate Social Responsibility Committee
6. The Legal Committee

The four Independent Directors were also announced.

The Company scheduled the Board of Directors' meetings in advance throughout the year. The meeting was held at least once a month to oversee and monitor the Company's operations. Extra meetings would be called

for if necessary as shown in the Annual Report so that the Directors would carry out their duties appropriately. The meeting invitation letters and agenda in the form of document and information systems of the Boards of Directors were provided to the Board of Directors 5 days prior to the meeting.

The minutes of the meetings were recorded in writing and kept available for Directors and relevant persons to inspect. In addition, the minutes of the Board of Directors' Meetings were submitted to A Shareholders (the Ministry of Finance and the Ministry of Transport) and summary of the minutes distributed to B Shareholders (Member Airlines) for acknowledgement and also available on website for shareholders.

### The Evaluation of Board of Directors

To be in line with the Good Corporate Governance practice, the Board of Directors did their evaluation to monitor themselves for better performing their duties. This evaluation also assisted them in setting the Company's direction and supervising the management properly. The evaluation was conducted every six months and based on two categories: Self Assessment and Board Evaluation.

Category of Evaluation	First Evaluation (October 2017 – March 2018)		Second Evaluation (April – September 2018)	
	Point	Level	Point	Level
Self Assessment	110.4	Excellent	110.3	Excellent
Board Evaluation	118.6	Excellent	118.4	Excellent

#### The Self Assessment

consists of six topics: core competency, independence, preparedness, practices as a director, committed activities and development of organization. The Self Assessment's result was shown excellent.

#### The Board Evaluation

consists of four topics: Board of Directors and their meetings, communications, work procedures and the relationship with executive management. The Board Evaluation's result was shown excellent.



## The Board of Directors' Knowledge and Skills Development

The Company realized the importance of the Board of Directors' competency development, which contributed to the Company highest efficiency and productivity as well as being in line with the Good Corporate Governance practices. In the fiscal year 2019, the Board of Directors participated in training and seminars on courses related to role and function organized by the Thai Institute of Directors Association. In addition, The Boards of Directors has continuously participated in the Company's activities, for example: Corporate Social Responsibility (CSR), site visits to the Air Traffic Control Centres for better understanding of the Company's functions. The Board of Directors also made overseas familiarization trips to observe aviation related operations in order to gain experiences for the benefits of air navigation services provision to accommodate new technology and the increase of flight volume in the future.

## The Orientation for the New Directors

The Company arranged the orientation for the new Directors with a provision of essential and responsibility-related information in the form of documents, presentation and facility visit. The information proposed to the new Directors were as follows:

1. The Board of Directors and Sub-Committee appointment letters.
2. The Company's information consisting of the booklet of the Company's memorandum of association, general information (Company's background and status, shareholders, policies, vision, values, responsibilities in air navigation services and business units), organization chart, personnel, air transport situation and the Company's performance and financial statements, Corporate Plan, significant projects.
3. Board of Directors' handbook consisting of the names of the Board of Directors and its composition, their authorization and duties, terms, Board meeting and its allowances, Sub-Committee and their authorization and duties, information of independent directors, the evaluation, the application to be member airlines, agreement between the Ministry of Transport and the Company, the asset account submission under the Organic Act on Anti-Corruption B.E. 2561 and relevant laws, regulations and the Acts including a booklet of information system application for the Board of Directors.

## Connected Transactions of the Board of Directors with the Company

In the fiscal year 2019, the Company was reported that the Board of Directors had no connected transactions. In addition, they did not hold any shares or held not more than 10 percent of all voting shares of the Company.

## Authorized Directors

In the fiscal year 2019, Authorized Director of the Company, included 5 Authorized Directors, two out of the following four Authorized Directors could co-sign and affix the Company seal to bind the Company as follows:

1. Air Chief Marshal Siwakiat Jayema
2. Mr. Lavaron Sangsnit
3. Mr. Puttipong Prasarttong-Osoth
4. Squadron Leader Pongtorn Thepkanjana
5. Mr. Somnuk Rongthong

## The Secretary To The Board Of Directors

In the fiscal year 2019, members of the Secretary to Board of Directors were as follows:

1. Mr. Somnuk Rongthong Secretary  
President

2. Mr. Tinnagorn Choowong Assistant Secretary  
Executive Vice President (Operations)
3. Mr. Sukluer Chiawarcheep Assistant Secretary  
Executive Vice President (Policy and Human Resources)
4. Mrs. Thaniya Suntharasantic Assistant Secretary  
Vice President (Office of the President)

## The Board of Directors' Attendance

In the fiscal year 2019, the Board of Directors held 12 meetings with attendance details as follows:

Name		Number of Attendances
Air Chief Marshal Siwakiat	Jayema <sup>1/</sup>	12/12
Police General Dechnarong	Sutticharnbancha <sup>2/</sup>	7/7
Mr. Lavaron	Sangsnit <sup>3/</sup>	10/10
Mrs. Amphawan	Wannako <sup>4/</sup>	4/7
Mr. Puttipong	Prasarttong-Osoth <sup>5/</sup>	9/12
Squadron Leader Pongtorn	Thepkanjana <sup>6/</sup>	8/12
Mrs. Phongsaward	Guyaroonsuith <sup>7/</sup>	12/12
Police Lieutenant General Surachate	Hakparn <sup>8/</sup>	0/6
Colonel Dr. Peerawat	Promkladpanao <sup>9/</sup>	6/6
Professor Dr. Amorn	Pimanmas <sup>10/</sup>	8/9
Mr. Somnuk	Rongthong <sup>11/</sup>	12/12

(The absent attendants were due to other engagement)

- Remarks: <sup>1/</sup> Appointed as the Director and Vice Chairman on 30 April 2017 and appointed as Chairman on 24 January 2018
- <sup>2/</sup> Appointed as the Director on 23 January 2017, appointed as Vice Chairman on 25 April 2018 and resigned on 1 May 2019
- <sup>3/</sup> Appointed as the Director on 1 December 2018 and appointed as Vice Chairman on 1 July 2019
- <sup>4/</sup> Appointed on 23 January 2019 and resigned on 5 August 2019
- <sup>5/</sup> Appointed on 17 March 2015, resigned on 23 January 2018 and reappointed on 17 April 2018
- <sup>6/</sup> Appointed on 18 December 2017, resigned on 23 January 2018 and reappointed on 17 April 2018
- <sup>7/</sup> Appointed on 31 October 2016, resigned and reappointed on 23 January 2019
- <sup>8/</sup> Appointed on 31 October 2016 and resigned on 9 April 2019
- <sup>9/</sup> Appointed on 15 August 2014, resigned and reappointed on 23 January 2017 and resigned on 23 March 2019
- <sup>10/</sup> Appointed on 23 January 2019
- <sup>11/</sup> Appointed on 26 September 2018, resigned and reappointed on 23 January 2019

## The Executive Committee

The Executive Committee consisted of not less than three members and not more than five members. In the fiscal year 2019, the Executive Committee consisted of:

- |                             |                        |                      |
|-----------------------------|------------------------|----------------------|
| 1. Mr. Lavaron              | Sangsnit <sup>1/</sup> | Chairman             |
| 2. Mr. Puttipong            | Prasarttong-Osoth      | Member               |
| 3. Squadron Leader Pongtorn | Thepkanjana            | Member               |
| 4. Mrs. Phongsaward         | Guyaroonsuith          | Member               |
| 5. Mr. Somnuk               | Rongthong              | Member and Secretary |
| 6. Mr. Tinnagorn            | Choowong               | Assistant Secretary  |
| 7. Mr. Sukluer              | Chiawarcheep           | Assistant Secretary  |
| 8. Mrs. Thaniya             | Suntharasantic         | Assistant Secretary  |

Remarks: <sup>1/</sup> Appointed on 1 December 2018

## Responsibilities

The Executive Committee was appointed according to Article 42 fourth paragraph of the Company's Articles of Association which stipulates that "In order to facilitate and expedite the conduct of the Company and to supervise the management of the Company more closely the Board of Directors shall set up an Executive Committee of not less than three nor more than five persons".

## The Executive Committee's Attendance

In the fiscal year 2019, the Executive Committee held 12 meetings with attendance details as follows:

Name		Number of Attendances
Mr. Lavaron	Sangsnit <sup>1/</sup>	10/10
Mr. Puttipong	Prasarttong-Osoth	9/12
Squadron Leader Pongtorn	Thepkanjana	8/12
Mrs. Phongsaward	Guyaroonsuith	4/12
Mr. Somnuk	Rongthong	12/12

(The absent attendants were due to other engagement.)

Remarks: <sup>1/</sup> Appointed on 1 December 2018

## The Audit Committee

In the fiscal year 2019, the Audit Committee consisted of:

- |   |                                |                     |
|---|--------------------------------|---------------------|
| 1. Police General Dechnarong  | Sutticharnbancha <sup>1/</sup> | Chairman            |
| 2. Police Lieutenant General Surachate                                    | Hakpam <sup>2/</sup>           | Member              |
| 3. Colonel Dr. Peerawat   | Promkladpanao <sup>3/</sup>    | Member              |
| 4. Vice President (Office of Internal Audit)                              |                                | Secretary           |
| 5. Senior Director, Core Business and Information Technology Audit Bureau |                                | Assistant Secretary |
| 6. Senior Director, Support and Planning Audit Bureau                     |                                | Assistant Secretary |

Remarks: <sup>1/</sup> Appointed as the Director on 23 January 2017, appointed as Vice Chairman on 25 January 2018 and resigned on 1 May 2019

<sup>2/</sup> Appointed on 31 October 2016 and resigned on 9 April 2019

<sup>3/</sup> Appointed on 15 August 2014, resigned and reappointed on 23 January 2017 and resigned on 23 March 2019

## Responsibilities

1. Report on validity of financial statements and management reports.
2. Report on the efficiency, effectiveness and cost control schemes of the Company's operations.
3. Report on conflict of interest and related matters.
4. Report on compliance with rules, regulations, Cabinet Resolutions and policies set by the State Enterprises Board of Directors.

## The Risk Management Committee

In the fiscal year 2019, there were changes in the Risk Management Committee during the year as follows:

- Between 1 October 2018 – 29 January 2019 consisted of:
 

1. Squadron Leader Pongtorn	Thepkanjana	Chairman
2. Mrs. Phongsaward	Guyaroonsuith	Member
3. Mr. Somnuk	Rongthong	Member
4. Vice President (Office of Policy and Strategy)		Secretary
5. Senior Director, Policy and Strategy Management Bureau		Assistant Secretary
  
- Between 30 January 2019 – 30 September 2019 consisted of:
 

1. Squadron Leader Pongtorn	Thepkanjana	Chairman
2. Mrs. Amphawan	Wannako <sup>1/</sup>	Member
3. Professor Dr. Amorn	Pimanmas <sup>2/</sup>	Member
4. Mr. Somnuk	Rongthong	Member
5. Vice President (Office of Policy and Strategy)		Secretary
6. Senior Director, Policy and Strategy Management Bureau		Assistant Secretary

Remarks: <sup>1/</sup> Appointed on 23 January 2019 and resigned on 5 August 2019

<sup>2/</sup> Appointed on 23 January 2019

## Responsibilities

The Risk Management Committee considered all aspects or situations that might pose risk to or otherwise affect the Company. The Committee had to evaluate such situations and determine policy to eliminate and/or reduce the risk. The Management and staff then had to follow such policy.

## The Remuneration Committee

In the fiscal year 2019, the Remuneration Committee consisted of:

- |  |                             |                     |
|--|-----------------------------|---------------------|
| 1. Mr. Puttipong   | Prasarttong-Osoth           | Chairman            |
| 2. Squadron Leader Pongtorn  | Thepkanjana                 | Member              |
| 3. Mrs. Phongsaward  | Guyaroonsuith               | Member              |
| 4. Colonel Dr. Peerawat  | Promkladpanao <sup>1/</sup> | Member              |
| 5. Vice President (Human Resource)                                 |                             | Secretary           |
| 6. Senior Director, Human Resource and Quality of Work Life Bureau |                             | Assistant Secretary |

Remark: <sup>1/</sup> Appointed on 15 August 2014, resigned and reappointed on 23 January 2017 and resigned on 23 March 2019

## Responsibilities

1. To give policy and set criteria for the evaluation of the President's performance.

2. To consider the evaluation of the President's performance.
3. To give the policy and approve the appropriate remuneration and benefit packages for the Management.
4. To submit the result of the evaluation of the President's performance to the Board of Directors for approval.
5. To perform the relevant matters as assigned by the Board of Directors.

## The Corporate Governance and Corporate Social Responsibility Committee

In the fiscal year 2019, there were changes in the Corporate Governance and Corporate Social Responsibility Committee during the year as follows:

- Between 1 October 2018 – 29 January 2019 consisted of:

1. Air Chief Marshal Siwakiat	Jayema	Chairman
2. Police General Dechnarong	Sutticharnbancha	Member
3. Mr. Lavaron	Sangsnit <sup>1/</sup>	Member
4. Mr. Puttipong	Prasarttong-Osoth	Member
5. Squadron Leader Pongtorn	Thepkanjana	Member
6. Mrs. Phongsaward	Guyaroonsuith	Member
7. Police Lieutenant General Surachate	Hakpam	Member
8. Colonel Dr. Peerawat	Promkladpanao	Member
9. Mr. Somnuk	Rongthong	Member
10. Vice President (Office of the President)		Secretary
11. Mr. Marnoch	Sawatdee	Assistant Secretary

Remarks: <sup>1/</sup> Appointed as the Director on 1 December 2018

- Between 30 January 2019 – 30 September 2019 consisted of:

1. Air Chief Marshal Siwakiat	Jayema	Chairman
2. Police General Dechnarong	Sutticharnbancha <sup>1/</sup>	Member
3. Mr. Lavaron	Sangsnit	Member
4. Mrs. Amphawan	Wannako <sup>2/</sup>	Member
5. Mr. Puttipong	Prasarttong-Osoth	Member
6. Squadron Leader Pongtorn	Thepkanjana	Member
7. Mrs. Phongsaward	Guyaroonsuith	Member
8. Police Lieutenant General Surachate	Hakpam <sup>3/</sup>	Member
9. Colonel Dr. Peerawat	Promkladpanao <sup>4/</sup>	Member
10. Professor Dr. Amorn	Pimanmas <sup>5/</sup>	Member
11. Mr. Somnuk	Rongthong	Member
12. Vice President (Office of the President)		Secretary
13. Mr. Marnoch	Sawatdee	Assistant Secretary

Remarks: <sup>1/</sup> Appointed as the Director on 23 January 2017 and resigned on 1 May 2019

<sup>2/</sup> Appointed on 23 January 2019 and resigned on 5 August 2019

<sup>3/</sup> Appointed on 31 October 2016 and resigned on 9 April 2019

<sup>4/</sup> Appointed on 15 August 2014, resigned and reappointed on 23 January 2017 and resigned on 23 March 2019

<sup>5/</sup> Appointed on 23 January 2019

## Responsibilities

To set the Corporate Governance and Corporate Social Responsibility policy and practices, pre-consider and



give the suggestion, report on compliance with the Corporate Governance and Corporate Social Responsibility Plan including monitoring and evaluating the Corporate Governance and Corporate Social Responsibility practices.

## The Legal Committee

In the fiscal year 2019, the Legal Committee consisted of:

1. Mrs. Phongsaward	Guyaroonsuith	Chairman
2. Miss Chunhachit	Sungmai	Member
3. Miss Nathsinee	Yuttidhammadamrong	Member
4. Mr. Somnuk	Rongthong	Member
5. Dr. Abhijai	Chandrasen	Legal Advisor
6. Vice President (Office of the President)		Secretary
7. Senior Director, General Administration Bureau		Assistant Secretary

## Responsibilities

To consider and give suggestion regarding Laws, regulations and contract as requested by the Company or assigned by the Board of Directors.

## The Independent Directors

In the fiscal year 2019, there were changes in the Independent Directors during the year as follows:

- Between 1 October 2018 – 29 January 2019 consisted of:
  - Police General Dechnarong Sutticharnbancha
  - Police Lieutenant General Surachate Hakparn
  - Colonel Dr. Peerawat Promkladpanao
- Between 30 January 2019 – 30 September 2019 consisted of:
  - Police General Dechnarong Sutticharnbancha <sup>1/</sup>
  - Police Lieutenant General Surachate Hakparn <sup>2/</sup>
  - Colonel Dr. Peerawat Promkladpanao <sup>3/</sup>
  - Professor Dr. Amorn Pimanmas <sup>4/</sup>

Remarks: <sup>1/</sup> Appointed as the Director on 23 January 2017 and resigned on 1 May 2019

<sup>2/</sup> Appointed on 31 October 2016 and resigned on 9 April 2019

<sup>3/</sup> Appointed on 15 August 2014, resigned and reappointed on 23 January 2017 and resigned on 23 March 2019

<sup>4/</sup> Appointed on 23 January 2019

The Independent Directors have performed their duty in line with a principle of “Independence” which is defined as “a key to foster the Directors’ responsibilities. A certain number of the Independent Directors should be comprised of the Board of Directors and they can make suggestions or reports with consideration of their duties and responsibilities independently and justly without direct or indirect benefits or advantages in that case and without considering any benefits relating to properties or positions. In addition, the Independent Directors are not under any influence from people, groups or situations that would result in the Company and shareholders incurring damage or loss of appropriate benefits due to act or omission of act.”

The Independent Directors will have to declare their independence when appointed and annually. In the fiscal year 2019 the Independent Directors held 2 meetings with all members attended.

## Remuneration Rate for the Board of Directors and Committees

The Company is a state enterprise that has to abide by the Cabinet's resolution regarding remuneration of the Board of Directors, which includes a fixed amount of remuneration, meeting remuneration, etc. as set by the Ministry of Finance.

Remuneration Rate for the Board of Directors and Committees Divided into Groups in the fiscal year 2019

Committee	Total (Baht)
1. The Board of Directors	1,052,500.00
2. The Executive Committee	580,000.00
3. The Audit Committee	210,166.67
4. The Risk Management Committee	320,000.00
5. The Remuneration Committee	65,000.00
6. The Corporate Governance and Corporate Social Responsibility	690,000.00
7. The Legal Committee	192,000.00
<b>Total</b>	<b>3,109,666.67</b>

Remuneration Rate for the Board of Directors and Committees Divided individually in the fiscal year 2019

Committee	Total (Baht)
1. Air Chief Marshal Siwakiat Jayema	540,000.00
2. Police General Dechnarong Suttichambancha	306,250.00
3. Mr. Lavaron Sangsnit	428,750.00
4. Mr. Puttipong Prasarttong-Osoth	400,000.00
5. Squadron Leader Pongtorn Thepkanjana	447,500.00
6. Mrs. Phongsaward Guyaroonsuith	475,000.00
7. Police Major General Surachate Hakpam	125,333.34
8. Colonel Peerawat Promkladpanao	247,096.77
9. Mrs. Amphawan Wannako	174,193.00
10. Professor Dr. Amorn Pimanmas	345,403.00
11. Mr. Somnuk Rongthong	480,000.00
12. Dr. Abhijai Chandrasen	261,000.00
13. Ms. Chunhachit Sungmai	21,000.00
14. Ms. Nathsinee Yuttidhammadamrong	15,000.00
<b>Total</b>	<b>4,266,526.11</b>

## The Labour Relations Committee

In the fiscal year 2019, (October 2018 - September 2019), there were 12 meetings with attendance details as follows:

			Number of Meeting
1.	Mr. Somnuk Rongthong	Chairman	12
2.	Miss Duangta Samitsuwan	Member (Employer)	6
3.	Mr. Sukluer Chiawarcheep	Member (Employer)	2
4.	Mrs. Sirikes Niemloy	Member (Employer)	9
5.	Mr. Channarong Chuacharoen	Member (Employer)	12
6.	Mr. Chamnan Ruechai	Member (Employer)	8
7.	Mrs. Chidkamol Soonthornsit	Member (Employer)	12
8.	Mrs. Thaniya Suntharasantic	Member (Employer)	9
9.	Mr. Chana Tadtasai	Member (Employer)	11
10.	Mr. Niwat Lekdee	Member (Employer)	6
11.	Mrs. Kleawthong Lapthananon	Member and Secretary	8
12.	Mr. Parinya Thienthong	Member (Employee)	3
13.	Mr. Matee Khamhaeng	Member (Employee)	11
14.	Mr. Nirut Puttstit	Member (Employee)	10
15.	Mrs. Kasamaporn Sawatdichai	Member (Employee)	11
16.	Mr. Kant Teekanuntaporn	Member (Employee)	9
17.	Mr. Ulan Siribunyarit	Member (Employee)	9
18.	Mr. Sangsith Prasomthong	Member (Employee)	11
19.	Mr. Akasak Phothong	Member (Employee)	10
20.	Mr. Sudkhate Wiengsri	Member (Employee)	9
21.	Mr. Sapol Singhadara	Member (Employee)	11

Remarks: No. 3 Completed term in position on 15 December 2018

No. 4 Appointed in December 2018

No. 8 Appointed in December 2018

No. 10 Appointed in December 2018

No. 12 Leaved the office in January 2019

No. 19 Appointed in December 2018

## Remuneration Rate for the Executive Management in the Fiscal Years 2019

Fiscal Year	Number	Salary and Other Income
2017	5	31.68
2018	5	37.25
2019	6	44.62

As at 30 September 2019

Remark: Other income was Position Allowance, Licence Fees, Vehicle Allowance and Annual Special Rewards.

## Conflict of Interest Policy

In the fiscal year 2019, AEROTHAI has continued Guidelines on Appropriate Internal Control Measures for Juristic Persons to Prevent Bribery of State Officials, Foreign Public Officials and Agents of Public International Organizations of NACC's announcement. By definition Ways to Prevent Bribery by the Management and Staff who have a duty to comply with the National Anti-Corruption Law, giving or receiving bribes, risk analysis was rated a very Low risk in conflict of interests Leading to Appropriate Internal Control in five Guidelines such as conflict of interest annual report, conflict of interest seminars, promotion of conduct to be followed according to the Code of Ethics, conflict of interest complaint management and disclosure of Management and Staff's wrongdoing on AEROTHAI's Website.





## The Various Operations of the Organization

### Operational Report of Sustainable Development



#### Corporate Governance for AEROTHAI's sustainable development

The corporate governance for AEROTHAI's sustainable development was authorized by the Committee of Corporate Governance and Corporate Social Responsibility. The Committee's responsibilities consist of both identifying corporate governance and social responsibility policy and recommending management in 2019 SEPO's principle and guidelines on corporate governance for State-Owned Enterprise in accordance with the corporate strategy of AEROTHAI's Master Plan deployment.

#### The Corporate Governance and Corporate Social Responsibility Committee

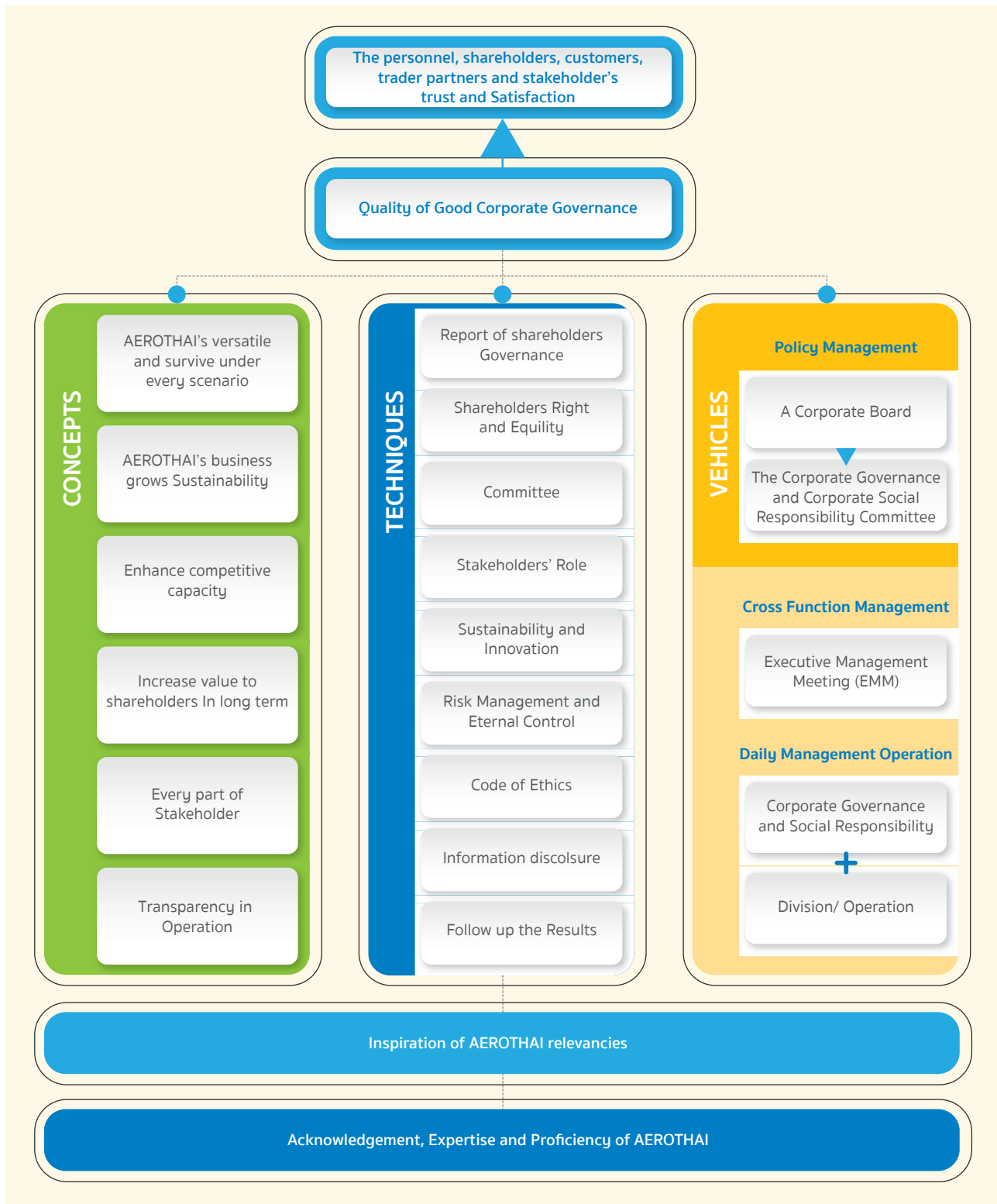
The Committee's responsibilities are as follows: imposing policy and guidelines on corporate governance and corporate social responsibility, considering, recommending and monitoring corporate governance plan in accordance with Master Plan of corporate social responsibility. In addition the Committee follows and assesses the impact of corporate governance and social responsibility.

#### The AEROTHAI's Policy in Corporate Governance and Social Responsibility

Aeronautical Radio of Thailand Ltd. strictly adheres to administration under good corporate governance which provides safe service with international-standard quality and responds to stakeholder's satisfaction with fairness, transparency and responsibility to society and environment.

### The Organization of Corporate Governance for AEROTHAI’s Sustainable Development

Adhering to good corporate governance, 2019 SEPO’s principle and guidelines on corporate governance for State-Owned Enterprise, AEROTHAI establishes the qualified Corporate Governance Structure as a guideline as follows:



The Company has complied with the 2019 SEPO’s principle and guideline of corporate governance by setting the corporate governance structure to provide top executives for policy management functioning as the Corporate Governance and Corporate Social Responsibility Committee who imposes policy and direction of administration with cross functional management. The Executive Management is responsible to the implementation of corporate

governance policy and reporting the impact to the Board of Directors. Daily report is recorded by the Corporate Governance Section of the Office of the President which is responsible for the standards and criteria in corporate governance implementation as well as the coordinator with every part of the organization in driving master plan for corporate governance and social responsibility. Furthermore the Office of the President integrates the outcome to increase corporate operation transparency with long-term value increasing to shareholders and considering every sector of stakeholders through competitive capacity and sustainable development with agility.

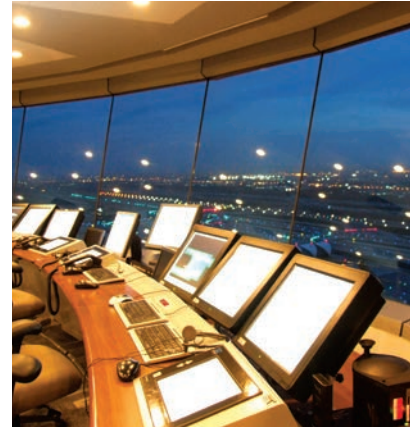
### AEROTHAI's Anti-Corruption

Working Group of Anti-Corruption was established in 2018, to report directly to the President, with responsibilities in recommendations, guidelines on policy as well as criteria setting. The Working Group of Anti-Corruption still has to make an operation plan for prevention and suppression of staff's corruption in conformity with National Anti-Corruption Strategy along with enhancing the cultivation of Moral Ethic and Integrity and encouraging employees' awareness as well as operation-working climate focusing on organizational value implied to establish Moral Promotion Centre. Moreover Working Group of Anti-Corruption's obligations are coordinating and cooperating in prevention and suppressing of corruption with external agencies, e.g. the National Anti Corruption Commission, Office of Public Sector Anti-Corruption Commission, State Enterprise Policy Office, Ministry of Transport, State Enterprise organizations and other private sectors through participation in other activities including setting criteria for corruption prevention as follows:

1. Publicize the information
2. Stakeholders' participation in operations
3. Strengthen the transparency in procurement
4. Handle complaints of corruption
5. Prevent bribery
6. Prevent conflict of interest
7. Monitor discretion

### Assessment of Integrity and transparency of AEROTHAI's operation

Integrity and transparency of AEROTHAI's operation is assessed by the National Anti Corruption Commission with excellent score level for 5 years. The Corporate has accelerated an integrity and transparency operation for sustainable conveyance. In 2014 AEROTHAI improved handling complaints systematically. In 2015 the knowledge transfer of anti-corruption was set throughout the corporate. In 2016 AEROTHAI supported integrity in Human Resource Management and in 2017 it constructed the procedure of check and balance of independent agencies. In 2018 AEROTHAI increased the channel of communication and public promotion in integrity and transparency to reach every target. In 2019 it established the system of integrity and transparency publicization on AEROTHAI website with the system of integrity and transparency management by assigning ITA Ambassador to communicate Integrity and Transparency Assessment with every stakeholder. ITA Administration functions as the monitor of the whole ITA Assessment completely. ITA Approver represents the top management's responsibility in ITA Assessment to drive Integrity and Transparency



### The Acceleration of AEROTHAI’s Moral Organization Sustainably

AEROTHAI set guideline of accelerating moral organization throughout the corporate under the acceleration plan of Integrity Promotion conforming with Ministry of Culture’s framework in promoting and improving of moral organization. The organization’s culture dimension is used to produce social value and strengthen economic value of the Country.

Aligning the organization’s operation to be moral organization with imposing the working plan of promotion and development to be the model of Ministry of Culture’s moral organization under the National Master Plan in Moral Promotion, Issue 1 (2016-2021), AEROTHAI set the project in the Corporate Plan, 2020-2024. The framework of promoting and developing moral organization divided the implementation plan to 3 phases. The first phase in 2020, an implementation leads to Moral Promotion Organization, the second phase in 2021, an implementation leads to be Moral Organization and the third phase in 2022, an implementation leads to the sustainable Moral Model Organization.



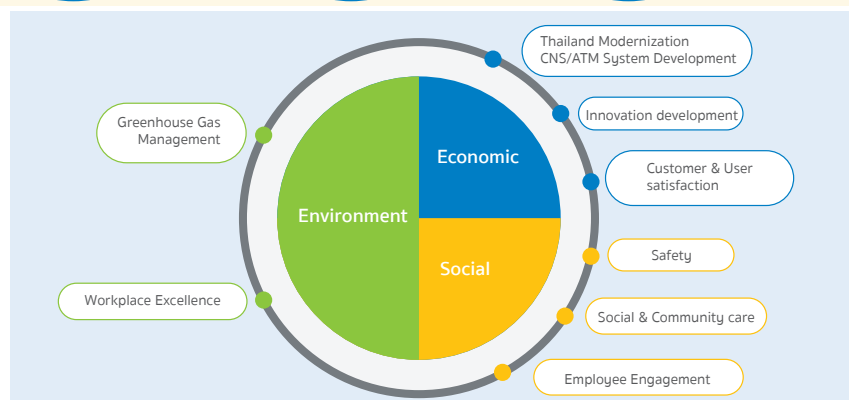
### Sustainable Development in 2019.

#### AEROTHAI and Sustainable Development

In the fiscal year 2019, AEROTHAI has implemented Corporate Governance and Corporate Social Responsibility Master Plan, 2019-2023 under the policy “Aeronautical Radio of Thailand Ltd. strictly adheres to administration under good corporate governance which provides safe service with quality of international standards and responds to stakeholders’ satisfaction with fairness, transparency and responsibility to society and environment.”. The plan aimed to push operations consideration of promotion such as knowledge management and innovation for social and internal/external environment responsible including of AEROTHAI core process in tandem acceptance, all groups of stakeholders trust by Strategy and Corporate Governance and Corporate Social Responsibility Policy by Corporate Governance and Corporate Social Responsibility Committee.



In the fiscal year 2019, the Company started to arrange ranking sustainable development issues according to the Global Reporting Initiative (GRI) in 7 sustainable development issues as follows:





## Development of Operations for Economic Sustainability

### Thailand Modernization CNS/ATM System

The Company emphasized the preparation to accommodate the rapid growth of aviation industry. It aimed to develop the capability of the air navigation service system both of air traffic management and air traffic engineering. In the fiscal year 2019, Thailand Modernization CNS/ATM Systems (TMCS) was installed to increase capacity to support more flights, Improve air navigation service efficiency and safety, including increasing air navigation service systems with competitive capacity based on current global standards and changes in aviation technology. It is expected that the number of flights will increase to 1.5 million flights in the next 15 years.



### Innovation Development

The Company put emphasis on the development of innovations at all aspects to improve the air navigation services (core business) and related services as well as organization management as follows:

- Setting guidelines to support innovation development. Drafting manual for the application and selection of innovations and arranging innovation competition on a yearly basis.
- Encouraging innovation culture for the staff to conduct research and develop innovations with creative strength to support the Company's operations including air navigation services, aviation engineering and organization management.

In the fiscal year 2019, there was 1 innovation that was selected at international level, i.e. "Intelligent Monitoring and Control System" to receive silver award, Computer Science-Software-Electronics-Electricity-Method of Communication (Class C) from the participation in the "International Exhibition of Inventions of Geneva". The said Exhibition was organized between 10-14 April 2019 in Geneva, Switzerland. In addition, the Institute of Inventors and Researchers of Iran (FIRI) has awarded special prize for the Intelligence Monitoring and Control System. The System will alert engineers to realize that there are problems with the system or equipment so they can fix them in time. The engineers can monitor the system through computer, smart phone and tablet so it is convenient for them and this helps increase the safety and efficiency of air navigation services.



## Users' Satisfaction

The Company has conducted users' satisfaction survey every year with the objectives as follows:

- To respond to users' requirements for both air navigation services and related services.
- To provide channels for users to make suggestions relating to products and services, seek advice, solve problems and receive complaints through telephone, e-mail and website on a 24-hour basis.
- To improve and upgrade the services continuously, e.g. the assignment of clearance distance and separation is not carried out in full capacity, the use of English terminology is not up to international standards, etc.

## Framework of Cooperation with Other Organizations both Domestic and International for Standards Development

Technical Memorandum of Cooperation

- Between AEROTHAI and Cambodia Air Traffic Services Co., Ltd. (CATS). The Company established Air Traffic Flow Management (ATFM) Project in the Country and the region. It has developed software for Multiple FIRs flight management under the name of Air Traffic Flow Advisory System (ATFAS) to support the flexible air traffic management in the Region. In the fiscal year 2019, the Company has cooperated with CATS, Cambodia to organize ATFM Cooperation Meeting and signed Technical Memorandum of Cooperation to exchange aeronautical data and support the provision of ATFM Services in order to develop the aviation industry in the region since August 2019.



- Thailand hosted the 34<sup>th</sup> ASEAN Summit for the ASEAN top leaders to meet in Bangkok during 21-23 June 2019. The leaders and VIP representatives from ASEAN member countries travelled to Thailand with the first flight arriving on 20 June 2019 and the last flight departing on 24 June 2019. As the provider of air traffic control services who would be the first checkpoint to impress leaders and VIP representatives who travelled to attend this Summit, AEROTHAI invited representatives from airlines operating flights at Don Mueang International Airport and Suvarnabhumi Airport as well as representatives from the Airports of Thailand PLC to meet and learn the air traffic management measure for maximum safety to these VIP flights. AEROTHAI has established an ad hoc Operation Centre to collaborate and facilitate the safety of these VIP aircraft.



## Sustainable Social Development

### Taking Care of Society and Community

In the fiscal year 2019, the Company followed the Master Plan relating to the Corporate Social Responsibility to enhance the safety recognition and change of social behaviours. AEROTHAI realized the importance of human resource development, caring for society and community in many dimensions, promoting development for sustainability to encourage society and community to be aware that some activities, customs and cultures may have impacts on the aviation safety of the Country at the community level and the youths. There were many projects being implemented as follows:

- **AEROTHAI Safe Airspace from Dangerous Factors** The Company has been pushing for the resolutions to solve the problems of sky lanterns launching and rockets firing by going to meet people in the communities, educate them with knowledge and understanding that sky lanterns launching and rockets firing were flight hazards. The Company sought cooperation from the general public or organizers to submit letters to ask permission to launch rockets to the Government Unit for aviation safety during the Rocket Festival (Boon Bang Fai) which is the major annual festival for the Thai people. In the fiscal year 2019, the Company has collaborated with the following 4 units:
  - The Civil Aviation Authority of Thailand
  - Department of Provincial Administration, Ministry of Interior
  - Geo-Informatics and Space Technology Development Agency (GISTDA), Ministry of Higher Education, Science, Research and Innovation
  - Aeronautical Radio of Thailand Ltd.



Lectures and trainings of the use of Bumpen System (for issuing of permit) have been organized. In addition, the Company also gave lectures to village leaders, organizers and interested general public in Nong Khai and Udon Thani.

**การขออนุญาตการปล่อยโคมลอย โคมควัน จุดบั้งไฟ**

เพื่อใช้เป็นข้อมูลในการออกประกาศแจ้งเตือนนักบินให้หลีกเลี่ยงเส้นทางที่มีกิจกรรมดังกล่าว

1. เตรียมรายละเอียดสถานที่ วัน และเวลาที่จะมีการปล่อยโคมลอย โคมควัน จุดบั้งไฟ
2. ระบุจำนวนของโคมลอยหรือบั้งไฟ
3. แจ้งรายละเอียดทั้งหมด และเบอร์ติดต่อแก่ผู้ใหญ่บ้าน/กำนันหรือศูนย์ดำรงธรรมอำเภอให้ทราบล่วงหน้า ไม่น้อยกว่า 7 วัน
4. นายอำเภอพิจารณา และดำเนินการในส่วนที่เกี่ยวข้องต่อไป
5. สอบถามข้อมูลเพิ่มเติมได้ที่ [www.caat.or.th](http://www.caat.or.th)

เมื่อรู้วิธีการขออนุญาตแล้วเรามาดูลักษณะของโคมลอย โคมควันที่ถูกบังคับดีกว่า

**โคมลอย**

90 ซม.  
40 ซม.

**โคมควัน**

ปล่อยโคมลอย  
จุดบั้งไฟ  
แบบปลอดภัย  
ใครๆ ก็ทำได้  
ง่ายนิดเดียว!

เทศบาลอวยกระหนงจังหวัดภาคเหนือ หรือเทศบาลอื่นเป็นส่วนใหญ่มีกิจกรรมการปล่อยโคมลอย โดยมีการจุดไฟเพื่อให้เกิดอากาศร้อนพุ่งตัวโคมให้ลอยตัวขึ้น และโคมควันบรรจด้วยควันร้อนไม่ต้องใช้เชื้อเพลิงปล่อยให้ลอยขึ้นไปบนท้องฟ้า แต่ปัจจุบัน ได้มีการเพิ่มปริมาณเชื้อเพลิงที่ถูกติดกับตัวโคมลอย โดยควัน เพื่อให้อยู่บนอากาศได้สูง และระยขึ้น



- **Community Innovation** The Company aimed to create innovations that would benefit the communities around the organization and airports by utilizing the technology and expertise of the Company's personnel. Such communities were as follows:
  - The communities around the airports near the approach or flight path which were affected by the Company's services.
  - The communities that created impacts on the Company's services, i.e. the community that launched rockets, sky lanterns, drones and the communities that operated radio services around the airports, approach and flight path.
  - Other social communities to create opportunities and encourage people in the communities to realize that they can work by not creating any pollution to the environment. This was to show that the Company displayed its Corporate Social Responsibility as a good management organization.
  
- **Lecture on Air Traffic Services/Communications, Navigation and Surveillance (ATS/CNS)** The Company aimed to support the quality of education, promoting learning opportunity and professional development for the youth at Secondary School. It arranged lectures on ATS/CNS twice in the central and provincial areas for 300 pupils. This was the gesture to show the Company's proactive measures for Corporate Social Responsibility to cover the whole organization that were strong, sustainable and with the following targets:
  - To support and cultivate knowledge and understanding of air navigation services to pupils around the Company's offices in the central and provincial areas in accordance with targeted groups.
  - To give the youth choices to choose the subjects to study. They can study subjects relating to air navigation or aviation so there will be an increase number of significant human resource for the Thai aviation industry in the future.
  
- **In the fiscal year 2019, AEROTHAI organized the competition of "AEROTHAI Mini Volleyball" for the Cup of Her Royal Highness Princess Maha Chakri Sirindhorn.** This year marked the 20th year anniversary. Competitions were arranged for the Primary School, male and female ages not over 12 years old. This was to give opportunity to youth for support in sports. The Company provided the youth and parents with video showing hazardous factors that had impacts on the safety of Thai air transport.

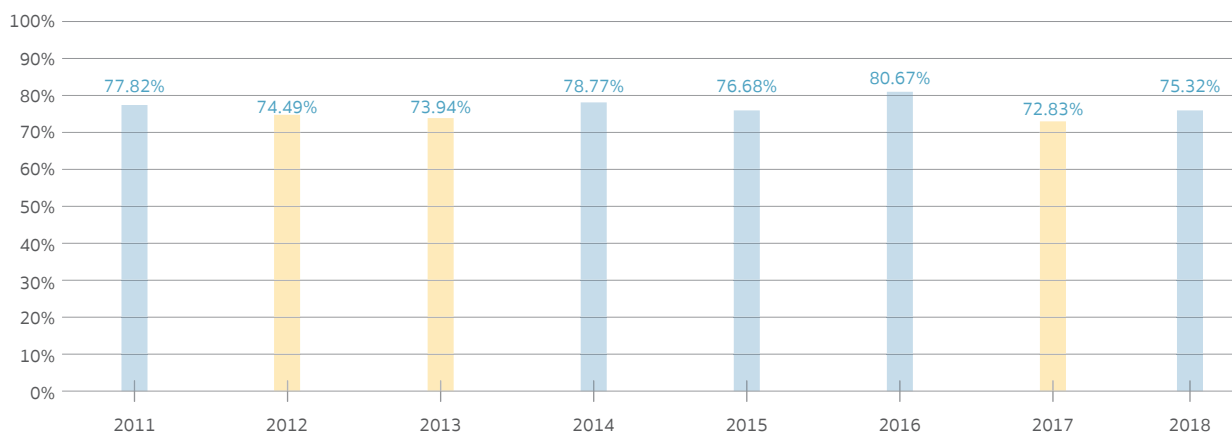
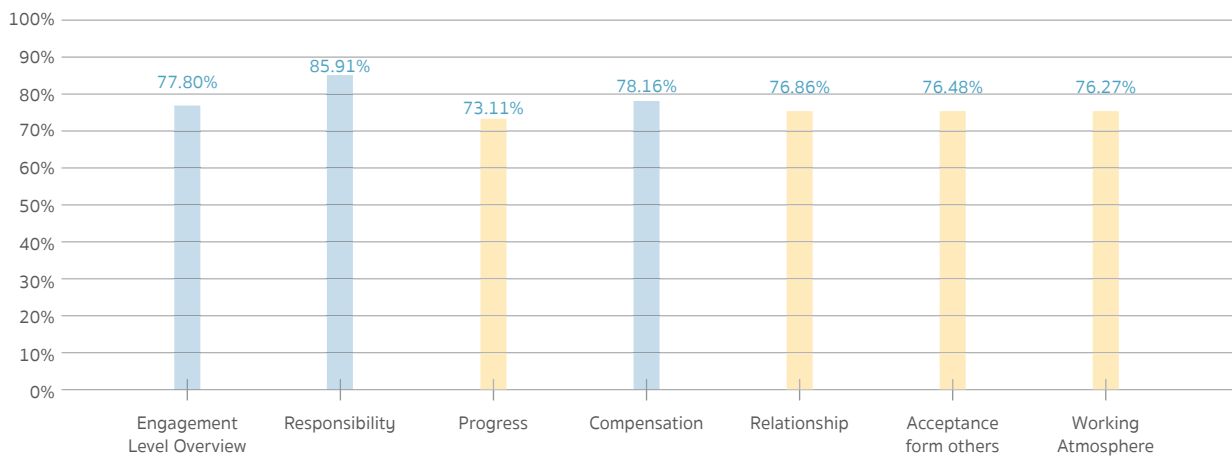


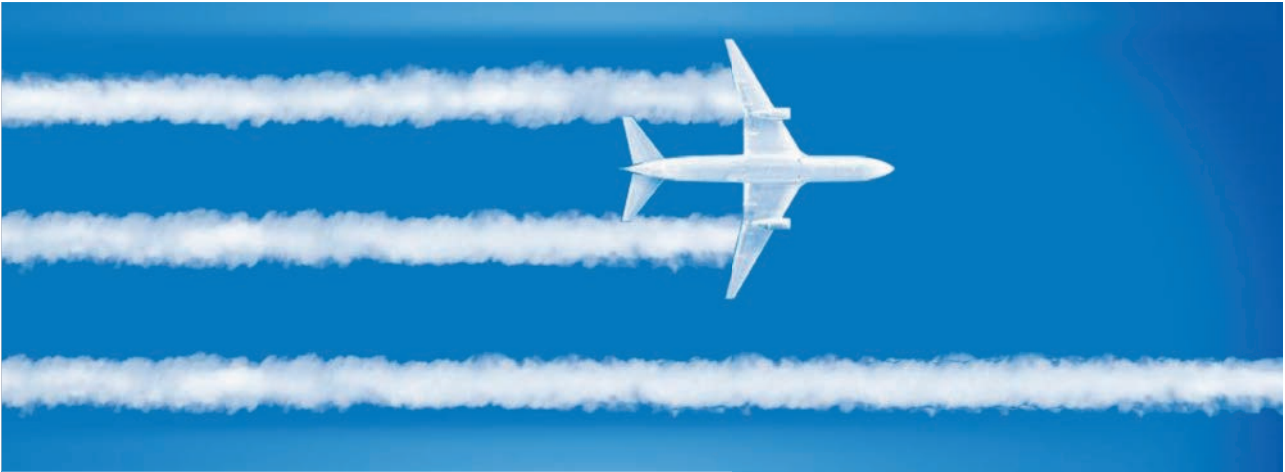
- **Nan Fah Thai Foundation gave 240 scholarships to the underprivileged pupils around the Country to:**
  - Give opportunity and support the education of handicapped pupils who are poor so that they can use the fund to provide for their everyday lives. If they continue to receive the scholarships, it can help them to have an occupation in the future.
  - Give live experiences to the handicapped pupils and encourage activities for handicapped and normal pupils to participate which will result in good social attitude.
  - Respond to the Government’s policy to increase the potential of handicapped people to be the same as normal people.



### Employee Engagement

The Company conducted employee engagement survey with the results continue to rise for 5 years (2014-2019). The result of the employee engagement in 2019 was 77.8%

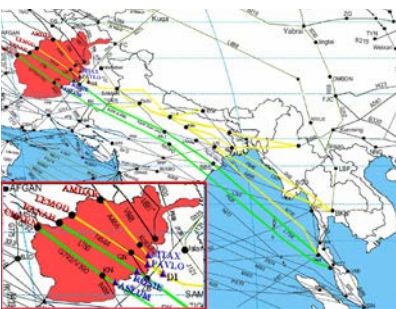




## Sustainable Environmental Development

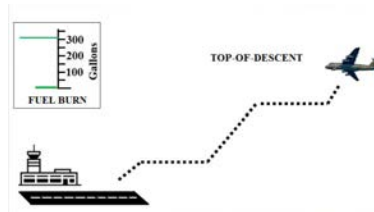
### Greenhouse Effect Management

In the fiscal year 2019, the Company has driven its environmental implementation to increase its efficiency in accordance with the policy on management of environment, energy and sustainable changes of the organization. The Company has created sustainable value to the business by setting environmental indicator for Carbon Emission from the deficiency of Air Traffic Management System (ATM). The implementation is corresponding to the strategic objective “To build adequate capacity for future demand and upgrade the efficiency of aviation systems”. This is Corporate Social Responsibility (CSR) that responds to the strategic objective and Corporate Plan regarding core business. It is CSR-in-process (Responsive) that is to continue to provide air navigation services to reduce carbon emission which will reduce negative impact and fulfill stakeholders’ requirement, e.g. Gate Hold Procedures, Unidirectional Parallel Route, Conditional Routes (CDR), Ground Delay Program (CTOTT) and Continuous Descent Operations (CDO). For the Corporate Social Responsibility Master Plan, 2019-2023, there are projects/works to support the CSR-in-process with the objective to publicize the action to reduce carbon emission and create awareness to all sectors. The followings are some of the CSR-in-process (Responsive) projects/works:



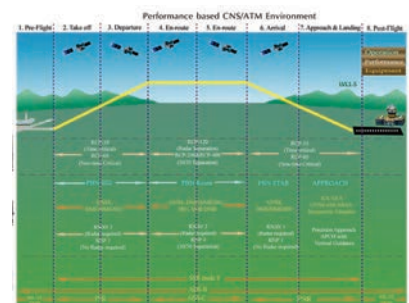
#### BOBCAT (Bay of Bengal Cooperative Air Traffic Flow Management Advisory System)

- Reduce fuel consumption for aircraft over 10 million Kg.
- Reduce expenses for airlines over US\$ 110 million (Baht 4 billion)



#### Continuous Descent Operations (CDO)

- Reduce 1-2 minutes for each flight
- Aircraft can save fuel 120-200 Kg. per minute
- Reduce carbon emission 380-630 Kg. per minute per flight



#### Performance-Based Navigation (PBN)

- To reduce fuel consumption for airlines
- To reduce carbon emission, reduce air pollution and noise pollution to the atmosphere

## Occupational Safety and Work Environment

The Company realized the importance of the improvement/maintenance of all working buildings around the Country and applied the assessment criteria to participate in the competition for best establishment on safety at the national level. The assessment criteria was set according to the regulations and laws on safety by the Department of Labour Protection and Welfare. The Company has 11 locations and has participated in the competition with the following results:



Award	Location	No. of Year
1. National Outstanding Enterprise for over 10 years, consecutively	1. Head Office, Tung Mahamek	13
	2. Phitsanulok Air Traffic Control Centre	13
	3. Surat Thani Air Traffic Control Centre	12
	4. Hat Yai Air Traffic Control Centre	12
	5. Chiang Mai Air Traffic Control Centre	11
	6. Ubon Ratchathani Air Traffic Control Centre	11
	7. Nakhon Ratchasima Air Traffic Service Engineering Operations Centre	11
	8. Suvarnabhumi Airport Office	10
2. National Outstanding Enterprise (Gold) for 1-4 years, consecutively	1. Udon Thani Air Traffic Control Centre	3
	2. Phuket Air Traffic Control Centre	2
3. Provincial Outstanding Enterprise for the first year entry	1. Hua Hin Air Traffic Control Centre	1

For occupational safety, indicator was set for accidents from work and environment for 2014-2019 as follows:

Goal = 0 times

Accident Location	2014	2015	2016	2017	2018	2019 (Jan-June)
1. Head Office, Tung Mahamek	3	2	1		-	0
2. Flight Inspection Services Bureau		1			-	0
3. Chiang Mai Air Traffic Control Centre			1		-	0
4. Suvarnabhumi Airport Office			1		-	0
5. Hua Hin Air Traffic Control Centre			1	1	-	0
6. Ubon Ratchathani Air Traffic Control Centre				1	-	0

## THE AUDIT COMMITTEE'S PERFORMANCE REPORT

### OF AERONAUTICAL RADIO OF THAILAND LTD. FOR THE FISCAL YEAR 2019

In the fiscal year 2019 the Audit Committee of Aeronautical Radio of Thailand Ltd. was as follows


The Audit Committee consisted of

- |                                   |                  |          |
|-----------------------------------|------------------|----------|
| 1. Police General Dechnarong      | Sutticharnbancha | Chairman |
| 2. Police Major General Surachate | Hakparn          | Member   |
| 3. Colonel Peerawat               | Promkladpanao    | Member   |

The Audit Committee performed their duties as assigned by the Board of Directors, and according to the charter of the Audit Committee of the Company which was consistent with the criteria of the Ministry of Finance on standards and internal auditing practices for government agencies B.E. 2561 (2018) and the Audit Committee Charter and the Audit Committee of State Enterprise under the Ministry of Finance Practice Handbook. In the fiscal year 2019, (from October 2018 to March 2019) the Audit Committee held three meetings which were attended by the senior management, Chief Audit Executive, and the management of Office of Internal Audit. Major matters could be summarized as follows:

1. To verify the financial report for its accountability, make reports of the implementation projects with respect to efficiency, effectiveness and economics measures, report on conflict of interest and report on activities in accordance with related rules, regulations, Cabinet Resolutions, and policies set by the Board of Directors.
2. To review the efficiency and the effectiveness of the Company's Internal Controls, Risk Management and Good Corporate Governance by receiving internal audit reports and the Internal audit group's practice report regularly. Moreover, the Committee has followed up the results of the control self assessment in accordance with Internal Control Standard 2001.
3. To review the Independence of Internal Auditor group and the audit practices to ensure compliance with regulations and best practice determined by the Ministry of Finance. To monitor for the measures taken to follow the recommendations after each audit to ensure that the corporate has appropriate internal control and to prevent or reduce any risk that might occur.
4. In fiscal year 2019, the Office of the Auditor General of Thailand was the auditor of the Company by specifying the fee for reviewing the financial statements and the audit fee in the amount of Baht 1,900,000.00.
5. To supervise the internal audit work, monitor the progress of operations in accordance with the audit plan and review the report of the Internal Audit Office. However, during April to September 2019, the Internal Audit Office reported its performance in accordance with the internal audit implementation plan and other operational results, including the 5-year strategic internal audit implementation plan, the annual internal audit implementation plan for the year 2020 as well as the appraisal of the Chief Audit Executive, Senior Director Level, Experts, Director Level and Internal Audit officers for their performances in the year 2019 for agreement of the President prior to approval by the Board of Directors.

After performing their duties and responsibilities delegated by the Board of Directors, the Audit Committee and Office of Internal Audit certified that the financial report truly and fairly reflected the Company's financial status and operating results in accordance with generally accepted accounting standards. In conclusion, the Company has been operating in accordance with appropriate internal control measurement, rules, regulations, Cabinet Resolutions and policies set by the Board of Directors. The Company had adequate risk management control. The Internal audit practice complied with the principle and best practice under the Ministry of Finance. There were no issues relating to conflict of interest. The written reports of the Audit Committee were submitted to the Board of Directors on a regular basis. The Audit Committee's suggestions and guidelines were considered by the Company to improve operations and enhance effectiveness.

Police General .....  .....  
 (Dechnarong Sutticharnbancha)  
 Chairman of the Audit Committee



## Internal Audit

For the year 2019, the internal audit activities were conducted with independent, impartial, ethic and expertise manners in accordance with the Standards for Professional Internal Audit Practices as clearly defined in the Office of Internal Audit Charter. The objectives of the Office of Internal Audit focused on the value deliver to the units under auditing that would increase their efficient and effective results along with the organization's strategies and objectives. It provided accurate reports and performed the duty according to laws, regulations, rules and standards as set. Moreover, the Office also focused on internal auditors' competency development on knowledge and expertise in various areas and encouraged them to get profession certificates from well-known institutes both domestic and international.

### • Internal Audit Plan

The 5-year Internal Audit Strategic Plan (fiscal years 2019-2023) and the Internal Audit Plan for the fiscal year 2019 have been developed in accordance with the Company's objectives and its Corporate Plan. The risk assessment methodology was applied to assess, to prioritize and to select activities needed to be audited based on risk exposure as well as the policies and expectation of the main stakeholders; the Audit Committee, Office of the Auditor General of Thailand, the President and Senior Executives so that the internal audit plan can fulfill the Company's operational policies, goals and objectives.

### • Internal Audit Execution

For the internal audit operations, the Office provided the assurance and consulting services in the areas of the reliability of the organization's financial statements, the compliance to the laws, regulations, policies, standards, related instructions, and working processes which would influence the success of the Company. Moreover, the Office monitored and evaluated the performance of the asset management in order to ensure that they were kept and used efficiently.

For the auditing engagement, the auditing plan in details have been evolved by means of collecting information and review risk factors, internal controls or other significant abnormalities then applied them to set up auditing objectives, execution framework and the audit program for each auditing activities. The auditing reports including suggestions/solutions were reported to the audited units and executives for further actions to their performance.

In the fiscal year 2019, the Office has fully completed its auditing program as well as the other auditing activities assigned by the Management and the Audit Committee which covered the following issues; risks and corruption indication. Moreover, the digital technology for the internal audit management system has been successfully implemented. The internal audit management system would be able to increase the efficiency and productivity of the internal audit process. The full operation will be in 2020.

### • Development of Auditors' Competencies

The Office of Internal Audit promoted knowledge, skills and professional competencies for internal auditors to improve their ability to perform their duties efficiently in accordance with internal audit professional code of ethics.

The Office encouraged the development and continued to conduct both internal and external trainings for internal auditors to be well equipped with knowledge, competencies and expertise in internal auditing, as well as other knowledge needed for the future auditing. Moreover, the Office also promoted and supported internal auditors to become certified as professional in internal auditors or retain their professional certification such as CIA, CISA, CISM, CPA, CPIA, and CPIAT.

In 2019, 1 additional internal auditor received CPIAT from the Institute of Internal Audit of Thailand. Currently, 16 internal auditors (61.54%) were certified auditors, which exceeded the Office's Key Performance Indicators (KPIs).

# Financial Report

## 1. Report of the Board of Directors' Responsibility to the Financial Statements

The Company's Financial Report was arranged under the approval of the Company's Board of Directors to reflect the Company's financial status together with annual operating performance in accordance with generally accepted accounting standards.

The Company's Board of Directors was well aware of the responsibility to prepare and arrange the Financial Report that presented the Company's annual financial status and operating performance in compliance with generally accepted accounting standards as well as their responsibility to financial information which was presented in the 2019 Annual Report. Thus, appropriate accounting principles have been applied on a consistent basis with due consideration of optimal estimation in preparing the Company's financial statements. All important information was sufficiently disclosed in the notes on the Company's Financial Statements for the benefits of the Company's shareholders and stakeholders

In addition, The Company's Board of Directors has deployed and maintained effective systems of risk management and internal controls which provided reasonable assurance that the Company's accounting records were accurate, complete and sufficient to protect the assets of the Company as well as prevent fraud or other material irregular activities.

The Company's Board of Directors monitored the preparation of financial reports by appointing the Audit Committee to oversee the quality of the Company's financial reports and internal control systems. The Audit Committee's opinion regarding such matters was disclosed in this Annual Report under the Audit Committee's Report.

In the Board of Directors' opinion, the Company's internal control systems were satisfactory and could assure the reliability of the Company's financial statements in compliance with generally accepted accounting standards, legal requirements and other associated regulations.

## 2. Summary of Financial Report

	2019	2018	2017
<b>Operating Performance (Baht : Million) <sup>1/</sup></b>			
Total Income	13,347.32	13,115.85	12,194.11
Total Expenditure	12,498.96	10,757.41	10,193.64
Overcollection to be refunded to Member Airlines	848.36	2,358.44	2,000.47
<u>Note:</u> <sup>1/</sup> Separate Financial Statements of the Company			
<b>Financial Status (Baht : Million) <sup>2/</sup></b>			
Total Assets	17,343.61	15,877.71	14,428.62
Total Liabilities	16,300.91	14,877.73	13,463.86
Total Shareholders' Equity	1,042.70	999.98	964.76

	2019	2018	2017
<b>Financial Ratio</b>			
Debt-to-Equity Ratio (times)	15.63	14.88	13.96
Debt-to-Equity Ratio (times) (Not including accumulated Overcollection)	6.32	5.54	6.31
Debt Service Coverage Ratio (times)	8.74	2.11	1.64
<u>Note:</u> <sup>2/</sup> Financial statements of the Company and Staff Welfare Fund			

### 3. The Company's Operation Analysis - Separate Financial Statements of the Company

The Company's total income in the fiscal year 2019 was over total expenditure with overcollection to be refunded to Member Airlines at the amount of Baht 848.36 Million.

Items	2019	2018	Increase (Decrease)	
			Amount	%
<b>Income</b>				
Air Navigation Services	12,202.68	12,244.85	(42.17)	-
Other Related Services	839.75	730.26	109.49	15
Other Income	304.89	140.74	164.15	117
<b>Total Income</b>	<b>13,347.32</b>	<b>13,115.85</b>	<b>231.47</b>	<b>2</b>
<b>Expenditure</b>				
Operating Expenditure	12,490.01	10,743.70	1,746.31	16
Finance Costs	8.95	13.71	(4.76)	(35)
<b>Total Expenditure</b>	<b>12,498.96</b>	<b>10,757.41</b>	<b>1,741.55</b>	<b>16</b>
<b>Overcollection to Member Airlines</b>	<b>848.36</b>	<b>2,358.44</b>	<b>(1,510.08)</b>	<b>(64)</b>

#### 3.1 Income Analysis

The Company's total income in the fiscal year 2019 was Baht 13,347.32 million. This was derived mainly from income from air navigation services of Baht 12,202.68 million or 92% of total income along with income from other related services including rental and maintenance of equipment, aeronautical telecommunications services (AOC), and work orders accounting for 6% of total income or Baht 839.75 million. In addition, income from other services was Baht 304.89 million or 2%.

Actual income from air navigation services was Baht 12,202.68 million with a decrease of Baht 42.17 million from the previous year. This was mainly a result from a decline in air traffic by nonmember airlines. Income of Baht 839.75 million from other related services increased by 15% or Baht 109.49 million from the previous year mainly due to increased income from rental and maintenance of equipment and Airline Operational Control services (AOC). The other income of Baht 304.89 million increased by 117% or Baht 164.15 million from the previous year. This was derived from an adjusted account of state property and land rental for Air Navigation Aids NDB station in Prachin Buri in which the Treasury Department retrospectively collected.

### 3.2 Expenditure Analysis

The Company's total expenditure in the fiscal year 2019 was Baht 12,498.96 million, of which Baht 9,612.41 million was accounted for employee benefits, Baht 2,877.60 million was other operating expenditure, and the remaining Baht 8.95 million was the finance cost. This year, the Company could save the operating expenditure of Baht 340.33 million with the cost control measures, which did not affect the core business and safety standards.

## 4. Analysis of Financial Status – Financial statements of the Company and Staff Welfare Fund

### 4.1 Assets Analysis

The Company and Staff Welfare Fund's total assets as at 30 September 2019 were Baht 17,343.61 million, comprised of 53% current assets and 47% non-current assets, with the following details:

Unit : Million Baht

Items	2019	2018	Increase (Decrease)	
			Amount	%
Current Assets	9,110.93	7,777.07	1,333.86	17
Non-current Assets				
- Restricted Deposit Account	123.00	-	123.00	100
- Long-Term Investments	71.70	56.10	15.60	28
- Long-Term Loans to Staff	4.24	4.10	0.14	3
- Buildings and Equipment	7,212.53	6,971.00	241.53	3
- Intangible Assets	122.01	80.60	41.41	51
- Assets under Construction	699.20	988.84	(289.64)	(29)
<b>Total</b>	<b>17,343.61</b>	<b>15,877.71</b>	<b>1,465.90</b>	<b>9</b>

In 2019, total assets increased by 9% or Baht 1,465.90 million from the previous year due to an increase in current assets by 17% or Baht 1,333.86 million, mainly derived from an increase in temporary investment and work in process. Moreover, non-current assets increased by 2% or at Baht 132.04 million due to the increase in buildings and equipment since many investments in equipment projects were completed.

### 4.2 Liabilities Analysis

The Company and Staff Welfare Fund's total liabilities as at 30 September 2019 were Baht 16,300.91 million, comprised of 74% current liabilities and 26% non-current liabilities with the following details:

Unit : Million Baht

Items	2019	2018	Increase (Decrease)	
			Amount	%
Current Liabilities	11,959.29	11,756.24	203.05	2
Current Portion of Long-Term Liabilities	126.94	126.94	-	-
Non-current Liabilities				
- Children's Educational Support	0.11	0.11	-	-
- Long-Term Loans	317.13	444.07	(126.94)	(29)
- Employee Benefit Obligations	3,897.44	2,550.37	1,347.07	53
<b>Total</b>	<b>16,300.91</b>	<b>14,877.73</b>	<b>1,423.18</b>	<b>10</b>

In 2019, total liabilities increased by 10% or Baht 1,423.18 million from the previous year. The current liabilities were mainly the accumulated overcollection at Baht 9,715.37 million. The Company had been invested in Air Navigation Service Systems and others related systems from 2014-2019 at the total amount of Baht 6,626.09 million.

The non-current liabilities were mainly Employee Benefit Obligations. In 2019, there was a change in severance and compensation payment rate for retired employees according to the notification of the State Enterprise Labour Relations Commission. It is stipulated that the employer shall pay the compensation to the employees who have been working for consecutive period of 20 years and over. The employees shall be entitled to receive the compensation of not less than the rate of wages for the last 400 days which resulted in higher employee benefit obligations from previous year.

### 4.3 Shareholders' Equity Analysis

The Company and Staff Welfare Fund's shareholders' equity as at 30 September 2019 was Baht 1,042.70 million with the following details:

Unit : Million Baht

Items	2019	2018	Increase (Decrease)	
			Amount	%
Registered Ordinary Share Capital	660.00	660.00	-	-
Staff Welfare Fund	382.70	339.98	42.72	13
<b>Total</b>	<b>1,042.70</b>	<b>999.98</b>	<b>42.72</b>	<b>4</b>

The capital structure as at 30 September 2019 comprised of total liabilities of Baht 16,300.91 million or 94% and shareholders' equity of Baht 1,042.70 million or 6%.

## 5. Cash Flow Analysis – Financial Statements of the Company and Staff Welfare Fund

In the fiscal year 2019, the Company and Staff Welfare Fund's ending balance of cash and cash equivalents as at 30 September 2019 was Baht 1,793.61 million, which decreased from the beginning balance by Baht 1,098.85 million. Net cash provided by operating activities was mainly from overcollection and depreciation of the investment in fixed assets. Net cash used in investment activities was mainly used for project investments to support and enhance the capabilities of air navigation services. Additionally, net cash used in financing activities was mostly for repayment of long-term loans.

Items	2019	2018	Increase (Decrease)
Cash Flow from Operating Activities	2,894.12	3,116.81	(222.69)
Cash Flow from Investing Activities	(3,855.65)	(2,521.43)	(1,334.22)
Cash Flow from Financing Activities	(136.81)	(808.60)	671.79
Gain (Loss) on Exchange Rate	(0.51)	0.33	(0.84)
Cash and Cash Equivalents - At the end of the period	1,793.61	2,892.46	(1,098.85)

## 6. Financial Ratio Analysis - Financial Statements of the Company and Staff Welfare Fund

In the fiscal year 2019, the Company and Staff Welfare Fund's debt-to-equity ratio increased from the previous year due to the increase in employee benefit obligations and accumulated overcollection. Additionally, the Debt Service Coverage Ratio (an ability to pay principal and interests) derived from net cash flows from operating activities which was mainly from the overcollection and higher depreciation of the completed projects.

Items	2019	2018	Increase (Decrease)
Debt-to-Equity Ratio (times)	15.63	14.88	0.75
Debt-to-Equity Ratio (times) (Not including accumulated overcollection)	6.32	5.54	0.78
Debt Service Coverage Ratio (times)	8.74	2.11	6.63

The Company operates as a non-profit organization (cost-recovery basis). Practically, in the case of income-over-expenditure, the overcollection shall be refunded to Member Airlines. On the other hand, the Company shall collect any under-recovery from Member Airlines if there is income-under-expenditure. The Company's funds for various investments are financed by overcollection that the Company retains according to the resolution of the Ordinary General Meeting and long-term loans from financial institutions. The ability to repayment loans depends mainly on depreciation which is already included in Air Navigation Services Charges (ANS Charges) to be collected from Airlines.

# Financial Trend

## 1. Financial Trend in 2020

According to the Company's 2020 Financial Plan (Years 2020-2024) which was approved by the Company's Board of Directors at the 6/2019 (626) Meeting on 26 June 2019, the total income in 2020 is expected to be Baht 13,663.74 million consisting of Air Navigation Services (ANS) Charges at Baht 12,665.03 million, with an increase of 4.6% forecasted overall air traffic volume from 2019. For income from ANS Charges, the unit rate of ANS charges for En Route is Baht 3,500 per unit and Terminal is Baht 500 per unit. The expected income from related services and others is Baht 998.71 million. The approved operating expenditure is Baht 13,376.43 million. Thus, the expected income-over-expenditure is at Baht 287.31 million

The Capital Expenditure Budget in 2020 is at Baht 1,280.00 million which is consistent to the Company's Corporate Plan for the years 2020-2024 and the sources of investment derive from income-over-expenditure or overcollection from 2019 with no loans required in fiscal year 2020.

The Company's financial trend in 2020 shows that the income will exceed the expenditure with moderately high liquidity. Thus, the Company can manage to use the remaining working capital as a source of investments instead of long-term loan from external financing.

## 2. Financial Trend in 5-year period (2020-2024)

### 5-year Income and Expenditure Plan (2020-2024):

According to the 2020 Financial Plan and Corporate Plan for 2020-2024, the Company expected that the total income will increase at an average rate of 6% per annum so the Company can maintain the current unit rate of ANS Charges until 2021 and achieve the Company's goal and objectives. The operating expenditure is expected to increase at an average rate of 7% per annum and the Company will continue to have income-over-expenditure for the next 5 years.

### 5-year Investment Plan and Source of Financing:

According to the 5-year investment plan (2020-2024) which is consistent to the Company's Corporate Plan for 2020-2024, the limit of investment budget is expected at approximately Baht 13,000.00 million and will be mainly used in safety and its related services. As for safety purpose, the investment is for improvement and development of modern system and equipment to ensure the continuity of safety services in order to support the air traffic growth. The procurement of system and equipment to maintain stability and efficiency of Air Navigation Services will be invested by replacing deteriorated equipment as well as additional procurements. Moreover, the investment will be used in other technology to develop air navigation services in accordance with ICAO's Aviation System Block Upgrade: ASBUs. The sources of investment will derive from the Company's overcollection and other remaining working capital.

# AUDITOR'S REPORT

## To the Shareholders of Aeronautical Radio of Thailand Limited

### Opinion

The Office of the Auditor General of Thailand has audited the accompanying financial statements of Aeronautical Radio of Thailand Limited (the Company), which comprise of the statements of financial position, as at 30 September 2019, and the consolidated statements of income and expenditure, statements of changes in shareholders' equity and statements of cash flows for the years then ended, and notes to the financial statements, as well as a summary of significant accounting policies.

In the Office of the Auditor General of Thailand's opinion, the above mentioned financial statements including the financial position of the Company as at 30 September 2019, and the financial performance and cash flows for the year then ended present fairly in all material respects according to Thai Financial Reporting Standards (TFRSs).

### Basis for Opinion

The Office of the Auditor General of Thailand conducted the audit in accordance with State Audit Standards and Thai Standards on Auditing (TSAs) principles. The Office of the Auditor General of Thailand's responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of the Office of the Auditor General of Thailand's report. The Office of the Auditor General of Thailand is independent of the Company in accordance with the State Audit Standards issued by the State Audit Commission and the Code of Ethics for Professional Accountants issued by the Federation of Accounting Professions that are relevant to the Office of the Auditor General of Thailand's audit of the financial statements, and has fulfilled other ethical responsibilities in accordance with these requirements. The Office of the Auditor General of Thailand believes that the audit evidence obtained is sufficient and appropriate to provide a basis for the Office of the Auditor General of Thailand's opinion.

### Other Information

The Management is responsible for the other information which is the information included in the annual report excepting the financial statements and auditor's report thereon. The Management agrees that the annual report is made available to the Office of the Auditor General of Thailand after the date of this auditor's report.

The Office of the Auditor General of Thailand's opinion on the consolidated and separate financial statements does not cover the other information and the Office of the Auditor General of Thailand will not express any form of assurance conclusion thereon.

In connection with the audit of the financial statements, the Office of the Auditor General of Thailand's responsibility is to read and consider whether the other information is materially inconsistent with the financial statements or the Office of the Auditor General of Thailand's knowledge obtained in the audit, or otherwise appears to be materially misstated.



When the Office of the Auditor General of Thailand reads the annual report, if the Office of the Auditor General of Thailand concludes that there is a material misstatement, the Office of the Auditor General of Thailand is required to communicate the matter to those charged with governance.

## Responsibilities of the Management and Those Charged with Governance for the Financial Statements

The Management is responsible for the preparation and fair presentation of the financial statements in accordance with TFRSs, and for such internal control as management determines necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the management is responsible for assessing the Company's ability to continue as a going concern, disclosing matters relate to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

## Auditor's Responsibilities for the Audit of the Financial Statements

The Office of the Auditor General of Thailand's objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes the Office of the Auditor General of Thailand's opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with TSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with TSAs, the Office of the Auditor General of Thailand exercises professional judgment and maintain professional skepticism throughout the audit. The Office of Auditor General of Thailand also:

- Identifies and assesses the risks of material misstatement of the financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence that is sufficient and appropriate to provide a basis for the Office of the Auditor General of Thailand's opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Management.

- Concludes on the appropriateness of the Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If the Office of the Auditor General of Thailand concludes that a material uncertainty exists, the Office of the Auditor General of Thailand is required to draw attention in the Auditor's Report of the Office of the Auditor General of Thailand to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify the Office of the Auditor General of Thailand's opinion. The Office of the Auditor General of Thailand's conclusions are based on the audit evidence obtained up to the date of the Auditor's Report of the Office of the Auditor General of Thailand. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluates the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

The Office of the Auditor General of Thailand communicates with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that the Office of the Auditor General of Thailand identifies during the Office of the Auditor General of Thailand's audit.

Signed

(Miss Bunloon Sirisingsungchai)

Director of Financial and Procurement

Audit Office No.11

Signed

(Mrs. Sulaiwon Phianphoemphat)

Division Director

## AERONAUTICAL RADIO OF THAILAND LTD.

### Statements of Financial Position

As at 30 September 2019

Unit : Baht

Assets	Supplementary Information	30 September 2019	30 September 2018
<b>Current Assets</b>			
Cash and Cash Equivalents	5.1	1,793,614,880.29	2,892,457,970.32
Temporary Investment	5.2	5,838,545,982.49	3,197,790,255.40
Receivables from ANS and Other Receivables	5.3	1,318,280,164.46	1,561,875,045.06
Short-Term Loans to Staff		12,826,471.00	11,821,796.00
Store Supplies	5.4	72,730,885.25	100,800,688.29
Other Current Assets	5.5	74,927,531.80	12,329,017.96
Total Current Assets		9,110,925,915.29	7,777,074,773.03
<b>Non-Current Assets</b>			
Restricted Deposit Account	5.6	123,000,000.00	-
Other Long-Term Investments	5.7	71,700,000.00	56,100,000.00
Long-Term Loans to Staff		4,243,856.00	4,100,617.00
Buildings and Equipment	5.8	7,212,532,833.17	6,970,997,616.83
Intangible Assets	5.9	122,005,958.23	80,602,864.02
Assets under Construction	5.10	699,199,065.34	988,836,218.04
Total Non-Current Assets		8,232,681,712.74	8,100,637,315.89
<b>Total Assets</b>		<b>17,343,607,628.03</b>	<b>15,877,712,088.92</b>

Notes to financial statements are an integral part of these financial statements.

## AERONAUTICAL RADIO OF THAILAND LTD.

## Statements of Financial Position

As at 30 September 2019

Unit : Baht

Liabilities and Shareholders' Equity	Supplementary Information	30 September 2019	30 September 2018
<b>Current Liabilities</b>			
Trade and Other Payables	5.11	1,558,730,019.67	1,601,907,472.37
Current Portion of Long-Term Loans	5.12	126,940,000.00	126,940,000.00
Accrued Expenses	5.13	85,547,878.86	243,666,864.92
Interest Payable		4,203,092.13	5,124,540.98
Accumulated Overcollection	5.14	9,715,370,122.78	9,338,202,071.72
Other Current Liabilities	5.15	595,431,114.81	567,341,802.73
Total Current Liabilities		12,086,222,228.25	11,883,182,752.72
<b>Non-Current Liabilities</b>			
Children's Educational Support		110,247.59	108,996.78
Long-Term Loans	5.16	317,130,000.00	444,070,000.00
Employee Benefit Obligations	5.17	3,897,441,969.35	2,550,366,585.35
Total Non-Current Liabilities		4,214,682,216.94	2,994,545,582.13
<b>Total Liabilities</b>		16,300,904,445.19	14,877,728,334.85
<b>Shareholders' Equity</b>			
Share Capital	5.18		
Registered Ordinary Share Capital 6,600,000 shares of Baht 100.00 each		660,000,000.00	660,000,000.00
Paid-in Capital 6,600,000 shares of Baht 100.00 each		660,000,000.00	660,000,000.00
Staff Welfare Fund	5.19	382,703,182.84	339,983,754.07
Total Shareholders' Equity		1,042,703,182.84	999,983,754.07
<b>Total Liabilities and Shareholders' Equity</b>		17,343,607,628.03	15,877,712,088.92

Notes to financial statements are an integral part of these financial statements.

Signed  
(Mr. Somnuk Rongthong)  
President

Signed  
(Mrs. Chidkamol Soonthornsit)  
Vice President (Finance)

## AERONAUTICAL RADIO OF THAILAND LTD.

### Consolidated Statements of Income and Expenditure

For the year ended 30 September 2019

Unit : Baht

	Supplementary Information	30 September 2019	30 September 2018
<b>Income</b>			
Income from Air Navigation Service Charges		12,202,685,050.08	12,244,849,249.77
Equipment rental, Maintenance and NOC income		704,895,131.24	589,072,816.19
Income from work orders		134,849,281.62	141,190,519.01
Other Income	5.21	304,886,719.40	140,734,477.03
Total income		13,347,316,182.34	13,115,847,062.00
<b>Expenditure</b>			
Costs of production		90,305,941.12	93,266,523.14
Supplies used		42,577,876.01	37,814,607.88
Employee Benefit Expenses	5.22	9,612,410,839.30	7,630,232,792.23
Depreciation and Amortization Expenses		1,196,868,569.42	1,112,847,219.18
Maintenance of Assets & Equipment		296,995,003.83	326,555,196.02
Assets Rental and Property Tax		252,783,272.35	250,181,569.67
Utilities and Communication Expenses		186,287,139.37	164,213,379.39
Other Expenses	5.23	811,777,219.07	1,128,583,578.79
Finance costs		8,948,874.75	13,710,581.04
Total Expenditure		12,498,954,735.22	10,757,405,447.34
Income-over-Expenditure		848,361,447.12	2,358,441,614.66
Overcollection to be refunded to Member Airlines		848,361,447.12	2,358,441,614.66
Income-over- Expenditure		-	-
Other comprehensive income and expense		-	-
Comprehensive Income-over-Expenditure		-	-

Notes to financial statements are an integral part of these financial statements.

Signed  
(Mr. Somnuk Rongthong)  
President

Signed  
(Mrs. Chidkamol Soonthornsit)  
Vice President (Finance)

## AERONAUTICAL RADIO OF THAILAND LTD.

### Statements of Changes in Shareholders' Equity

For the year ended 30 September 2019

Unit : Baht

	Company	Staff Welfare Fund	Total
Balance as at 1 October 2017	660,000,000.00	304,758,989.87	964,758,989.87
Income-over- Expenditure - Staff Welfare Fund	-	35,224,764.20	35,224,764.20
Balance as at 30 September 2018	660,000,000.00	339,983,754.07	999,983,754.07
Balance as at 1 October 2018	660,000,000.00	339,983,754.07	999,983,754.07
Income-over- Expenditure - Staff Welfare Fund	-	42,719,428.77	42,719,428.77
Balance as at 30 September 2019	660,000,000.00	382,703,182.84	1,042,703,182.84

Notes to financial statements are an integral part of these financial statements.

Signed  
**(Mr. Somnuk Rongthong)**  
 President

Signed  
**(Mrs. Chidkamol Soonthornsit)**  
 Vice President (Finance)

## AERONAUTICAL RADIO OF THAILAND LTD.

### Statements of Cash Flows

For the year ended 30 September 2019

Unit : Million Baht

	30 September 2019	30 September 2018
<b>Cash Flows from Operating Activities:</b>		
Overcollection to Member Airlines excluding dividend	848,299,690.22	2,358,382,542.84
Income-over-expenses to Staff Welfare Fund		
Reconciliations of Overcollection or (Under-Recovery) as Cash Receipts or (Disbursements) from Operating Activities:		
Unrealized Loss (Gain) on Currency Exchange rate	703,962.72	(61,147.11)
Doubtful Accounts Expense (Adjustment)	(7,316,408.85)	41,328,205.70
Bad Debts Expense	650,105.53	2,567,178.71
Depreciation and Amortization	1,197,071,012.49	1,113,012,142.51
Assets under construction transferred to Expenses	478,143.15	2,635,394.09
Gain on Fixed Assets Disposal	(415,954.39)	(617,644.20)
Loss on Retirement of Assets	628,164.58	14,157,966.65
Deferred Income	(3,311,913.65)	(3,002,350.33)
Interest Received	(116,922,817.63)	(75,287,869.69)
Interest Expense	8,948,874.75	13,710,581.04
Employee Benefit Obligations	1,423,128,433.73	132,872,489.52
Overcollection to be refunded to Member Airlines before any changes in Operating Assets and Liabilities	3,351,941,292.65	3,599,697,489.73
Changes in Operating Assets and Liabilities		
Operating Assets (Increase) Decrease		
Receivables from ANS and Other Receivables	256,210,710.65	(237,059,283.46)
Store supplies	28,069,803.04	9,902,435.76
Other Current Assets	(62,598,513.84)	(7,230,948.58)
Operating Liabilities Increase (Decrease)		
Trade and Other Payables	(43,272,978.02)	46,740,764.23
Accumulated Overcollection	(471,193,396.06)	(399,425,116.31)
Accrued Expenses	(158,118,986.06)	17,847,152.95
Other Current Liabilities	26,420,631.73	137,784,315.93
Children's Educational Support	1,250.81	618.06
Staff Welfare Fund	42,719,428.77	35,224,764.20
Cash Receipts from Operating Activities	2,970,179,243.67	3,203,482,192.51
Employee Benefits paid	(76,053,049.73)	(86,667,627.22)
<b>Net Cash provided by Operating Activities</b>	<b>2,894,126,193.94</b>	<b>3,116,814,565.29</b>

Notes to financial statements are an integral part of these financial statements.

## AERONAUTICAL RADIO OF THAILAND LTD.

### Statements of Cash Flows (continued)

For the year ended 30 September 2019

Unit : Million Baht

	30 September 2019	30 September 2018
<b>Cash Flows from Investing Activities:</b>		
Dividend Received	61,756.90	59,071.82
Restricted Deposit Account	(123,000,000.00)	-
Cash Deposit at Bank (Temporary Investment)	2,648,442,292.87	3,871,555,188.68
Cash Withdrawal from Bank (Temporary Investment)	(5,289,198,019.96)	(5,352,302,782.90)
Cash Withdrawal from Bank (Long-term Investment)	(15,600,000.00)	(46,000,000.00)
Payment Received from Short-Term Loan to Staff	24,203,050.00	26,077,872.00
Cash Paid to Short-Term Loan to Staff	(18,322,677.00)	(19,286,967.00)
Payment Received from Long-Term Loan to Staff	318,206.00	352,150.00
Cash Paid to Long-Term Loan to Staff	(7,346,493.00)	(7,555,530.00)
Cash Paid for Acquisition of Assets under Construction	(1,185,949,630.04)	(1,061,250,604.44)
Cash Paid for Acquisition of Equipment and Software	(1,093,499.64)	(215,647.00)
Proceeds from Sale of Equipment	961,200.00	680,574.77
Interest Received	110,878,740.01	66,453,529.27
<b>Net Cash provided by (used in) Investing Activities</b>	<b>(3,855,645,073.86)</b>	<b>(2,521,433,144.80)</b>
<b>Cash Flows from Financing Activities:</b>		
Payments for long-term loans	-	(37,715,000.00)
Payments for Current Portion of Long-Term Loans	(126,940,000.00)	(750,569,000.00)
Cash paid to interest on loans	(9,870,323.60)	(20,325,354.46)
<b>Net Cash provided by (used in) Financing Activities</b>	<b>(136,810,323.60)</b>	<b>(808,609,354.46)</b>
<b>Net Increase in Cash and Cash Equivalents</b>	<b>(1,098,329,203.52)</b>	<b>(213,227,933.97)</b>
<b>Cash and Cash Equivalents at the beginning of the year</b>	<b>2,892,457,970.32</b>	<b>3,105,352,654.36</b>
<b>Gain or loss on revaluation of foreign exchange</b>	<b>(513,886.51)</b>	<b>333,249.93</b>
<b>Cash and Cash Equivalents at the end of the year</b>	<b>1,793,614,880.29</b>	<b>2,892,457,970.32</b>

Notes to financial statements are an integral part of these financial statements.

Signed  
**(Mr. Somnuk Rongthong)**  
 President

Signed  
**(Mrs. Chidkamol Soonthornsit)**  
 Vice President (Finance)



# AERONAUTICAL RADIO OF THAILAND LTD.

## Notes to Financial Statements

For the year ended 30 September 2019

### 1. The Objective of the Establishment of the Company

The Company's objective is to provide air traffic control, aeronautical communications and related services to meet the requirements of air transport operators and the International Civil Aviation Organization's (ICAO) standards and recommended practices with safety, consistency and efficiency that is the Government's obligation to ICAO as one of the Contracting States. The Company provides services to air transport operators on a cost recovery basis. The Company recovers expenses by collecting air navigation services charges fairly from users.

### 2. Principles for Presentation of Financial Statements

The financial statements of Aeronautical Radio of Thailand Ltd. consist of the Company's financial statements and Staff Welfare Fund which have been prepared in accordance with generally accepted accounting principles of the Accounts Act, 2000 and Accounting Professional Act, 2004 as well as accounting interpretation and guidelines that have been approved by the Federation of Accounting Professions. Also, the Company's financial statements have been prepared in accordance with the announcement by Department of Business Development regarding the brief items necessary in 2011 financial statements, dated 28 September 2011.

### 3. The Thai Accounting Standards (TAS), Thai Financial Reporting Standards (TFRS), Thai Standard Interpretations Committee (TSIC) and Thai Financial Reporting Interpretations Committee (TFRIC)

which have been announced in the Royal Thai Government Gazette are as follows:

#### • Effective for accounting periods on or after 1 January 2019:

TAS 1	(revised 2018)	: Presentation of Financial Statements
TAS 2	(revised 2018)	: Inventories
TAS 7	(revised 2018)	: Statement of Cash Flows
TAS 8	(revised 2018)	: Accounting Policies, Changes in Accounting Estimates and Errors
TAS 10	(revised 2018)	: Events after the Reporting Period
TAS 12	(revised 2018)	: Income taxes
TAS 16	(revised 2018)	: Property, Plant and Equipment
TAS 17	(revised 2018)	: Leases
TAS 19	(revised 2018)	: Employee Benefits
TAS 20	(revised 2018)	: Accounting for Government Grants and Disclosure of Government Assistance
TAS 21	(revised 2018)	: The Effects of Changes in Foreign Exchange Rates
TAS 23	(revised 2018)	: Borrowing Costs
TAS 24	(revised 2018)	: Related Party Disclosures
TAS 26	(revised 2018)	: Accounting and Reporting by Retirement Benefit Plans
TAS 27	(revised 2018)	: Separate Financial Statements
TAS 28	(revised 2018)	: Investments in Associates and Joint Ventures

TAS 29 (revised 2018)	: Financial Reporting in Hyperinflationary Economies
TAS 33 (revised 2018)	: Earnings per Share
TAS 34 (revised 2018)	: Interim Financial Reporting
TAS 36 (revised 2018)	: Impairment of Assets
TAS 37 (revised 2018)	: Provisions, Contingent Liabilities and Contingent Assets
TAS 38 (revised 2018)	: Intangible Assets
TAS 40 (revised 2018)	: Investment Property
TAS 41 (revised 2018)	: Agriculture
TFRS 1	: First-time Adoption of IFRS
TFRS 2 (revised 2018)	: Share-based Payment
TFRS 3 (revised 2018)	: Business Combinations
TFRS 4 (revised 2018)	: Insurance Contracts
TFRS 5 (revised 2018)	: Non-current Assets Held for Sale and Discontinued Operations
TFRS 6 (revised 2018)	: Exploration for and Evaluation of Mineral Resources
TFRS 8 (revised 2018)	: Operating Segments
TFRS 10 (revised 2018)	: Consolidated Financial Statements
TFRS 11 (revised 2018)	: Joint Arrangements
TFRS 12 (revised 2018)	: Disclosure of Interests in Other Entities
TFRS 13 (revised 2018)	: Fair Value Measurement
TFRS 15	: Revenue from Contracts with Customers
TSIC 10 (revised 2018)	: Government Assistance – No Specific Relation to Operating Activities
TSIC 15 (revised 2018)	: Operating Leases – Incentives
TSIC 25 (revised 2018)	: Income Taxes – Changes in the Tax Status of an Entity or its Shareholders
TSIC 27 (revised 2018)	: Evaluating the Substance of Transactions Involving the Legal Form of a Lease
TSIC 29 (revised 2018)	: Service Concession Arrangements: Disclosures
TSIC 32 (revised 2018)	: Intangible Assets -Web Site Costs
TFRIC 1 (revised 2018)	: Changes in Existing Decommissioning, Restoration and Similar Liabilities
TFRIC 4 (revised 2018)	: Determining whether an Arrangement contains a Lease
TFRIC 5 (revised 2018)	: Rights to Interests arising from Decommissioning, Restoration and Environmental Rehabilitation Funds
TFRIC 7 (revised 2018)	: Applying the Restatement Approach under TAS 29 (revised 2018) Financial Reporting in Hyperinflationary Economies
TFRIC 10 (revised 2018)	: Interim Financial Reporting and Impairment
TFRIC 12 (revised 2018)	: Service Concession Arrangements
TFRIC 14 (revised 2018)	: Minimum Funding Requirements and their Interaction TAS 19 (revised 2018) - The Limit on a Defined Benefit Asset (Employee Benefits)
TFRIC 17 (revised 2018)	: Distributions of Non-cash Assets to Owners
TFRIC 20 (revised 2018)	: Stripping Costs in the Production Phase of a Surface Mine
TFRIC 21 (revised 2018)	: Levies
TFRIC 22	: Foreign Currency Transactions and Advance Consideration

• Effective for accounting periods on or after 1 January 2020:

TAS 1	: Presentation of Financial Statements
TAS 2	: Inventories

TAS 7	: Statement of Cash Flows
TAS 8	: Accounting Policies, Changes in Accounting Estimates and Errors
TAS 10	: Events after the Reporting Period
TAS 12	: Income taxes
TAS 16	: Property, Plant and Equipment
TAS 19	: Employee Benefits
TAS 20	: Accounting for Government Grants and Disclosure of Government Assistance
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TAS 24	: Related Party Disclosures
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TAS 28	: Investments in Associates and Joint Ventures
TAS 29	: Financial Reporting in Hyperinflationary Economics
TAS 32	: Financial Instruments: Presentation
TAS 33	: Earnings per Share
TAS 34	: Interim Financial Reporting
TAS 36	: Impairment of Assets
TAS 37	: Provisions, Contingent Liabilities and Contingent Assets
TAS 38	: Intangible Assets
TAS 40	: Investment Property
TAS 41	: Agriculture
TFRS 1	: First-time Adoption of IFRS
TFRS 2	: Share-based Payment
TFRS 3	: Business Combinations
TFRS 4	: Insurance Contracts
TFRS 5	: Non-current Assets Held for Sale and Discontinued Operations
TFRS 6	: Exploration for and Evaluation of Mineral Resources
TFRS 7	: Financial Instruments: Disclosures
TFRS 8	: Operating Segments
TFRS 9	: Financial Instruments
TFRS 10	: Consolidated Financial Statements
TFRS 11	: Joint Arrangements
TFRS 12	: Disclosure of Interests in Other Entities
TFRS 13	: Fair Value Measurement
TFRS 15	: Revenue from contracts with customers
TFRS 16	: Leases
TSIC 10	: Government Assistance – No Specific Relation to Operating Activities
TSIC 25	: Income Taxes – Changes in the Tax Status of an Entity or its Shareholders
TSIC 29	: Service Concession Arrangements: Disclosures
TSIC 32	: Intangible Assets -Web Site Costs
TFRIC 1	: Changes in Existing Decommissioning, Restoration and Similar Liabilities
TFRIC 5	: Rights to Interests arising from Decommissioning, Restoration and Environmental Rehabilitation Funds

TFRIC 7	: Applying the Restatement Approach under TAS 29 Financial Reporting in Hyperinflationary Economies
TFRIC 10	: Interim Financial Reporting and Impairment
TFRIC 12	: Service Concession Arrangements
TFRIC 14	: Minimum Funding Requirements and their Interaction TAS 19 - The Limit on a Defined Benefit Asset (Employee Benefits)
TFRIC 16	: Hedges of a Net Investment in a Foreign Operation
TFRIC 17	: Distributions of Non-cash Assets to Owners
TFRIC 19	: Extinguishing Financial Liabilities with Equity Instruments
TFRIC 20	: Stripping Costs in the Production Phase of a Surface Mine
TFRIC 21	: Levies
TFRIC 22	: Foreign Currency Transactions and Advance Consideration
TFRIC 23	: Uncertainty over Income Tax Treatments

The Company's Management has made an assessment of the impact caused by applying these standards and interpretations and believes that there will be no material impact on the Company's financial statements.

## 4. Summary of Significant Accounting Policies

### 4.1 Incomes and Expenditures Recognition

- 4.1.1 Income derived from air navigation services is recognized as income in the accounting period that services are provided.
- 4.1.2 Equipment rental and maintenance incomes and Airline Operational Control (AOC) income are recognized as income over the period at the rate of remuneration specified in the agreements.
- 4.1.3 Income from work orders is recognized as income when each order is completed and delivered to customers.
- 4.1.4 Interest received is recognized on time proportion basis using the actual rate of return.
- 4.1.5 Expenditures are recognized on an accrual basis.

### 4.2 Allowance for Doubtful Accounts

The allowance is recorded equal to the estimated losses that may result in collection of debts. Generally, estimations are based on an experience of debt recovery in the past and from non-governmental organizations or non-state enterprise debtors' current status at the Statement of Financial Position date. The allowance for doubtful accounts is made according to the Regulations for Account and Finance, 2005 by the Ministry of Finance as follows:

Period	Overdue Rate of Provision for Doubtful Accounts (%)
Over 6 months - 1 year	50
Over 1 year	100

### 4.3 Store Supplies

Store supplies are recorded at cost on the weighted average method. For overseas purchases, import formality handling charges are recorded as operating expenditure.

#### 4.4 Investments

Investments are recorded at cost as follows:

- 4.4.1 Temporary investment is the investment that the Company expects to hold to maturity or converts into cash within one year such as fixed deposit account due within 12 months.
- 4.4.2 Other long-term investment is the investment that the Company expects to hold longer than one year such as over 12-month fixed deposit account.

#### 4.5 Buildings and Equipment

4.5.1 Buildings and equipment are recorded at cost less accumulated depreciation.

Depreciation, the Company has depreciated the assets by using the straight-line method based on the estimated useful life of assets begin from the month the assets were available for use as follows:

Buildings and Construction	7-20	years
Utility Systems	5-20	years
Radar and Equipment	7-15	years
Power Generators	10-20	years
Teleprinters	7	years
Equipment and Tools	7-20	years
Furniture and Office Supplies	5-7	years
Vehicles	5	years
Aircraft	5-25	years
Assets from Donations	5-25	years

Assets acquired or received with a value not exceeding Baht 30,000 are recognized as expenses.

Intangible assets prior to the year 2014 are including in furniture and office supplies.

The developments of computer system which materially enhance the capacity or efficiency as well as the acquisition of assets which provide revenue to the Company for more than one year are recognized as fixed assets.

- 4.5.2 Aircraft Inspection and Repair as Necessary (IRAN) are recorded at cost and depreciation is calculated using the straight-line method based on the duration of the affected aircraft's useful life: 5–10 years.

#### 4.6 Intangible Assets

The amortization of intangible assets is calculated using the straight-line method of 20% per year over the asset's estimated useful life.

#### 4.7 Interest Paid on Loan

Asset under construction funded by loans: interest paid will be recorded as the cost of the asset under construction. After the work has been completed, the interest paid will be recognized as expenses.

#### 4.8 Unearned Income

Receipt of assets donated which used for operations longer than one accounting period are recorded at cost as unearned income and then gradually transferred to other income throughout the useful life of those assets.

#### 4.9 Accounting Items in Foreign Currency

Assets and Liabilities of foreign currency value are recorded in Baht by initially using the currency exchange rate at the date the transaction occurs. At the end of each accounting period, the asset and liability value will be adjusted to Baht according to the currency exchange rate announced by the Bank of Thailand on that day. Gain or loss from currency exchange rate revaluation will be recognized wholly as an income or expense item in the statements of income and expenditure.

#### 4.10 Overcollection and Under-Recovery to Member Airlines

The Company operates on a non-profit or cost recovery basis. If income exceeds expenditure, the over-collection amount will be recorded as liability and will be refunded to Member Airlines. On the other hand, if expenditure exceeds income, then the under-recovery amount will be recorded as asset and will be charged to Member Airlines. Such rule will be distributed to each Member Airlines according to revenue generated by each of them for that particular period.

#### 4.11 Employee Benefit Obligations

The Company's employee benefits in respect of defined benefit plans and other long-term employee benefits are determined by using the projected unit credit method based on actuarial valuation. The discount rate used is determined by reference to market yields on government bonds in which all actuarial gains and losses arising in each accounting period will be recognized as income or expense within the accounting period in which they arise.

#### 4.12 Provident Fund

On 1 October 1992, the Company established "the Registered Provident Fund for Staff of Aeronautical Radio of Thailand Ltd." in accordance with the Provident Fund Act, 1987. The staff members pay accumulated contribution to the fund at the rates of 2-15% of their salaries and the Company makes a contribution to the fund at the rates of 8.5-15% of staff members' salaries.

#### 4.13 Cash and Cash Equivalents

Cash and cash equivalents mean cash on hand and at bank for which repayment is due within 3 months.

### 5. Supplementary Information

#### 5.1 Cash and Cash Equivalents

Unit : Million Baht

Items	2019			2018
	Company	Staff Welfare Fund	Total	%
Cash on hand - Domestic	1.54	2.15	3.69	3.90
Cash at Banks - Domestic	1,715.32	74.60	1,789.92	2,888.56
<b>Total</b>	<b>1,716.86</b>	<b>76.75</b>	<b>1,793.61</b>	<b>2,892.46</b>

**5.2 Temporary Investment**

Unit : Million Baht

Items	2019			2018
	Company	Staff Welfare Fund	Total	%
Fixed Deposit Account 6 months	-	0.68	0.68	539.11
Fixed Deposit Account 8 months	-	6.10	6.10	-
Fixed Deposit Account 11-12 months	5,629.70	202.07	5,831.77	2,658.68
<b>Total</b>	<b>5,629.70</b>	<b>208.85</b>	<b>5,838.55</b>	<b>3,197.79</b>

**5.3 Receivables from Air Navigation Services (ANS) and other receivable**

Unit : Million Baht

Items	2019			2018
	Company	Staff Welfare Fund	Total	%
Receivables from ANS				
Receivable cheques	2.25	-	2.25	14.59
Airlines Debtors	1,352.28	-	1,352.28	1,558.44
Domestic Business Debtors	91.46	0.08	91.54	96.79
International Business Debtors	20.73	-	20.73	81.03
Accrued Income	39.48	0.18	39.66	1.64
	1,506.20	0.26	1,506.46	1,752.49
Less Allowance for doubtful accounts	(292.08)	-	(292.08)	(299.40)
Total Receivables from ANS Net	1,214.12	0.26	1,214.38	1,453.09
Other receivables				
Interest Receivable	11.64	0.25	11.89	18.46
Penalty to contractors	25.78	-	25.78	25.78
Loans to staff	0.06	-	0.06	0.12
Prepaid Expenses	36.00	-	36.00	30.87
Advances to staff for expenses	4.59	25.58	30.17	33.56
Total other receivables	78.07	25.83	103.90	108.79
<b>Total</b>	<b>1,292.19</b>	<b>26.09</b>	<b>1,318.28</b>	<b>1,561.88</b>

Account receivable aging of airline customers, domestic business customers and International business customers as at 30 September 2019 are classified as follows:

Unit : Million Baht

Airline customers	
Not over 6 months	1,082.83
Over 6 months - 12 months	(5.33)
Over 12 months	274.47
Revaluation of Account receivable due to currency exchange rate translation	0.31
	1,352.28
<u>Less</u> Allowance for doubtful accounts	(271.81)
Total account receivable of airline customers	1,080.47
Domestic business customers	
Not over 6 months	76.51
Over 6 months - 12 months	6.72
Over 12 months	8.23
	91.46
<u>Less</u> Allowance for doubtful accounts	(11.59)
Total account receivable of domestic business customers	79.87
International business customers	
Not over 6 months	12.44
Over 6 months - 12 months	0.22
Over 12 months	8.57
Revaluation of Account receivable due to currency exchange rate translation	(0.50)
	20.73
<u>Less</u> Allowance for doubtful accounts	(8.68)
Total account receivable of international business customers	12.05



### 5.4 Store Supplies

Unit : Million Baht

	2019	2018
Spare parts for Radar	31.58	64.86
Spare parts for Aircraft	18.37	18.47
Spare parts for Navigation Aids	11.40	11.67
Spare parts for Radio Equipment	6.38	1.74
Office supplies	4.26	3.36
Other spare parts	0.74	0.70
<b>Total</b>	<b>72.73</b>	<b>100.80</b>

### 5.5 Other Current Assets

Unit : Million Baht

	2019	2018
Deposit Payments	4.55	4.68
Work in Process	70.68	4.72
Output Tax	0.59	-
Suspense accounts	(0.89)	2.93
<b>Total</b>	<b>74.93</b>	<b>12.33</b>

### 5.6 Restricted Bank Deposits

The Company has pledged the fixed deposit account – 12 months of Krung Thai Bank PCL at the amount of Baht 123.00 million as a collateral of guarantee to the Revenue Department in order to postpone the penalty and surcharge payment. (Supplementary Information 5.25)

### 5.7 Other Long-term Investments

Unit : Million Baht

Items	2019			2018
	Company	Staff Welfare Fund	Total	%
Vayupak Fund 1	10.00	-	10.00	10.00
Fixed Deposit Account-22 months	-	15.60	15.60	-
Fixed Deposit Account-36 months	-	46.10	46.10	46.10
<b>Total</b>	<b>10.00</b>	<b>61.70</b>	<b>71.70</b>	<b>56.10</b>

## 5.8 Buildings and Equipment

Unit : Million Baht

	Original Cost				Accumulated Depreciation			Book Value		
	Balance 1 Oct 18	Increase	Decrease	Balance 30 Sept 19	Balance 1 Oct 18	Increase	Decrease	Balance 30 Sept 19	30 Sept 19	30 Sept 18
<b>The Company's buildings and equipment</b>										
Buildings and Construction	2,968.59	31.15	6.02	2,993.72	1,934.64	113.32	0.12	2,047.84	945.88	1,033.95
Utility Systems	1,440.20	136.20	32.39	1,544.01	872.83	93.40	14.05	952.18	591.83	567.37
Radar and Communication Equipment <sup>1/</sup>	8,782.91	671.29	24.03	9,430.17	5,037.94	601.59	6.07	5,633.46	3,796.71	3,744.97
Power Generators	559.38	93.64	3.44	649.58	296.68	55.55	3.37	348.86	300.72	262.70
Teleprinters	0.06	-	-	0.06	0.06	-	-	0.06	-	-
Equipment and Tools	1,337.99	226.35	0.84	1,563.50	939.42	116.42	0.72	1,055.12	508.38	398.57
Furniture and Office Supplies	1,141.09	194.29	10.28	1,325.10	804.37	142.38	10.03	936.72	388.38	336.72
Vehicles	6.43	-	-	6.43	3.14	0.90	-	4.04	2.39	3.29
Aircraft	813.22	87.38	-	900.60	194.06	34.60	-	228.66	671.94	619.16
Assets from Donations	114.16	4.98	30.50	88.64	110.70	3.26	30.45	83.51	5.13	3.46
<b>Total</b>	<b>17,164.03</b>	<b>1445.28<sup>2/</sup></b>	<b>107.50</b>	<b>18,501.81</b>	<b>10,193.84</b>	<b>1,161.42<sup>3/</sup></b>	<b>64.81</b>	<b>11,290.45</b>	<b>7,211.36</b>	<b>6,970.19</b>
<b>Staff Welfare Fund's equipment</b>										
Musical Instruments and Sports Equipment	3.58	0.56	-	4.14	2.77	0.20	-	2.97	1.17	0.81
<b>Grand Total</b>	<b>17,167.61</b>	<b>1445.84</b>	<b>107.50</b>	<b>18,505.95</b>	<b>10,196.61</b>	<b>1,161.62</b>	<b>64.81</b>	<b>11,293.42</b>	<b>7,217.53</b>	<b>6,971.00</b>

Notes: <sup>1/</sup> Radar and Equipment comprise of radar systems, air navigation aids, surveillance systems, automatic message switching systems, and other communication equipment.

<sup>2/</sup> The amount is for buildings and equipment, which increased from the transfer of assets under construction at Baht 1,396.03 million, acquisition of buildings and equipment at Baht 0.53 million, assets from donations at the amount of Baht 4.98 million and assets transferred between the Company and Staff Welfare Fund at Baht 43.74 million.

<sup>3/</sup> The amount includes depreciation expense at Baht 1,159.19 million and Accumulated depreciation transferred between the Company and Staff Welfare Fund at Baht 2.23 million.

Buildings and construction used for operations are constructed on the State property and land which its ownership rests with the Ministry of Finance.

### 5.9 Intangible Assets

Unit : Million Baht

	2019	2018
Computer Software as at 1 October 2018	132.13	83.44
<u>Add</u> Additional during the year	79.08 <sup>1/</sup>	48.69 <sup>1/</sup>
	211.21	132.13
<u>Less</u> Accumulated Amortization	(89.20)	(51.53)
Total Computer Software as at 30 September 2019	122.01	80.60
Amortization – This year	37.67	24.75

<sup>1/</sup> the transfer of assets under construction

### 5.10 Assets under Construction

Unit : Million Baht

	2019	2018
Balance brought forward as at 1 October 2018	988.84	2,967.25
<u>Add</u> Additional during the year	1,185.95	1,061.25
	2,174.79	4,028.50
<u>Less</u> Transfer to Buildings and Equipment	(1,396.03)	(2,988.33)
Transfer to Intangible Assets	(79.08)	(48.69)
Transfer to Expenses	(0.48)	(2.64)
Balance carried forward as at 30 September 2019	699.20	988.84

### 5.11 Trade and Other Payables

Unit : Million Baht

Items	2019			2018
	Company	Staff Welfare Fund	Total	%
Trade Payable				
Trade Payable - Domestic	1,059.34	0.06	1,059.40	1,049.14
Trade Payable - Overseas	53.17	-	53.17	5.18
Suspense Account for Goods and Services	356.54	-	356.54	425.97
Total Trade Payable	1,469.05	0.06	1,469.11	1,480.29
Other Payables				
Suspense Account for Pay Cheques	16.62	2.71	19.33	34.26
Suspense Account for Debtors	11.36	-	11.36	19.88
Staff Payable	10.14	-	10.14	16.02
Deferred Income	48.64	0.15	48.79	51.46

Items	2019			2018
	Company	Staff Welfare Fund	Total	%
Total Other Payables	86.76	2.86	89.62	121.62
Total	1,555.81	2.92	1,558.73	1,601.91

### 5.12 Current Portion of Long-Term Loans Due in One Year

As at 30 September 2019, the balance of long-term loans from Government Saving Bank is at Baht 126.94 million with credit limit of Baht 1,650.00 million. During the year, long-term loans transferred to current portion at Baht 126.94 million and the Company made repayments of principal at Baht 126.94 million.

### 5.13 Accrued Expenses

Unit : Million Baht

Items	2019			2018
	Company	Staff Welfare Fund	Total	%
State Property Land and Office Rental	23.26	-	23.36	196.71
Utilities	42.76	-	42.76	39.29
Others	13.89	5.64	19.53	7.67
Total	79.91	5.64	85.55	243.67

### 5.14 Accumulated Overcollection

Unit : Million Baht

	2019	2018
Overcollection to Member Airlines - brought forward as at 1 Oct 18	9,338.20	7,379.19
Add Overcollection to Member Airlines during the year	848.36	2,358.44
	10,186.56	9,737.63
Less Rebate Overcollection in 2018 to Member Airlines during the year	(471.19)	(399.43)
Balance carried forward as at 30 Sept 2019	9,715.37	9,338.20

The Company's Shareholders at the 72<sup>nd</sup> Ordinary General Meeting on 23 January 2019 approved that the Company rebate 20% of the fiscal year 2018 overcollection to Member Airlines by issuing refund vouchers for Air Navigation Service charges for 6 months from April - September 2019. The remaining 80% of overcollection is for investment in 2019 and reserve for future investment. The Company has invested in air navigation service systems and other systems since 2014-2018 at the total amount of Baht 6,626.09 million.

In 2019, the Company had Baht 13,347.32 million total income and Baht 12,498.96 million total expenditure resulting in an overcollection at Baht 848.36 million. When combined the overcollection this year with the accumulated overcollection brought forward from 2018 of Baht 9,338.20 million and the overcollection rebated to Member Airlines of Baht 471.19 million, leaving the accumulated overcollection of Baht 9,715.37 million at the end of the fiscal year 2019.

In addition, income derived from telecommunication business under telecommunication licence type 2 for the operator with its own network, which is amounted to Baht 103.09 million during 1 October 2018 – 30 September 2019 has already been included in Equipment Rental & Maintenance and AOC income.

### 5.15 Other Current Liabilities

Unit : Million Baht

Items	2019			2018
	Company	Staff Welfare Fund	Total	
Unearned Income	5.13	-	5.13	3.46
Accrued Income Tax and Tax Payable	408.44	0.21	408.65	368.59
Guarantee Money	169.25	0.05	169.30	161.69
Suspense Account for B Shares allocation	0.46	-	0.46	0.75
Other Suspense Account	11.89	-	11.89	32.85
Total	595.17	0.26	595.43	567.34

### 5.16 Long-Term Loans

Unit : Million Baht

Bank	Contract Date	Credit Limit	Duration	Transferred to loans due within 1 year	Payment during the period	Balance as at 30 Sept. 2019	Balance as at 30 Sept. 2018
Government Savings	3 Sept. 07	1,650.00	15 Y., Grace Period 2 Y.	126.94	-	317.13	444.07

As at 30 September 2019, the Company has total credit limit at Baht 1,650.00 million consisting of loans from Government Savings Bank which have been used for investment in various projects. The payments of principal and interest are scheduled every 6 months.

### 5.17 Employee Benefit Obligations

Principal actuarial assumption for calculating provisions is as follows:

Unit : Million Baht

	2019	2018
Discount rate (%)	1.53	3.23
Salary increase rates (%)	7.50	7.50

The changes in present value of employee benefit obligations:

Unit : Million Baht

	2019	2018
Employee benefit obligations - Balance brought forward	2,550.37	2,504.16
Current employee benefits	1,423.12	132.87
Employee benefit paid	(76.05)	(86.66)
Remaining Employee benefit obligations	3,897.44	2,550.37

In 2019, there is a change in severance and compensation payment rate for retired employees according to the notification of the State Enterprise Labor Relations Commission Re: Minimum Standards for State Enterprise Employment Conditions (Issue 4). It is stipulated that the employers shall pay the compensation to the employees who have worked for consecutive period of 20 years and over. The employees shall be entitled to receive the compensation of not less than the rate of wages for the last 400 days which results in higher employee benefit obligations from the fiscal year 2018.

#### Sensitivity Analysis of Assumption for Calculation

The provision of employee benefit obligations by actuarial assumption is sensitive to the changes on assumptions used for calculation such as economic and demographic assumption under the defined benefit plan in which the change in each assumption occurs separately.

The effect of assumption changes to present value of the employee benefit obligations as at 30 September 2019 are as follows:

Unit : Million Baht

	Changes in present value of employee benefit obligations	
	Increase by 1%	Decrease by 1%
Discount rate (%)	(344.89)	399.44
Salary increase rates (%)	3.62	(5.49)

#### 5.18 Shareholders' Equity

Unit : Million Baht

	2019	2018
Registered Ordinary Shares and paid up Share Capital		
Ordinary Shares: 6,600,000 shares; Baht 100 per share		
A-shares (held by the Ministry of Finance)	600.00	600.00
B-shares (held by Member Airlines)	60.00	60.00
Total	660.00	660.00

#### 5.19 Staff Welfare Fund

Unit : Million Baht

	2019	2018
Cash and Cash Equivalents	76.75	65.14
Temporary Investment	208.85	204.44
Receivables from ANS and Other Receivables	26.09	24.29
Short-Term Loans to Staff	12.83	11.82
Other Long-Term Investments	61.70	46.10
Long-Term Loans to Staff	4.24	4.10
Buildings and Equipment	1.17	0.81
Total Assets	391.63	356.70
Trade and Other Payables	2.92	12.16
Accrued Expenses	5.64	4.11

	2019	2018
Other Current Liabilities	0.26	0.34
Children's Educational Support	0.11	0.11
Total Liabilities	8.93	16.72
Staff Welfare Fund		
Balance at the beginning	339.98	304.76
Income-over-Expenditure	42.72	35.22
Total Staff Welfare Fund	382.70	339.98
Total Liabilities and Staff Welfare Fund	391.63	356.70

### 5.20 Appropriation to the Ministry of Finance

The Cabinet Meeting on 27 October 1998 required the Company to pay the appropriation to the Ministry of Finance in proportion of 10% of income from air navigation services charges starting from the fiscal year 1998.

At the Cabinet Meeting on 13 August 2003, approval was given to the Company to prolong the non-payment of the appropriation to the Ministry of Finance between 2002 and 2005. Later, approval to terminate the payment of the appropriation to the Ministry of Finance effective from the fiscal year 2006 was given by the Cabinet Meeting on 20 September 2005.

### 5.21 Other income

Unit : Million Baht

	2019	2018
Interest received	88.18	56.93
Gains on exchange rate	-	4.66
Dividend received	0.06	0.06
Other income	216.65	79.08
Total	304.89	140.73

### 5.22 Employee Benefit Expenses

Unit : Million Baht

	2019	2018
Staff Costs	7,349.53	6,715.17
Employee Benefit Expenses	1,423.12	132.87
Contribution to Provident Fund	516.89	480.92
Contribution to Staff Welfare Fund	322.87	301.27
Total	9,612.41	7,630.23

### 5.23 Other Expenses

Unit : Baht

	2019	2018
Audit Fee	3.72	-
Meeting Expense	46.33	41.40
Consultant and service fees	23.62	104.36
Public Relations Expense	33.80	31.31
Donations	23.88	19.48
Travelling Expense	268.32	305.57
Premium Fees	36.20	35.25
Other Fees	18.56	124.34
Training Expense	182.58	178.54
Store Supplies and Assets Retirement Expense	30.02	40.91
Securities Expense	67.58	61.61
Loss on Fixed Assets Retirement	0.63	14.13
Loss on Foreign Exchange rate	6.29	-
Doubtful Accounts	(7.32)	41.33
Bad Debts	0.65	2.57
Others	76.92	127.78
Total	811.78	1,128.58

### 5.24 Provident Fund

On 1 October 1992, the Company calculated the gratuity fund to be paid to staff as of that date at Baht 342.66 million. The Company transferred Baht 173.60 million to the Provident Fund. The remaining amount of Baht 169.06 million had to be transferred within 10 years and/or the remaining working period of the staff with interest at an average one year fixed deposit rate. The Company completed the transfer of all the remaining deferred gratuity funds to the Provident Fund in the fiscal year 2002.

As at 30 September 2019 there were 3,210 staff members. The Company made a contribution in this period at Baht 518.27 million to the Provident Fund, (which was recorded as staff costs at Baht 516.89 million and cost of production of work order at Baht 1.38 million).

### 5.25 Contingent Liabilities

The Company provides air navigation services and related services according to the agreement with the Ministry of Transport which falls in an exemption for Value Added Tax (VAT) according to the Royal Decree under the Revenue Code Regarding Value Added Tax Exemption (Issue 239), B.E. 2534 (1991) as amended by the Royal Decree Issued under the Revenue Code Regarding Value Added Tax Exemption (Issue 254), B.E.2535 (1992) section 4.

Then, the Revenue Department examined the Company in overall aspects from fiscal years 2003 to 2011 with no issues or observations about VAT on all of the Company's income. However, in November 2013, the Revenue Department's officer examined the Company's income for fiscal year 2012 and sent an official letter of the examination results later in March 2014 that there is an issue about VAT relating to the Company's income from work orders to non-airlines customers in accounting period 2012.



After continuously monitored and coordinated with the Revenue Department officers about the issue, the Company found that the Company has tax payable relating to VAT from October 2011 to June 2018 at a total amount of Baht 234.77 million which consists of VAT at the amount of Baht 112.11 million with penalty and surcharge at the amount of Baht 122.66 Million.

However, the Company had already made a VAT payment at the amount of Baht 112.11 million to the Revenue Department on 8 August 2018. For penalty and surcharge at the amount of Baht 122.66 million, the Company sent a letter Ref. ART 1228/2561 dated 1 August 2018 to the Ministry of Finance requesting for an extension in submitting the VAT from the due date to get the exemption on penalty and surcharge. Now, The Company has already pledged the Fixed Deposit Account-12 months of Krung Thai Bank PCL at the amount of Baht 123 million as a collateral of guarantee to Revenue Department in order to postpone the penalty and surcharge payment.



**AEROTHAI** 



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