



民航處  
CIVIL AVIATION  
DEPARTMENT

2015-2016 年報  
Annual Report



致力保障 航空安全  
Maintaining Safety in Aviation



## 我們的理想 Our Vision

致力於安全、有效率及可持續發展的航空運輸系統

Committed to a Safe, Efficient and Sustainable Air Transport System

## 我們的使命 Our Mission

- 奠定香港作為國際及區域頂尖航空中心的地位
- 維持有效法律制度，以實施根據適用國際民航公約制訂的相關條文
- 借助先進航空導航系統科技，推動航空業發展
- 確保建立、達到和維持航空導航服務高水平的安全標準
- 在香港飛行情報區內維持既安全快捷，又秩序井然的航空交通
- 確保在香港飛行情報區內提供精準及快捷的航空資訊服務和適時及高效的警報服務
- 確保香港搜救區內飛機出現緊急情況和發生意外時，適當協調搜索和救援行動
- 制訂和貫徹執行機場安全及航空保安標準
- 確保香港註冊的飛機和以香港為基地的航空公司符合既定的適航及運作標準
- 確保香港認可的飛機維修機構符合國際標準
- 確保香港註冊的空勤人員和飛機維修工程師符合國際標準
- 制定策略並積極採取措施，確保所有航機運作符合相關可承受的安全水平，盡量減低航空安全風險
- 監察航空公司有否遵守雙邊民用航空運輸協定
- 制定有效措施以減少飛機噪音對社區的影響
- 透過協調及綜合系統法，推廣及管理航空安全
- 以公正持平方式進行意外調查，確定肇事原因及實況，以保障人命安全和防止同類意外再次發生
- Positioning Hong Kong as a leading centre of international and regional aviation
- Maintaining an effective legal system for the implementation of relevant provisions under applicable civil aviation related international conventions
- Facilitating the growth of aviation through the application of leading edge technology in Air Navigation Systems
- Ensuring that a high standard of safety in the provision of air navigation services is established, achieved and maintained
- Maintaining a safe, orderly and expeditious flow of air traffic within the Hong Kong Flight Information Region
- Ensuring that an accurate and efficient aeronautical information service and a timely and effective alerting service within the Hong Kong Flight Information Region are provided
- Ensuring proper coordination of search and rescue operation in the event of aircraft emergencies and accidents within the Hong Kong Search and Rescue Region
- Setting and enforcing aerodrome safety and aviation security standards
- Ensuring compliance with established airworthiness and flight operations standards by Hong Kong registered aircraft and locally based airlines
- Ensuring compliance with international standards by Hong Kong approved aircraft maintenance organisations
- Ensuring compliance with international standards by Hong Kong licensed flight crew and aircraft maintenance engineers
- Developing strategies and implementing proactive measures to minimise safety risks to aviation by ensuring that all operations are conducted in conformity with the respective acceptable levels of safety
- Monitoring compliance by airlines with bi-lateral Air Services Agreements
- Developing workable measures to minimise the impact of aircraft noise on local communities
- Promoting and managing aviation safety through a coordinated and integrated systems approach
- Conducting fair and impartial accident investigations to determine the circumstances and causes of accidents with a view to the preservation of life and avoidance of accidents in the future

## 我們的信念 Our Values

- 安全可靠
- 快捷高效
- 嚴守標準
- 專業誠信
- 團隊精神
- 持續發展
- Safety and security
- Efficiency and effectiveness
- Compliance with standards
- Professionalism and integrity
- Teamwork
- Sustainable development



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# 處長報告

## Director-General's Review



李天柱太平紳士  
民航處處長

Mr Simon Li Tin-chui, JP  
Director-General of Civil Aviation

我很榮幸在二零一六年五月十九日獲委任為民航處處長。民航處一直肩負重責，使香港飛行情報區的航空交通安全有序和運作暢順，同時確保所有航機的運作符合安全水平，維持香港作為國際及區域頂尖航空中心的地位。服務民航處三十多年，我見證着飛機設計不斷推陳出新，務求令飛機更安全和環保。其實民航處全人的工作態度亦一致，一直與時並進，令服務更精益求精。日後，我和同事一定會同心合力，繼續為市民提供優質的服務。

It was my great honour to be appointed as Director-General of Civil Aviation on 19 May 2016. The Civil Aviation Department (CAD) assumes the mantle of maintaining a safe, orderly and expeditious flow of air traffic within the Hong Kong Flight Information Region (HKFIR) and ensuring all flight operations are conducted in conformity with safety standards, thereby maintaining Hong Kong's status as a leading international and regional aviation hub. Having served in the Department for over three decades, I have seen continuous improvement in aircraft design to make planes safer and more environmentally friendly. So does CAD. We always keep up with the times and strive for excellence at work. In future, I will work with my colleagues to continue to deliver quality service to the community.



回顧二零一五至一六年度，民航處在同事群策群力下，各方面都穩步進展。

## 新航空交通管制系統

民航處總部的航空網絡中心及航空情報管理中心分階段於二零一五年十月和十二月啟用。新航空網絡中心配備了最先進而又符合國際通訊標準的航空交通服務訊息處理系統和自動航空氣象廣播系統，提升民航處提供航空交通資訊及航空氣象情報的服務；新航空情報管理中心在新系統的支援下，優化了處理飛行計劃書和航行通告的程序，並能以電子方式展示及發放航空情報。

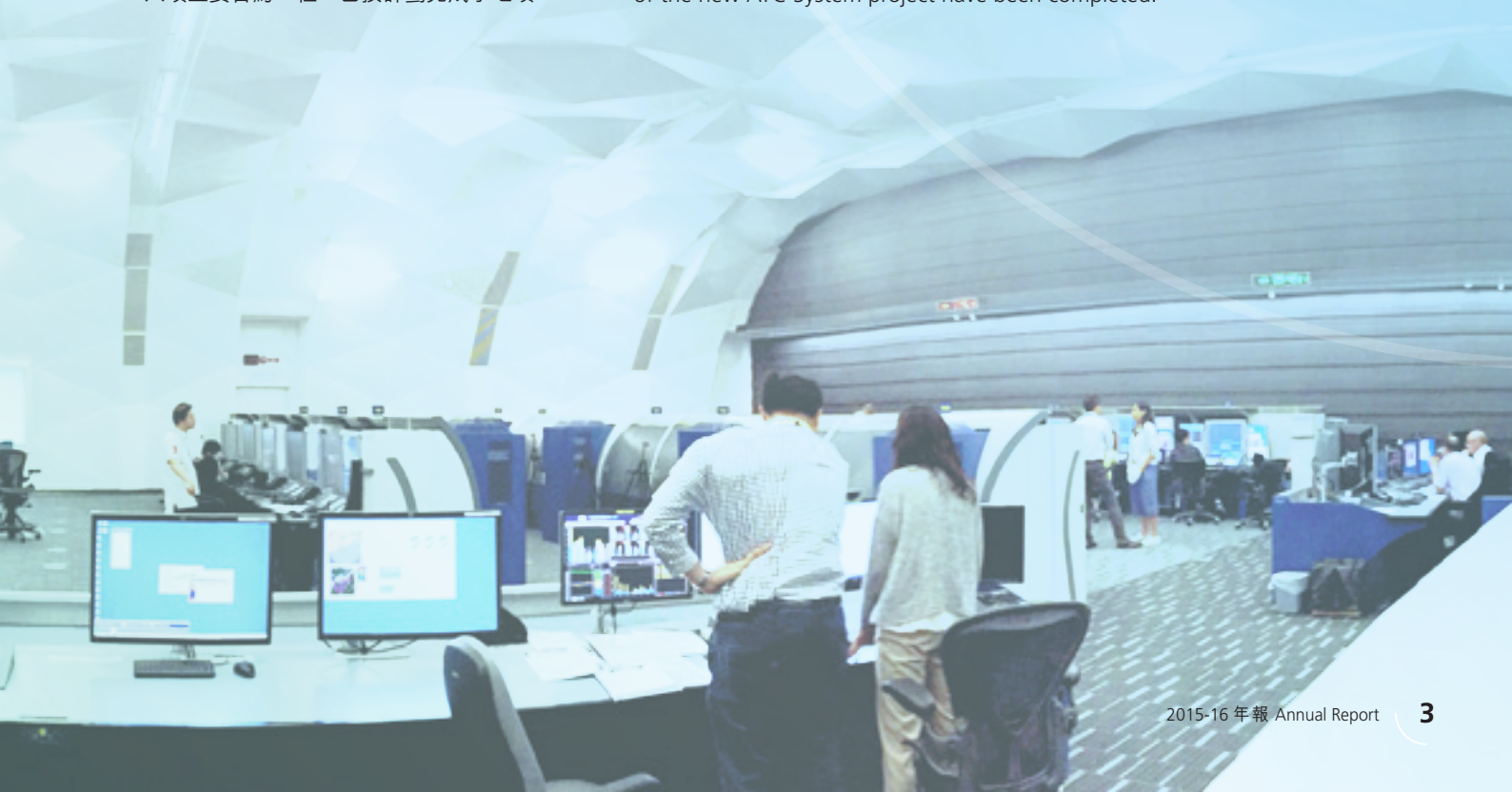
總括而言，兩個新中心配備多項新功能及先進科技，不僅提高民航處的航空情報管理工作效率，亦加強航空資訊的準確性和飛行安全，有助推動區內及國際航空業的發展，以應付持續增長的航空交通需求。隨着該兩個中心投入服務，更換航空交通管制系統的八項主要合約工程，已按計劃完成了七項。

Thanks to concerted efforts of CAD colleagues, the Department made steady progress in the year 2015-16.

## NEW AIR TRAFFIC CONTROL (ATC) SYSTEM

The new Aeronautical Network Centre (ANC) and Aeronautical Information Management Centre (AIMC) at CAD Headquarters were commissioned in phases in October and December 2015 respectively. The new ANC installed a state-of-the-art Air Traffic Service Message Handling System, which fully complies with the international communications standards, and a new Automatic VOLMET Broadcast System, which can enhance CAD's efficiency in providing air traffic service and aeronautical meteorological information. The AIMC, with the support of a new system, has greatly enhanced its operational efficiency in progressing flight plans and NOTAM as well as graphical presentation of aeronautical information.

All in all, the new functions and advanced features of the two centres not only boost CAD's efficiency in aeronautical information management but also enhance the accuracy of aeronautical information and flight safety to better suit the regional and international development of the aviation industry, as well as to cope with the increasing air traffic demand. With the commissioning of ANC and AIMC, seven out of eight major system contracts of the new ATC System project have been completed.



# 處長報告

## Director-General's Review

餘下的一項涉及新航空交通管理系統（航管系統）亦已準備就緒。為進一步確保新航管系統在運作上安全、可靠和穩定，運輸及房屋局（運房局）於二零一五年十一月委聘顧問，評估系統與操作人員的準備狀況，並向運房局提供獨立意見。根據顧問的評估，系統安全、穩定和可靠，與其他地區的空管中心的良好做法看齊。顧問並建議採用分階段的方式過渡至新系統。民航處在考慮過運房局顧問的建議，以及內部對整體運作準備狀況的評估後，已由二零一六年六月起逐步推行新航管系統。根據計劃，新航管系統將於二零一六年十一月全面投入運作。新航管系統採用多項自動化及先進的技術，將進一步提升航空交通管理的能力和效率。長遠而言，配合香港國際機場三跑道系統，將為香港各行各業帶來莫大裨益。

### 優化空管程序

年內，民航處處理了約41萬架次在香港國際機場升降的航班，並為近26萬架次飛越香港飛行情報區的航班提供空管服務。與上一年度比較，在香港國際機場升降的航班數目增加了3.6%，而飛越香港的航班數目更增加了超過10%。香港國際機場於二零一六年二月六日，處理了1 227架次航班升降，又再刷新單日航班升降紀錄。這些成績和紀錄，除了體現香港國際機場作為國際航空中心的地位外，亦代表了民航處全人努力不懈和不辭勞苦。

鑑於航空交通需求快速增長，民航處多年來一直致力促使香港國際機場達到最高跑道容量。通過進一步優化飛行程序和空管程序，香港國際機場雙跑道系統的最高容量已於年內提升至每小時68架次。

此外，為了全面落實《珠三角地區空中交通管理規劃與實施方案》內的優化措施，民航處一直透過三方工作組與國家民航局和澳門民航局保持緊密聯繫，商討分階段推展各項優化措施。年內，民航處與國家民航局達成協議，在香港和廣州兩個飛行情報區之間增設往來華東地區航路及一個名為「LELIM」的空管移交點，以供往來港澳及華東地區的航班使用。在三方不斷合作下，珠三角地區各機場將能

The remaining part, i.e. the Air Traffic Management System (ATMS), is also ready for use. As an additional check point in ensuring safety, reliability and stability of the new ATMS operations, the Transport and Housing Bureau (THB) has engaged a consultant in November 2015 to assess system and staff readiness and render independent advice to THB. According to their assessment, the ATMS was safe, stable and reliable, and on par with the best practice of ATC centres in other jurisdictions. They further recommended a phased transition approach of the new system. Taking into account the recommendation from the THB's consultant as well as CAD's own assessment on the overall operational readiness, we have launched the new ATMS incrementally from June 2016 onwards. According to the plan, the new ATMS will be fully commissioned and operated by November 2016. The new ATMS is equipped with advanced electronics technology, which will further enhance the capability and efficiency of air traffic management. In the long run, the new ATMS, coupled with the Three-Runway System (3RS) of Hong Kong International Airport (HKIA), will bring benefits to the whole community.

### ATC PROCEDURES ENHANCEMENT

During the year, CAD handled some 410 000 aircraft movements at HKIA and about 260 000 flights overflying the HKFIR. Compared with the previous year, the number of aircraft movements at HKIA and overflights increased by 3.6% and over 10% respectively. On 6 February 2016, a total of 1 227 flight movements were handled at HKIA, setting another new single-day record. These statistics reflected HKIA's status as an international aviation centre and represented the great efforts of CAD's staff.

In view of the rapid growth in air traffic demand, CAD has been working towards achieving the maximum runway capacity of HKIA over the past few years. By further enhancing flight and ATC procedures, the maximum hourly runway capacity at HKIA, i.e. 68 movements per hour, was reached during the year.

Furthermore, with the aim of full implementation of the enhancement measures as stipulated in the Pearl River Delta (PRD) Region Air Traffic Management Planning and Implementation Plan, CAD has been maintaining close liaison with the Civil Aviation Administration of China (CAAC) and the Civil Aviation Authority of Macau through the Tripartite Working Group to discuss the phased implementation of enhancement measures. During the year, CAD reached an agreement with the CAAC in which new air routes transiting the eastern part of the Mainland and an associated additional handover point between the Hong Kong and Guangzhou FIRs known as





健康有序地發展，而香港國際機場三跑道系統落成啟用後亦能夠發揮最大效用，以期達至每小時處理102班航班的長遠目標。

## 加強管理

民航處在處理更換航空交通管制系統和優化空管程序這兩項重點工作的同時，我們在其他範疇的工作並沒有半點鬆懈。面對航空業的蓬勃發展和配合香港國際機場三跑道系統工程，民航處正籌劃多個重大工作項目和進行人力規劃以配合運作需要。因此，民航處在年內加強高層管理，增設一個副處長職位，並由首長級乙級政務官蔡傑銘先生出任。新的組織架構將加強民航處的行政、資源管理和規劃能力，而原有的副處長得以更專注民航處的專業職能，監督航空安全，協助業界發展。

## 展望未來

二零一六年是民航處成立七十周年。香港機場已由當初九龍灣北岸一小片填海地，發展至現今大嶼山赤鱗角的龐大規模，並躋身全球最佳機場之列。要繼續維持香港國際航空中心的地位，民航處的責任重大，亦會面對不少挑戰。我想借用被譽為「波音747之父」的已故美國飛機工程師Joe Sutter的說話勉勵自己：「要順利完成一項計劃，除了要奮發蹈厲，拼力朝着目標進發外，亦需要別人的襄助，大家通力合作，及不妨讓他們做認為值得實行的事情。」

民航處會繼續與業界持份者同心協力，維持香港國際航空中心的地位，為香港航空業開拓更廣闊的前景。

LELIM were established for flights operating between Hong Kong, Macau and the eastern part of the Mainland. Continued cooperation among the three sides would bring about healthy and orderly development of the airports in the PRD region and enable the 3RS of HKIA to maximise its potential and to achieve the target runway capacity of 102 movements per hour in the long run.

## STRENGTHENED MANAGEMENT

The replacement of the new ATC System and the enhancement of ATC procedures have been the two major priorities of CAD in recent years. Nevertheless, CAD continues its endeavours to fulfil our duties in other aspects. To cope with the booming aviation market and the looming 3RS project, CAD has been undertaking a number of key projects and working on manpower planning. To this end, CAD strengthened its senior management during the year by creating a new Deputy Director post, which has been taken up by Mr Kevin Choi, an Administrative Officer Staff Grade B. The new organisational setup strengthens CAD's capacity in administration, resource management and project planning. The existing Deputy Director-General of Civil Aviation will concentrate on the professional work of CAD, oversee aviation safety and facilitate the development of aviation industry.

## LOOKING FORWARD

The year 2016 marks the 70th anniversary of the establishment of CAD. Having evolved from its infancy located at a small piece of reclaimed land at Kowloon Bay to the ever-growing one at Chek Lap Kok, Hong Kong airport has become one of the best airports all over the world. To maintain our status as an international aviation centre, CAD is tasked with great responsibilities and will inevitably face challenges. I would share with all some remarks made by Mr Joe Sutter, an American engineer who was often known as "Father of the 747", "The best way to see a program through is simply to accept the help, cooperate, and let others do what they think is worthwhile. In the meantime, continue racing toward the finish line."

CAD will continue to work with all stakeholders in the aviation industry in order to uphold Hong Kong's status as an international aviation centre and to open up more opportunities for the local aviation industry.





左起 from left

- 1 總庫務會計師  
Chief Treasury Accountant  
岑倫光先生  
Mr Stewart Shum Lun-kwong
- 2 部門秘書  
Departmental Secretary  
張振聲先生  
Mr Ivan Cheung Chun-shing
- 3 助理處長（航班事務及安全管理）  
Assistant Director-General  
(Air Services and Safety Management)  
岑毓麟先生  
Mr Alan Shum York-lan
- 4 助理處長（航空交通工程服務）  
Assistant Director-General  
(Air Traffic Engineering Services)  
胡志光先生  
Mr Richard Wu Chi-kwong
- 5 民航處副處長  
Deputy Director-General of Civil Aviation  
李天柱太平紳士  
Mr Simon Li Tin-chui, JP
- 6 民航處處長  
Director-General of Civil Aviation  
羅崇文太平紳士 AE  
Mr Norman Lo Shung-man, JP, AE
- 7 民航處副處長（特別職務）  
Deputy Director  
(Special Duties)  
蔡傑銘先生  
Mr Kevin Choi
- 8 助理處長（機場標準）  
Assistant Director-General  
(Airport Standards)  
廖志勇機長  
Captain Victor Liu Chi-yung
- 9 助理處長（飛行標準）  
Assistant Director-General  
(Flight Standards)  
曾煜本先生  
Mr Tsang Yuk-poon
- 10 助理處長（航空交通管理）  
Assistant Director-General  
(Air Traffic Management)  
李國柱先生  
Mr Raymond Li Kwok-chu



# 組織圖 (2015-2016年度)

## Organisation Chart (2015-2016)

### 民航處處長 Director-General of Civil Aviation

羅崇文太平紳士, AE  
Mr Norman Lo Shung-man, JP, AE

### # 民航處副處長 Deputy Director-General of Civil Aviation

李天柱太平紳士  
Mr Simon Li Tin-chui, JP

### # 民航處副處長 (特別職務) Deputy Director (Special Duties)

蔡傑銘先生  
Mr Kevin Choi

**# 備註:** 民航處由二零一六年六月二十八日起開設一個首長級乙級政務官的編外職位，職銜為民航處副處長(2)，由副處長(特別職務)蔡傑銘出任，而民航處原有的副處長職銜則改為民航處副處長(1)。

民航處副處長(1)協助民航處處長監察四個分部(飛行標準及適航部、航空交通管理部、航空交通工程服務部和機場安全標準部)的運作；民航處副處長(2)協助民航處處長監察三個分部(航班事務及安全管理部、行政部和財務部)的運作，及督導民航處多個重大工作項目的行政管理。

**# Remarks:** The CAD created a supernumerary Administrative Officer Staff Grade B post on 28 June 2016. The post, designated as Deputy Director-General of Civil Aviation (2) (DDGCA(2)), has been taken up by Deputy Director (Special Duties) Mr Kevin Choi and the former post, Deputy Director-General of Civil Aviation, has been re-designated as Deputy Director-General of Civil Aviation (1) (DDGCA(1)).

DDGCA(1) supports DGCA in overseeing the operation of four Divisions, namely FSAD, ATMD, AESD and APSD. DDGCA(2) supports DGCA in overseeing the operation of the ASMD, AdmD and FD, and the administrative management of various key projects of CAD.

### 航空交通管理部 Air Traffic Management Division (ATMD)

助理處長(航空交通管理)  
Assistant Director-General (Air Traffic Management)

李國柱先生  
Mr Raymond Li Kwok-chu

### 飛行標準及適航部 Flight Standards and Airworthiness Division (FSAD)

助理處長(飛行標準)  
Assistant Director-General (Flight Standards)

曾煜本先生  
Mr Tsang Yuk-poon

### 航班事務及安全管理部 Air Services and Safety Management Division (ASMD)

助理處長(航班事務及安全管理)  
Assistant Director-General (Air Services and Safety Management)

岑毓麟先生  
Mr Alan Shum York-lan

### 財務部 Finance Division (FD)

總庫務會計師  
Chief Treasury Accountant

岑倫光先生  
Mr Stewart Shum Lun-kwong

### 航空交通工程服務部 Air Traffic Engineering Services Division (AESD)

助理處長(航空交通工程服務)  
Assistant Director-General (Air Traffic Engineering Services)

胡志光先生  
Mr Richard Wu Chi-kwong

### 機場安全標準部 Airport Standards Division (APSD)

助理處長(機場標準)  
Assistant Director-General (Airport Standards)

廖志勇機長, 太平紳士  
Captain Victor Liu Chi-yung, JP

### 行政部 Administration Division (AdmD)

部門秘書  
Departmental Secretary

張振聲先生  
Mr Ivan Cheung Chun-shing

### 意外調查部 Accident Investigation Division 副總意外調查主任 Deputy Chief Inspector of Accidents

#### 意外調查

\* 民航處處長亦是總意外調查主任。意外調查部只在有需要時才運作，屆時會從其他分部抽調經特別訓練的人員作支援。

#### Accident Investigation

\* The Director-General of Civil Aviation (DGCA) is also Chief Inspector of Accidents. The Accident Investigation Division is mobilised only when required by drawing specially trained staff from other divisions.

# 大事紀要

## Calendar of Events

# 2015

### 四月三日

3 April

香港國際機場創下1 210架次之單日航班升降紀錄。

A new single day record of 1 210 flight movements was set at Hong Kong International Airport (HKIA).

### 四月十四至十六日

14-16 April

「2015美國聯邦航空局/亞太雙邊夥伴對話」在民航處總部舉行。

The 2015 Federal Aviation Administration / Asia Pacific Bilateral Partners Dialogue was held at CAD Headquarters.

### 七月二十三日

23 July

在07L/R跑道新增了兩個「要求授權的所需導航性能進場程序」以提升香港國際機場在天氣不利情況下處理抵港航班的能力。

Two additional Required Navigation Performance Authorisation Required Approach (RNP AR APCH) procedures for RWY 07L/R have been made available to enhance airport accessibility in unfavourable weather conditions.



**五月十四日**  
**14 May**

國家民航局、民航處及澳門民航局在廣州召開三方高層會議，討論珠三角地區空域優化議題。

A high-level meeting was held between the Civil Aviation Administration of China (CAAC), CAD and the Civil Aviation Authority of Macau (CAAM) in Guangzhou to discuss various issues related to Pearl River Delta (PRD) region airspace enhancement.

**六月十五日**  
**15 June**

資產管理系統ISO55001頒授儀式在民航處總部舉行。

ISO55001 Presentation Ceremony was held at CAD Headquarters.

**十月二十五日**  
**25 October**

香港國際機場雙跑道的運作容量增至每小時68架次。

The declared runway capacity for dual runway operations at HKIA increased to 68 movements per hour.

**十月二十九日**  
**29 October**

民航處與澳洲民航當局簽署《「設計更改，修理設計和航空產品的認可」的技術安排》。

CAD and the Civil Aviation Safety Authority Australia signed a Technical Arrangement on Acceptance of Design Change, Repair Design, Parts and Appliances.

2015

十一月四日  
4 November

2015年國際適航聯盟論壇在民航處總部舉行。  
2015 International Federation of Airworthiness Forum was held at CAD Headquarters.

十一月十二日  
12 November

所需導航性能標準儀表離場/進場程序完全取代傳統程序。  
RNP 1 Standard Instrument Departure (SID)/ Standard Instrument Arrival (STAR) procedures completely replaced conventional procedures.

2016

一月七日  
7 January

在香港和廣州兩個飛行情報區之間增設往來華東地區航道及一個名為「LELIM」的空管移交點，以供往來港澳及華東地區的航班使用。

New air routes for the eastern part of the Mainland and associated additional handover point between the Hong Kong and Guangzhou Flight Information Regions called LELIM were established for flights operating between Hong Kong, Macau and the eastern part of the Mainland.

一月十八日  
18 January

國家民航局空管局、民航處及澳門民航局在廣州召開高層會議，討論珠三角地區空域優化議題。

A high-level meeting was held between the Air Traffic Management Bureau of CAAC, CAD and CAAM in Guangzhou to discuss PRD region airspace enhancement issues.



**十二月九及十日**  
**9-10 December**

第五屆歐洲航空安全局國際合作論壇在民航處總部舉行。

The fifth International Cooperation Forum organised by the European Aviation Safety Agency was held at CAD Headquarters.

**十二月十五日**  
**15 December**

在六個政府部門及其它機構的參與下，成功舉辦了一次長程搜救演習。

A long range search and rescue exercise was successfully conducted with participation of six Government departments and other organisations.

**十二月二十八日**  
**28 December**

香港國際機場中場範圍第一期發展計劃啟用。

Midfield Development Phase One of HKIA was commissioned.

**二月六日**  
**6 February**

香港國際機場創下1 227架次之單日航班升降紀錄。

A new single day record of 1 227 flight movements was set at HKIA.

**三月十日**  
**10 March**

ISO27001:2013認證證書頒發儀式在民航處總部舉行。

ISO27001:2013 Certification Presentation Ceremony was held at CAD Headquarters.

**三月十八日**  
**18 March**

首班以空中巴士A350型客機運作的商業航班飛抵香港國際機場。

The first commercial flight operated by Airbus A350 aircraft landed at HKIA.

**三月二十三日**  
**23 March**

國家民航局、民航處和澳門民航局在香港召開高層會議，進一步討論有關優化珠三角地區空管程序與空域結構，以及提升該地區空域使用效率等多項議題，並為今後強化高層恆常合作建立基礎。

A high-level meeting was held between CAAC, CAD and CAAM in Hong Kong to further discuss various PRD region airspace enhancement issues, ATC procedures and optimisation of the airspace utilisation in the region, and to pave the way for further high-level co-operation in the future.

# 航空交通統計

## Air Traffic Statistics

### 過往五年國際民航交通概況

#### Five-Year Civil International Air Traffic

(二零一一年四月至二零一六年三月) (April 2011 – March 2016)

財政年度 Fiscal Year	飛機升降次數 Aircraft Movement		乘客* Passenger*		商業貨物 Commercial Cargo	
	升降次數 Movement	升跌百分比 % Change	人次 Number	升跌百分比 % Change	公噸 Tonnes	升跌百分比 % Change
2011-2012	339 133	7%	53 859 537	7%	3 923 295	-6%
2012-2013	355 008	5%	56 425 252	5%	4 039 873	3%
2013-2014	377 478	6%	60 085 950	6%	4 176 970	3%
2014-2015	395 997	5%	64 264 961	7%	4 405 028	5%
<b>2015-2016</b>	<b>410 065</b>	<b>4%</b>	<b>69 303 711</b>	<b>8%</b>	<b>4 343 289</b>	<b>-1%</b>

\* 乘客人次包括轉機，但不包括過境乘客。

\* Passengers include transfer, but exclude transit passengers.

### 過往五年航空交通管理部處理的航班總數

#### Five-Year Total Flights Handled by the Air Traffic Management Division

(二零一一年四月至二零一六年三月) (April 2011 – March 2016)

財政年度 Fiscal Year	航班總數* Flights Handled*	升跌百分比(比上年) % Change (from last year)
2011-2012	531 438	10%
2012-2013	563 642	6%
2013-2014	602 392	7%
2014-2015	631 383	5%
<b>2015-2016</b>	<b>670 481</b>	<b>6%</b>

\* 「航班總數」乃由香港民航處航空交通管理部每年所處理的班機數目。其中包括：

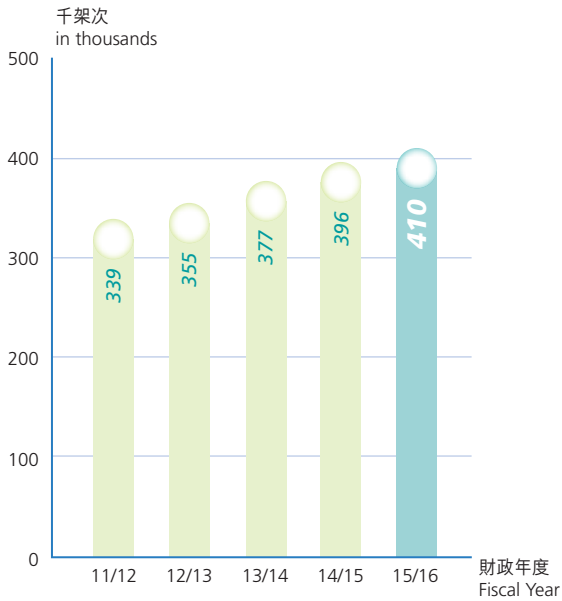
- (1) 在香港國際機場升降的國際及本地航班；
- (2) 所有飛越香港飛行情報區而不在本港升降的航班；
- (3) 由航空交通管理部處理進出澳門國際機場的航班。

\* [Flights Handled] is the total number of aircraft handled by the Air Traffic Management Division of CAD in the year. It includes:

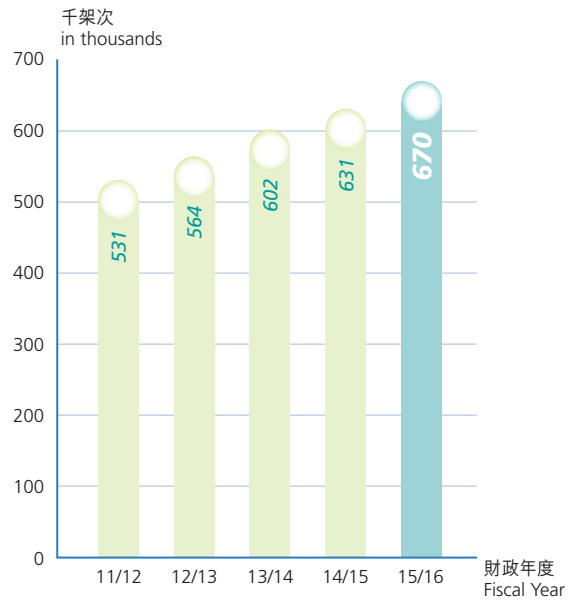
- (1) international and local aircraft movements at the Hong Kong International Airport;
- (2) flights transiting the Hong Kong Flight Information Region not landing Hong Kong;
- (3) flights landing and departing Macao International Airport handled by the Air Traffic Management Division.



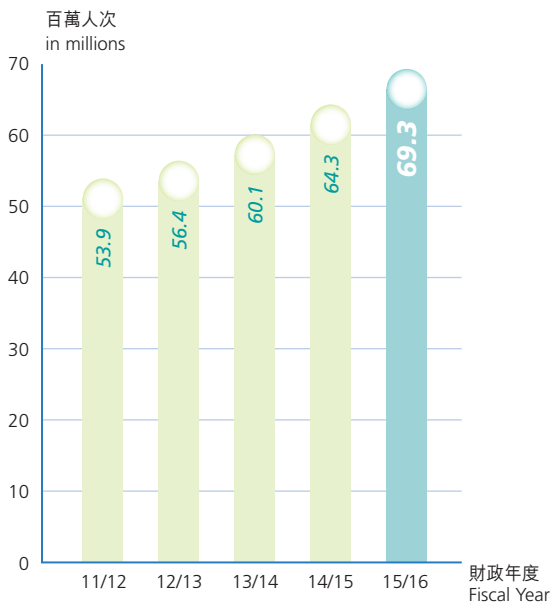
### 香港國際機場過往五年航機升降次數 Five-Year Aircraft Movement at the Hong Kong International Airport



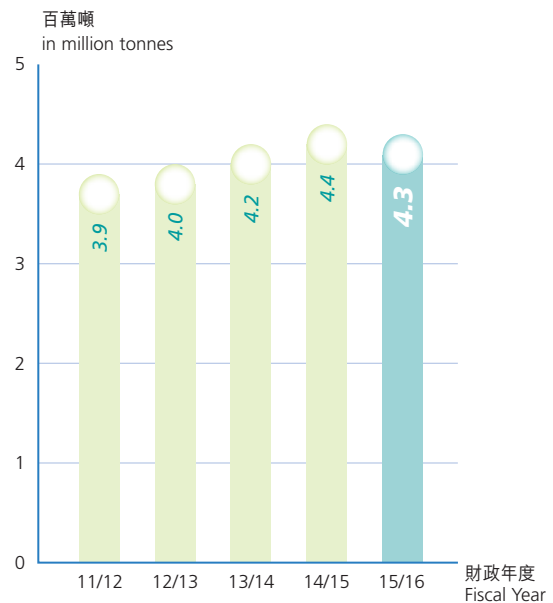
### 過往五年航空交通管理部處理的航班總數 Five-Year Total Flights Handled by the Air Traffic Management Division



### 香港國際機場過往五年客運量 Five-Year Passenger Traffic at the Hong Kong International Airport



### 香港國際機場過往五年貨運量 Five-Year Cargo Traffic at the Hong Kong International Airport



# 航空交通管理

## Air Traffic Management

航空交通管理部負責為在香港飛行情報區內航行的民航機提供空中導航服務，當中包括航空交通服務，通訊、導航和監察，以及搜索和救援。為履行使命，在香港飛行情報區內提供持續可靠的導航服務，並維持航空交通高效有序的運作，本部亦肩負培訓本地航空交通管制（空管）人員、提供航空電訊服務、協調航班和設計空管程序的責任。

The Air Traffic Management Division (ATMD) is responsible for the provision of air navigation services to civil aircraft operating within the Hong Kong Flight Information Region (HKFIR). The services include air traffic services, communications, navigation and surveillance as well as search and rescue. With the mission of providing reliable and sustainable air navigation services and maintaining efficient and orderly air traffic operations within HKFIR, ATMD is also responsible for the training of air traffic control (ATC) personnel, provision of aeronautical telecommunication services, flight schedule coordination and the design of ATC procedures.







# 航空交通管理

## Air Traffic Management

航空指揮塔為進出香港國際機場的航機提供空管服務。  
The Air Traffic Control Tower provides air traffic control services to aircraft operating at Hong Kong International Airport.



### 航空交通運作

在本財政年度內，航空交通管理部處理了411 513架次在香港國際機場升降的國際及本地航班，並為258 968架次飛越香港飛行情報區的航班（當中包括55 825架次往來澳門國際機場的航班）提供空管服務。與上一年度比較，在香港國際機場升降的航班數目增加了3.6%，而飛越香港的航班數目則增加了10.6%。

#### 跑道升降容量

通過進一步優化飛行程序和空管程序，香港國際機場雙跑道的最高容量，已於年內提升至每小時68架次。香港國際機場更於二零一六年二月六日，處理了1 227架次航班升降，刷新單日航班升降紀錄。

#### 航空交通管制主任執照考試和覆核

為維持空管運作的表現和安全標準，本部的訓練及安全組為航空交通管制主任（空管主任）安排各類實務考試。年內，就塔台管制、進場管制和區域管制三個空管範疇共舉行了244次實務考試。此外，本部也向經考核及格的人員頒發助理管制員證書、空管氣象記錄員證書、在職培訓導師證書和流量管制證書。

### AIR TRAFFIC OPERATIONS

During the financial year, ATMD handled 411 513 international and local aircraft movements at Hong Kong International Airport (HKIA). In addition, the Division handled 258 968 flights overflying the HKFIR (including 55 825 flights into and out of Macao International Airport). Compared with the previous year, the number of aircraft movements at HKIA and overflights increased by 3.6% and 10.6% respectively.

#### Runway Capacity

Further enhancements to flight procedures and ATC procedures enabled the handling capacity for the two runways at HKIA to be increased to a maximum of 68 movements per hour within the year. On 6 February 2016, a total of 1 227 flight movements were handled at HKIA, setting a new single day record during the year.

#### Examinations and Revalidations of Air Traffic Control Officer Ratings

The Training and Safety Section of ATMD carried out practical examinations on Air Traffic Control Officers (ATCOs) to ensure that the required performance and safety standards in ATC operations are maintained. In the year, 244 practical examinations were conducted in the three ATC streams – Aerodrome Control, Approach Control and Area Control. In addition, ATMD also issued Assistant Controller Certificates, ATC Meteorological Reporter Certificates, On-the-job Instructor Certificates and Flow Control Certificates to officers who had attained these qualifications.



## 招聘和培訓空管人員

### *招聘和培訓見習空管主任*

招聘和培訓見習空管主任的工作必須審慎規劃和管理，以配合預期的航空交通增長和人手需求。由於本地就業市場欠缺具備所需資歷的空管主任，民航處通常會招聘見習空管主任，經過專門培訓後，再擢升為空管主任。

在見習空管主任的招聘程序中，合資格的申請人必須通過一系列的評估，包括才能測驗筆試、工作性格測驗和面試。通過上述各項評估的申請人會在評估中心接受更深入的認知能力測試和性格評估。

## RECRUITMENT AND TRAINING OF ATC STAFF

### *Recruitment and Training of Student Air Traffic Control Officers (SATCOs)*

The recruitment and training of ATC staff have to be carefully planned and managed to meet anticipated air traffic growth and manpower needs. As qualified ATCOs are not readily available in the local job market, individuals are normally recruited as SATCOs. After specialised training, they will progress from SATCOs to ATCOs.

During the recruitment of SATCOs, eligible candidates will go through a series of assessments including a written aptitude test, an occupational personality questionnaire and an interview. Further in-depth assessment on cognitive ability and personality traits will be conducted in the Assessment Centre for candidates who pass all the assessments mentioned.



航空指揮塔為進出香港國際機場的航機提供空管服務。  
The Air Traffic Control Tower provides air traffic control services to aircraft operating at Hong Kong International Airport.



見習空管主任的培訓需要周詳規劃，務使受訓學員的表現能達到既定的進展基準。培訓計劃由不同階段的訓練單元組成，以確保學員充分掌握所學技能後，才開始接受另一單元的培訓。各個訓練單元均包括課堂學習、利用空管雷達模擬器或塔台模擬機進行模擬訓練，以及於工作崗位接受在職培訓。受訓人員必須通過考核，才會獲准獨立工作。培訓見習空管主任成為合資格的管制員，以擔任二級空管主任的職位，一般需時六年左右。

除本地培訓外，見習空管主任也會到海外修讀基本空管課程，內容廣泛，包括空管程序、氣象、雷達操作、飛行原理等航空知識，以擴闊他們在空管運作方面的閱歷。在本財政年度內，共有18名見習空管主任完成海外基本空管課程，而另有9名見習空管主任將在下一個財政年度內接受該等培訓。

截至二零一六年三月三十一日，空管主任的編制有279人，為空管主任提供支援的航空交通事務員則有118人。

The training programme of SATCOs is carefully designed and arranged to meet the established performance development benchmarks. It comprises staged training modules to ensure adequate consolidation before the next module. Each training module includes classroom lectures, practical training in the ATC Radar Simulator or Aerodrome Simulator, and on-the-job training at operational positions. After passing the validation check, the officer will be allowed to operate independently. The training of a SATCO to become a fully qualified controller at the rank of ATCO II normally takes around six years.

Apart from local training, SATCOs also attend overseas basic ATC courses. A wide coverage of aviation topics including ATC procedures, meteorology, radar operations and principles of flight will be introduced to broaden their exposure to various aspects of ATC operations. A total of 18 SATCOs completed their overseas basic ATC courses in this financial year and 9 more SATCOs would undergo such training in the next financial year.

As at 31 March 2016, the ATCO and Air Traffic Flight Services Officer (supporting staff to ATCO) establishment numbered at 279 and 118 respectively.

航空交通管制主任利用雷達協助指揮航班。  
Air Traffic Controllers direct aircraft with the assistance of radar.





### 其他職級的空管培訓

為人員提供空管專業培訓是航空交通管理部的重點任務之一。本部在年內定期舉辦多項培訓課程和在職培訓活動。

年內，本部舉辦了31項專業空管培訓課程，受訓人員從中取得多項專業空管資格，期間獲發的空管執照達33項。此外，又為87名塔台管制員舉辦塔台管制複修課程，讓他們在遇上突發情況時，例如在惡劣天氣下，或航機發生緊急事故時，也能應付裕如。本部還挑選了多名資深的空管主任接受不同範疇的進階培訓，包括安全管理系統、新式飛機操作、飛機意外調查和飛行程序設計等方面，以開拓他們的眼界，使他們勝任更專門的職務，以及承擔管理和督導責任。

### 其他培訓

除了安排內部空管培訓課程外，本部也與香港民航訓練中心合作，舉辦航空交通管理概論課程，讓業界伙伴和市民更深入了解航空交通管理的工作。課程定期舉辦，一直深受歡迎。

### ATC Training for Other Ranks

One of ATMD's major tasks is the provision of professional ATC training to staff. Training courses and on-the-job training activities were conducted regularly throughout the year.

During the year, 31 professional ATC training courses were conducted, leading to the issuance of 33 ATC ratings and the attainment of various professional ATC qualifications. Aerodrome refresher training was conducted for 87 Aerodrome Control personnel. The refresher training aims to ensure controllers' competency in responding to unusual circumstances, such as poor weather operations and aircraft emergencies. In addition, senior ATCOs were selected to attend advanced training in Safety Management System, Operations of Modern Aircraft, Aircraft Accident Investigation, and Flight Procedures Design, etc., to broaden their horizons, and enable them to undertake more specialised duties as well as management and supervisory responsibilities.

### Other Training Offered

Apart from the in-house ATC training courses, ATMD also conducted an Air Traffic Management Introductory Course in conjunction with the Hong Kong Civil Aviation Training Centre for industry partners and the public to have a better appreciation of air traffic management functions. The course is conducted regularly and has been well received.

塔台模擬機為學員提供逼真的實習訓練。  
Aerodrome Simulator emulates different training scenario with great realism.



### 新空管/飛程序

在過去數年，本部一直致力促使香港國際機場達到最高跑道容量。其中一項主要先決條件，是減少降落航機平均佔用跑道的時間，以縮短抵港航班的間距。在二零一五年第三季，本部的一項研究顯示，在民航處和香港機場管理局協力推行提高機師意識的計劃後，航機佔用跑道的時間已經減少至適當水平，使若干類型飛機的間距縮短至3.5海哩，香港國際機場得以在繁忙時段每小時可以處理34班抵港航班，並在二零一五年十月達到每小時68架次的最高跑道容量。

#### *「要求授權的所需導航性能進場程序」*

為提升香港國際機場在天氣不利情況下處理抵港航班的能力，本部於二零一五年年中起為07L/R跑道訂定了兩個「要求授權的所需導航性能進場程序」。新的程序利用衛星技術和航機上先進的導航性能，可以克服複雜地形和空域環境的限制，在香港國際機場提供一條從北方進場的航道，以便航機因惡劣天氣而不能從南方進場時使用。新的程序可供符合相關運作要求並獲民航處特別授權的航空公司使用。

#### *實施所需導航性能(RNP 1)標準儀表離場/進場程序*

按照亞太區落實基於性能導航(PBN)的地區發展計劃，民航處於二零一三年起實施RNP 1標準儀表離場/進場程序。為了讓營運者有更多時間將機隊升級和取得所需批准，民航處保留了相應的傳統程序。鑑於在香港國際機場運作的飛機大多已取得RNP 1的批准，過渡工作順利完成，因此由二零一五年十一月十二日起，RNP 1程序完全取代傳統程序。成功實施RNP 1程序，有助日後優化航道和空域設計，從而達至提升空域效率等運作效益。

### NEW ATC / FLIGHT PROCEDURES

ATMD has been working towards achieving the maximum runway capacity of HKIA over the past few years. One of the main prerequisites was a reduction in the average runway occupancy time for landings, to enable arriving aircraft to be spaced closer together. In the third quarter of 2015, ATMD completed a study which showed that the runway occupancy time had lowered to a satisfactory level, following a concerted pilot awareness campaign by both CAD and the Airport Authority Hong Kong. The lowering of runway occupancy time allowed a reduction in spacing to 3.5 nautical miles between certain categories of aircraft. The spacing reduction resulted in 34 arrival flights per hour to be handled at peak hours and the maximum hourly runway capacity at HKIA, i.e. 68 movements per hour, was reached in October 2015.

#### *Required Navigation Performance Authorisation Required Approach (RNP AR APCH) Procedures*

With an aim to enhance the accessibility to HKIA in unfavourable weather conditions, two new RNP AR APCH procedures for RWY 07L/R have been made available since mid-2015. The new procedures, which utilise satellite technology and advanced on-board navigation capability to overcome complex terrain and airspace environment, provide an approach path to the north of HKIA to cater for circumstances when weather precludes the conduct of approach from the south. They are available to airline operators which meet relevant operational requirements and have obtained special authorisation from CAD.

#### *Implementation of RNP 1 Standard Instrument Departure (SID)/Standard Instrument Arrival (STAR) procedures*

In line with the regional roadmap to implement performance-based navigation (PBN) in the Asia-Pacific Region, CAD has implemented RNP 1 SID/STAR procedures since 2013. In order to allow more time for operators to upgrade their fleet and obtain necessary approval, CAD retained the respective conventional procedures. Considering the majority of aircraft operating at HKIA have become RNP 1 approved and the transition has been successfully concluded, with effect from 12 November 2015, the RNP 1 procedures have completely taken over conventional procedures. The successful implementation of RNP 1 procedures would facilitate future enhancement of flight paths and airspace design, thereby offering operational benefits including enhanced airspace efficiency.



## 珠江三角洲(珠三角)地區航空交通管理計劃

為了全面落實《珠三角地區空中交通管理規劃與實施方案》(《方案》)內的優化措施，民航處一直透過三方工作組與國家民航局和澳門民航局保持緊密聯繫，商討分階段推展各項優化措施。年內，民航處與國家民航局達成協議，在香港和廣州兩個飛行情報區之間增設往來華東地區航道及一個名為「LELIM」的空管移交點，以供往來港澳及華東地區的航班使用。

此外，三方亦分別在二零一五年五月、二零一六年一月及三月召開了高層會議。在二零一六年三月二十三日在香港召開的一次高層會議中，國家民航局、民航處和澳門民航局進一步討論有關優化珠三角地區空管程序與空域結構，以及提升該地區空域使用效率等多項議題，並為今後強化高層恆常合作建立基礎。在三方不斷合作下，珠三角地區各機場將能健康有序發展，而香港國際機場三跑道系統亦能夠發揮最大效用，以期達至每小時處理102班航班的長遠目標。

民航處會繼續積極促進珠三角地區航空交通管理的合作交流，推展和落實其他優化區內空域設計和管理的措施，以配合區內未來航空交通量的快速增長。

## AIR TRAFFIC MANAGEMENT PLAN FOR THE PEARL RIVER DELTA (PRD) REGION

With the aim of full implementation of the enhancement measures as stipulated in the PRD Region Air Traffic Management Planning and Implementation Plan (the Plan), CAD has been maintaining close liaison with the Civil Aviation Administration of China (CAAC) and the Civil Aviation Authority of Macau (CAAM) through the Tripartite Working Group (TWG) to discuss the phased implementation of the enhancement measures. During the year, CAD reached an agreement with the CAAC in which new air routes for the eastern part of the Mainland and associated additional handover point between the Hong Kong and Guangzhou Flight Information Regions (FIRs) called LELIM were established for flights operating between Hong Kong, Macau and the eastern part of the Mainland.

Furthermore, three high-level meetings were also held in May 2015 as well as January and March 2016 respectively. The high-level meeting held in Hong Kong on 23 March 2016 between CAAC, CAD and CAAM further discussed various PRD airspace enhancement issues on flight procedures and airspace structure, and optimisation of the airspace utilisation in the region, and to pave the way for further high-level co-operation in the future. Continued cooperation among the three sides would bring about healthy and orderly development of the airports in the PRD region and enable the 3RS of the HKIA to maximise its potential and to achieve the target runway capacity of 102 movements per hour in the long run.

CAD will continue to proactively promote exchanges on PRD region air traffic management co-operation. It will also put forward and implement other measures to further rationalise the airspace management in the region to cope with the rapid growth in the volume of air traffic in future.

### 電訊服務

本部航空通訊組年內處理的資訊量顯著增長，其中通過固定航空通訊服務處理的訊息達 53 586 775個，較上一年度增加達17%。至於航空氣象廣播服務，年內為航機提供氣象報告合共351 506次，與去年度相比增加5%。

### 航班時刻分配

按照國際航空運輸協會發布的《世界航班時刻準則》，香港機場航班協調辦公室以公平、中立、高透明度的方式分配機場航班時刻，以確保現有的機場基礎設施得以善用。年內，於香港國際機場運作的航空公司及其他飛機營運者共獲分配418 061個航班時刻，達到機場實際最高容量的99.5%。香港機場航班協調辦公室所處理的航班時刻申請數量，較去年同期增加約4%。

### TELECOMMUNICATIONS SERVICES

The total number of messages handled by the Telecommunications Unit of the Division increased considerably in the year. On Aeronautical Fixed Service, 53 586 775 messages were handled, representing an increase of 17% as compared with last year. On Aeronautical Broadcast Service, the total number of weather messages broadcast to aircraft in flight amounted to 351 506, representing a 5% increase compared with last year.

### SLOT ALLOCATION

In accordance with the International Air Transport Association's Worldwide Slot Guidelines, the Hong Kong Schedule Coordination Office (HKSCO) managed slot allocation in a neutral, transparent and fair manner, with a view to ensuring the efficient utilisation of existing airport infrastructure. During the year, airlines and other aircraft operators at HKIA were allocated a total of 418 061 slots, reaching 99.5% of the airport maximum practical capacity. The number of slot applications processed by HKSCO also increased by about 4% compared with the same period last year.

長程搜救演習。  
Long range search and rescue exercise.





## 安全管理系統

航空交通管理部繼續致力推行安全管理系統，以期全面提升航空安全表現。為此，本部根據國際民用航空組織（國際民航組織）的條文和民航處的監管規定，積極推行安全風險管理和安全保證。在航空交通管理系統、儀器或程序作出重大變動前，本部會先評估安全風險和採取適當的緩解措施。

為監察與衡量安全績效表現，本部每季編製安全績效目標報告和安全績效指標報告，並呈交予負責監管本部安全績效的單位，即航空交通管理標準組審閱。此外，為確保安全管理系統不斷改進，年內本部就各個主要職能範疇進行了三次內部安全審查。本部又繼續支援航空交通管理標準組，協助其執行監管工作。

此外，本部繼續為員工提供合適的安全管理系統培訓，推廣重視安全的文化。除空管的基本培訓和複訓單元外，本部還推行了周詳的安全管理系統培訓計劃，向所有空管人員灌輸安全管理概念。

## 飛航搜索和救援（搜救）服務

本部與區域和國際搜救機關保持密切聯繫，並繼續參加本地和國際搜救會議及研討會。在六個政府部門及其它機構的參與下，本部於二零一五年十二月十五日成功舉辦了一次長程搜救演習。此外，本部亦恆常派員參與機場和飛機緊急事故演習。

## 海外航空會議和研討會

航空交通管理部於年內繼續積極參與推動地區和國際航空管理發展的會議和研討會。大部分的會議和研討會由國際民航組織、民用空中航行服務組織和區內其他航空機關舉辦。

## SAFETY MANAGEMENT SYSTEM (SMS)

ATMD continued putting in substantial efforts to enhance the overall aeronautical safety performance through effective implementation of its SMS. This is accomplished by proactive application of safety risk management and safety assurance in compliance with the provisions of the International Civil Aviation Organization (ICAO) and regulatory requirement of the department. Safety risk assessment is conducted and appropriate mitigation measures are introduced before any significant changes to the air traffic management systems, equipment or procedures can be implemented.

Reports on Safety Performance Targets and Safety Performance Indicators were compiled and submitted to the regulatory office overseeing the safety performance of ATMD, i.e. the Air Traffic Management Standards Office (ATMSO), on a quarterly basis for safety performance monitoring and measurement. To ensure the continuous improvement in safety performance, three internal audits were conducted in the year on different key functional areas of ATMD. In the meantime, the Division continued to provide necessary support to the ATMSO in facilitating regulatory oversight activities.

Besides, ATMD maintained its efforts to provide staff with appropriate SMS training in order to promote safety culture. A structured SMS training programme has been put in place to supplement the basic and recurrent ATC training modules in order to instil the concept of safety management in all ATC personnel.

## AERONAUTICAL SEARCH AND RESCUE (SAR) SERVICES

ATMD maintained close liaison with regional and international SAR authorities and continued to participate in local and international aeronautical SAR meetings and seminars. A long range SAR exercise was successfully conducted on 15 December 2015 with participation of six Government departments and other organisations. ATMD also regularly attended airport and aircraft emergency drills.

## OVERSEAS AERONAUTICAL MEETINGS AND CONFERENCES

During the year, ATMD continued to actively participate in meetings, seminars and conferences which promoted the development of air traffic management in the region and globally. Most of the meetings and seminars were organised by the ICAO, Civil Air Navigation Services Organisation and other aviation authorities of the Asia Pacific Region.





# 航空交通工程服務

## Air Traffic Engineering Services

航空交通工程服務部負責設計、規劃、統籌、提供和驗收航空交通管制(空管)系統、雷達、導航儀器和通訊設備。

The Air Traffic Engineering Services Division (AESD) is responsible for the design, planning, coordination, provision and commissioning of air traffic control (ATC) systems, radars, navigational aids and communication facilities.



# 航空交通工程服務

## Air Traffic Engineering Services

### 更換空管系統

現時空管系統於一九九八年香港國際機場啟用時投入運作，至今已使用超過17年。為應付未來的航空交通需求，本處於二零零七年獲立法會撥款15.65億元更換現有的空管系統。整個新空管系統透過八份主要合約實施，當中七份合約的工作已如期完成，並由二零一三年起分階段啟用，運作暢順。至於餘下的航空交通管理（航管）系統，民航處按國際航空安全管理標準和政府既定程序，對系統進行了一系列的嚴格驗收測試（包括實地驗收測試、飛行校驗測試、可靠性驗收測試和系統整合測試），並對系統作全面的安全評估，以確保系統的運作符合安全管理規定和合約條款。

為進一步確保新航管系統在安全管理和運作方面準備就緒，民航處在二零一二年委聘了獨立顧問提供專業意見，以及舉辦安全評估工作坊，以助有關人員就新空管系統的設計、推行和過渡制訂安全個案報告。獨立顧問已完成有關工作，並提出了制訂安全個案報告的工作框架。民航處已採用該框架，以按照國際民航組織的規定，編製報告供內部評估。

運輸及房屋局（運房局）於二零一五年十一月初委聘另一顧問，評估系統與操作人員的準備狀況，並向運房局提供獨立意見，進一步確保新航管系統的運作安全、可靠和穩定。顧問以二零一五年十二月的情況為依據，進行了「定照」方式的檢討。根據顧問的評估，系統工程屬安全、穩定和可靠，與其他地區的空管中心的良好做法看齊。顧問並建議採用分階段的方式過渡至新系統。

民航處在考慮過運房局顧問的建議，以及內部對整體運作準備狀況的評估後，計劃由二零一六年六月起逐步推行新航管系統。民航處將就分階段啟用所累積的經驗和進展、操作人員的準備狀況和資源需求等相關因素進行審慎的評估，並會參考運房局及民航處聘請的海外獨立顧問的意見。在

### Replacement of ATC Systems

The existing ATC systems have been in use for over 17 years since the opening of Hong Kong International Airport (HKIA) in 1998. To meet the future air traffic demand, the Legislative Council approved a provision of \$1.565 billion in 2007 for replacement of the existing ATC systems. The new ATC systems are implemented through eight major system contracts, seven of which have been completed as scheduled. Seven systems have been put into operational use by phases since 2013 and operating smoothly. For the remaining Air Traffic Management System (ATMS), a series of stringent system acceptance tests (including Site Acceptance Tests, Flight Check Acceptance Tests, Reliability Acceptance Tests and System Integration Tests) and comprehensive safety assessment have been conducted in accordance with international aviation safety management standards and established Government procedures, in order to ensure that the system operation complies with the safety management requirements and contract conditions.

To further ensure safety management and operational readiness of the new ATMS, CAD engaged an independent consultant in 2012 to provide expert advice and conduct safety assessment workshops for colleagues involved in formulating the safety case reports on the design, implementation and transition of the new ATC Systems. The consultant completed its tasks and recommended a framework of actions for formulating the safety case reports. The framework was adopted by CAD in compiling the reports for internal assessment as required by the International Civil Aviation Organization (ICAO).

The Transport and Housing Bureau (THB) has separately appointed another consultant in November 2015 to assess system and staff readiness and render independent advice to THB as an additional check point in ensuring safety, reliability and stability of the new ATMS operations. The consultant completed a "snapshot" review, based on the situation as at December 2015. According to their assessment, the engineering aspect of the ATMS was safe, stable and reliable, and on par with the good practice of ATC centres in other jurisdictions. They further recommended a phased transition approach of the new system.

Taking into account the recommendation from the THB consultant as well as CAD's own assessment on the overall operational readiness, CAD planned to launch the new ATMS incrementally from June 2016 onwards. CAD will base on actual experience gained and progress of phased implementation, as well as other related factors such as staff readiness and resource needs to carry out prudent assessment, while making reference to the advice by the THB's and CAD's overseas independent consultants.





新空管系統進行全面測試。  
The New ATC System was  
undergoing thorough testing.

系統和操作人員均準備就緒後，才會將新空管系統全面投入運作。

#### 國際民航組織提出的航空系統組塊升級

民航處根據國際民航組織的航空系統組塊升級框架，並考慮到亞太地區的《無縫空中交通管理計劃書》的優先次序，成功地與航空業界共同制定相關策略，分階段在香港實施各個組塊升級項目。年內，民航處繼續就航空系統組塊升級項目與持份者合作，並取得相當進展，特別是先進場面活動引導和控制系統、廣播式自動相關監察系統和航空交通服務設施間數據通訊等項目。

#### 持續發展安全管理系統，以提供穩妥的通訊、導航及監察服務和重要的屋宇裝備

在同事羣策羣力持續提升安全管理系統下，本部成功通過航空交通管理標準組對安全管理系統進行的全面監管審計，並獲續發安全管理系統證書，由二零一六年一月起生效，為期五年。這項重要成果，標誌着本部經提升的安全管理系統已更趨成熟和全面，完全符合國際民航組織的安全要求。本部亦全力配合航空交通管理標準組對衛星通訊、導航及監察/航管系統、外站運作，以及技術安全事故報告和調查程序所進行的定期審計和視察。

The new ATMS will be fully commissioned and operated after both system and staff are ready.

#### ICAO's Aviation System Block Upgrades

In accordance with ICAO's Aviation System Block Upgrades (ASBU) framework and after taking into consideration the priorities stipulated in the Seamless Air Traffic Management (ATM) Plan for the Asia and Pacific region, CAD collaborated successfully with the aviation industry to develop strategies for phased implementation of ASBU modules in Hong Kong. Throughout the year, CAD continued working with the stakeholders on relevant ASBU modules and steady progress was achieved, especially in the areas related to Advanced Surface Movement Guidance and Control System(A-SMGCS), Automatic Dependent Surveillance-Broadcast (ADS-B) and Air Traffic Services Inter-facility Data Communication(AIDC).

#### Ongoing Development of the Safety Management System in Support of the Provision of Safe Communications, Navigation, Surveillance and Critical Building Services

With concerted efforts of colleagues on continuous enhancement of Safety Management System (SMS), AESD passed the comprehensive SMS regulatory audits conducted by the Air Traffic Management Standards Office (ATMSO) and successfully renewed the SMS Certificate for another 5 years in January 2016. It was a great achievement signifying the enhanced SMS has become more mature and comprehensive while in full compliance with the ICAO safety requirements. AESD also provided full support to the ATMSO's regular audits and inspections on the satellite-based Communications, Navigation, Surveillance (CNS)/ATM systems, outstation operations, and Technical Safety Occurrence (TSO) reporting and investigation processes.

為配合持續不輟的安全保證工作，本部積極推行在職培訓，使更多相關同事成為認可審計人員，參與內部定期審計和視察工作。年內，本部繼續致力推廣安全意識，舉辦安全訓練和推廣活動。二零一六年二月，本部安排了海外專家到民航處總部，為同事提供培訓，以加強他們對通訊、導航及監察、航管和屋宇裝備/設施進行技術安全事故調查和分析的認識。

除了對現有通訊、導航及監察/航管系統的安全表現指標和目標進行定期安全趨勢檢視，以及按照檢視結果制訂有效的緩解風險措施之外，本部正參照適當的國際最佳做法，就屋宇裝備/設施（包括機電項目）和新空管系統，制訂新的安全表現指標和目標。

二零一六年二月，本部安排海外專家就通訊、導航及監察，航管系統和屋宇裝備/設施所進行的技術安全事故調查和分析工作，為民航處人員提供培訓，以加強他們對有關專業範疇的認識。

In February 2016, CAD arranged an overseas expert to deliver training courses on investigation and analysis of Technical Safety Occurrence on CNS, ATM and building services equipment/facilities to better colleagues' understanding in this specialised domain.

To support continuous safety assurance through regular internal audits and inspections, efforts were made to expand the pool of AESD approved auditors. Throughout the year, AESD continued its momentum in safety promulgation through organising safety training sessions and promotional activities. In February 2016, AESD arranged an overseas expert to provide training at the CAD Headquarters to better colleagues' understanding of TSO investigation and analysis on CNS, ATM and building services equipment/facilities.

In addition to the regular reviews of the safety trend of Safety Performance Indicators/Target (SPIs/SPT) for the existing CNS/ATM systems and formulating effective risk mitigating measures in accordance with the review results, new SPIs/SPT for the building services (including electrical and mechanical) equipment/facilities and new ATC systems were being formulated with reference to international best practices, as appropriate.





## 衛星通訊、導航及監察/航管系統

為遵從國際民航組織的全球空中航行計劃，民航處已開發及使用多項衛星通訊、導航及監察/航管系統和服務。當中，飛前放行指示雙向數據鏈路系統、電子飛行進程單系統和抵港航機排序系統在過去數年運作理想，為業界的營運帶來裨益。其他的最新發展概述如下：

### (一) 航空電訊網、航空交通服務訊息處理系統和航空交通服務設施間數據通訊

按照國際民航組織亞太地區航空電訊網和航空交通服務訊息處理系統實施計劃，香港與曼谷的電訊網和訊息處理系統已投入運作。香港現正與北京進行測試和試行，兩地的電訊網和訊息處理系統預期於二零一七年投入運作。

本部利用航空固定電訊網，與三亞和台北實施了全日24小時航空交通服務設施間數據通訊，以加強飛行安全，並提升與毗鄰空管中心的通訊運作效率。此外，本部已經與廣州和馬尼拉協調，並計劃於二零一六年第二季開展航空交通服務設施間數據通訊的初期技術測試和試行。

### (二) 先進場面活動引導和控制系統

鑑於航空交通量不斷增加及機場環境持續變動，本部安排了系統供應商全面檢視先進場面活動引導和控制系統訊號的完整性和覆蓋範圍。根據檢視報告的建議，機場中場客運廊已於二零一五年十二月增設外站單元機組，以增強系統訊號的覆蓋能力。我們並計劃提升同類系統，以配合即將進行的機場基建發展。

## Satellite-based CNS/ATM Systems

To comply with the ICAO Global Air Navigation Plan, CAD has developed and implemented various satellite-based CNS/ATM systems and services. The Pre-Departure Clearance Two-way Datalink Service, the Electronic Flight Strip System and the Arrival Manager System have been in satisfactory operation for some years bringing operational benefits to aviation stakeholders. The latest development of the others is highlighted below:

### (i) Aeronautical Telecommunication Network, Air Traffic Services Message Handling System and Air Traffic Services Inter-facility Data Communication

In accordance with the ICAO Asia-Pacific Regional Aeronautical Telecommunication Network (ATN) and Air Traffic Services Message Handling System (AMHS) Implementation Plan, the new circuit between Hong Kong and Bangkok has been put into operational use. Further tests and trials have been conducting with Beijing and the new circuit is planned for operational use in 2017.

The AIDC over Aeronautical Fixed Telecommunication Network with Sanya and Taipei has been put into 24-hour operation, enhancing flight safety and operational efficiency in communication with adjacent ATC centres. AESD has also coordinated with Guangzhou and Manila to schedule early AIDC technical tests and trials with Hong Kong in the second quarter of 2016.

### (ii) Advanced Surface Movement Guidance and Control System

To cope with the increasing traffic and on-going changes in the airport environment, AESD has engaged the equipment supplier to conduct a comprehensive signal integrity and coverage study of the A-SMGCS. In accordance with the recommendations of the study report, additional A-SMGCS Remote Units were installed at the Midfield Passenger Concourse in December 2015 to enhance the signal coverage performance. Similar system enhancement has been planned to cater for forthcoming HKIA infrastructure development.

### (三) 廣播式自動相關監察系統

年內，民航處繼續與國際民航組織區域辦事處及亞太地區其他國家緊密合作，帶領建立區域數據庫，以處理廣播式自動相關監察系統偵察的航空電子設備問題報告，加強亞太地區的飛行安全。此外，民航處亦牽頭協助國際民航組織制定及修訂廣播式自動相關監察系統的實施指引，供亞太地區國家使用。在積極參與國際民航組織廣播式自動相關監察研究和實施專責小組的工作下，民航處一直在亞太地區相關領域的發展工作保持領導地位。

### (四) 陸基增強系統

為使採用全球衛星導航系統的飛機進場和着陸程序更為精確，民航處已就機場安裝陸基增強系統，進行了初步的選址研究。本部結合了本處和地政總署設於全港各處的全球衛星導航系統監測站所收集到的實時數據，設立全港衛星數據庫。此外，本部自二零一三年起使用電離層閃爍監測系統，並通過國際民航組織電離層研究專責小組，與周邊地區合作，共同研究亞太地區上空電離層對陸基增強系統的性能可能產生的影響，以及系統適用的緩解措施。

### (五) 機場協同決策

本部在二零一三年推出桌面版及手機版的機場協同決策互聯網平台，該平台一直獲業界大力支持，成績令人鼓舞。在民航處成功推展機場協同決策平台的基礎上，香港機場管理局已聘請承包商進一步改善和擴展機場協同決策計劃，以為提升香港國際機場的運作效率，民航處將在技術和運作方面提供意見和支持。

### (iii) Automatic Dependent Surveillance-Broadcast System

Throughout the year, CAD continued to take lead in establishing the Regional ADS-B Avionics Problem Report Database, through close collaboration with ICAO Regional Sub-office and other Asia Pacific States, with a view to enhancing flight safety in the Asia Pacific Region. Besides, CAD took lead to support the ICAO in developing and refining the ADS-B implementation guidance materials for use by Asia Pacific States. Through our active participation in the ICAO ADS-B Study and Implementation Task Force, CAD has continued to maintain our leading position in ADS-B development in the region.

### (iv) Ground-Based Augmentation System

To augment the precision of aircraft approach and landing operations using the Global Navigation Satellite System (GNSS), CAD has conducted a preliminary siting study in preparation for installing a Ground-Based Augmentation System (GBAS) at HKIA. A territory-wide satellite database was established by combining the real time data collected by CAD's and Lands Department's GNSS monitoring stations located around the territory. Moreover, CAD has commenced using an Ionospheric Scintillation System since 2013, which enabled the collaboration with neighbouring areas through the ICAO Ionospheric Studies Task Force on studying possible ionospheric effect on GBAS performance and mitigating measures for deploying GBAS in the Asia Pacific Region.

### (v) Airport Collaborative Decision Making

AESD successfully launched the Airport Collaborative Decision Making (A-CDM) platform in both desktop and mobile versions on the Internet in 2013 with very encouraging feedback and support from the industry. Building on the successful implementation of the CAD's A-CDM platform, the Airport Authority Hong Kong (AAHK) has engaged a contractor to further enhance and extend the A-CDM scheme, which CAD will provide advice and support on technical and operation aspects, to strive for enhancing the overall HKIA's operational efficiency.



## 實施航空交通安全電子設備人員培訓計劃

為配合在二零一一年公布的「下一代航空專業人員」計劃，國際民航組織在空中交通安全電子協會國際聯合會、歐洲航空安全組織及各成員國的協助下，制定了《航空交通安全電子設備人員（電子設備人員）培訓手冊》（第7192號文件）。為此，民航處在二零一一年二月已為前線維修人員重組通訊、導航及監察/航管系統的傳統技術培訓計劃，加入更有系統並以技能為本的電子設備人員培訓模式。經過四年多的持續發展和實施後，按照國際民航組織第7192號文件編製的電子設備人員培訓計劃和文件，已經全面備妥，而香港國際機場的通訊、導航及監察和航管設備/設施對為航空安全至為重要，所有為該等設備/設施提供保養的前線維修人員，均需得到電子設備人員認證。

二零一五年九月，民航處的電子設備人員培訓計劃獲香港工程師學會正式認可，凡獲得電子設備人員認證的人員，可成為該學會的仲會員。這為「下一代航空專業人員」提供一個考取專業資格的清晰路徑，以投身航空業界，發展事業前途。

本部在二零一五年十月二十六日至三十日於菲律賓馬尼拉舉行的亞太地區民航局局長第52次會議上，提交了一份文件，與其他國家分享實施電子設備人員培訓計劃的經驗。該文件備受大會好評。隨後，蒙古民航局到訪民航處，希望從本部實施電子設備人員培訓計劃的經驗中借鏡觀形。

## Implementation of Air Traffic Safety Electronics Personnel Training Scheme

With contributions from the International Federation of Air Traffic Safety Electronics Associations (IFATSEA), EUROCONTROL and various Member States, ICAO has developed the Air Traffic Safety Electronics Personnel (ATSEP) Training Manual Doc 7192 to support the Next Generation of Aviation Professionals (NGAP) initiatives published in 2011. In line with the NGAP initiatives, CAD commenced in February 2011 to revamp the conventional CNS/ATM technical training scheme for the frontline maintenance staff with a view to introducing a more structured competency-based ATSEP model. After more than four years of on-going development and implementation, the ATSEP training scheme and documentation based on ICAO Doc 7192 are considered full-fledged. As such, all the frontline maintenance staff for safety-critical CNS and ATM equipment/facilities of HKIA should be ATSEP certified.

In addition, in September 2015, the ATSEP training scheme was accredited by the Hong Kong Institution of Engineers (HKIE) by admitting personnel who were ATSEP certified to be Associate Members of the HKIE. This will map a clear path for technical staff of NGAP to pursue professional qualification as well as career development in the aviation discipline.

To share our experience with other States in ATSEP training, AESD presented a paper during the 52nd Conference of Directors General of Civil Aviation Asia and Pacific Regions held in Manila, Philippines from 26 to 30 October 2015 and the paper was well received by the Conference. Subsequently, the Civil Aviation Authority of Mongolia visited CAD to draw on our experience in ATSEP training.



二零一六年一月，蒙古民航局訪問民航處，希望從香港實施電子設備人員培訓計劃的經驗中借鏡觀形。

In January 2016, Civil Aviation Authority of Mongolia visited CAD Headquarters to draw on our experience in implementing ATSEP training in Hong Kong.

## 推行資產管理系統

自二零一三年起，本部與機電工程署攜手展開計劃，為優化民航處總部空管大樓屋宇裝備的管理，推行ISO 55001資產管理系統。ISO 55001是一套國際認可的標準，用於管理資產在整個運作周期的表現。往後一年，本部與機電工程署共同進行一系列的特定工作，包括編製文件、培訓、管理檢討和內部審計。

空管大樓的機電系統、屋宇裝備系統和屋宇相關的電子設施系統所推行的資產管理系統，成功通過香港品質保證局的認證審計，獲得ISO 55001認證，為期三年。頒授儀式於二零一五年六月十五日舉行，標誌着兩個政府部門首次聯合獲發ISO 55001認證。

## Implementation of Asset Management System

Since 2013, AESD and the Electrical and Mechanical Services Department (EMSD) had jointly embarked on a project to implement the ISO 55001 "Asset Management System" with a view to enhancing management of the building services facilities in ATC Building of the new CAD Headquarters. ISO 55001 is an internationally recognised standard for performance management throughout the whole life cycle of an asset. Throughout the subsequent year, AESD and EMSD jointly undertook a series of specified activities including documents development, training, management review, and internal audits, etc.

With the certification audits successfully conducted by Hong Kong Quality Assurance Agency (HKQAA), ISO 55001 certification was approved for the asset management system implemented for the electrical and mechanical systems, building services systems and building-related electronics systems in the ATC Building with a validity of 3 years. The presentation ceremony held on 15 June 2015 also marked the first joint ISO 55001 certification issued to two government departments.



## 更換空管系統項目的第二期計劃

新空管中心於二零一六年十一月完全投入服務後，本部將繼續進行更換空管系統項目的第二期計劃，在現時空管大樓的空管中心和南控制塔安裝新的設備。本部成立了空管大樓和控制塔翻新工作組，成員包括民航處、建築署、機電工程署、香港天文台的代表和民航處聘用的保養服務承包商。工作組已於二零一六年一月二十七日召開了首次會議，以督導各個項目的整體協調工作，當中包括多個屋宇翻新和維修工程項目、更換屋宇裝備，以及安裝和測試新空管系統。

## Phase 2 Programme of Replacement of ATC System Project

Upon full commissioning of the new ATC Centre in November 2016, AESD would proceed with the Phase 2 Programme of the Replacement of ATC System Project, in which new equipment would be installed in the current ATC Centre and South Tower (S-TWR) at Air Traffic Control Complex (ATCX). AESD established the ATCX and S-TWR Refurbishments Task Force with members from CAD, Architectural Services Department, EMSD, Hong Kong Observatory and CAD's maintenance service contractor and a kick-off meeting was held on 27 January 2016 to steer the overall coordination of various works items on building refurbishments and repairs, building services equipment replacement, and new ATC systems installation and testing, etc.



ISO 55001頒授儀式於二零一五年六月十五日在民航處總部大樓舉行。  
ISO 55001 Presentation Ceremony was held at CAD Headquarters on 15 June 2015.

## 資訊科技管理

通過妥善實施各項新的資訊科技措施和「電子政府」策略，資訊科技管理組繼續支援各分部的日常運作。年內，資訊科技管理組完成了以下大型資訊科技項目，以加強資訊科技服務和支援：

(一) 二零一五年年初，資訊科技管理組委聘顧問，根據資訊保安管理標準（即ISO 27001），制定一套資訊科技保安政策、程序及指引。該標準是國際認可和廣為業界採納的最佳模式。同年年底，部門的資訊科技系統/服務、互聯網應用程式和支援服務，由認可的認證機構進行ISO 27001認證審計，並成功通過審計。這標誌着民航處的資訊科技系統和服務，符合資訊保安的國際最佳模式，達致國際最高級別標準。繼香港警務處、香港海關、房屋委員會及機電工程署後，民航處成為第五個獲得該項認證的政府部門。

## Information Technology Management

The Information Technology Management Unit (ITMU) continued to support day-to-day operations of various divisions through effective implementation of new Information Technology (IT) initiatives and the e-Government strategy. During the year, the following major IT projects were completed for the betterment of IT service and support:

(i) In early 2015, ITMU engaged a consultant to establish a set of IT security policies, procedures and guidelines in accordance with the information security management standards (i.e. ISO 27001), which is a standard internationally recognised and widely adopted by the industry as the best practice. Towards the end of 2015, ITMU engaged a recognised certification body to carry out a certification audit on its compliance with the ISO 27001 standards focusing on IT systems/services, internet applications as well as helpdesk support. ITMU successfully passed the ISO 27001 certification audit, signifying that the Department's IT system/services are of top class in compliance with the international best practice for information security, making the CAD the fifth Government department to attain this accreditation, after the Hong Kong Police Force, the Customs and Excise Department, the Housing Authority, and EMSD.



空管大樓和控制塔翻新工作組於二零一六年一月二十七日成立並召開首次會議。  
ATCX and S-TWR Refurbishments Task Force was established on 27 January 2016  
and a kick-off meeting was held on the same day.



(二) 為提升部門資訊科技保安和加強數據保護，資訊科技管理組設計和開發了一個安全的互聯網站，為空管人員提供資訊交流的平台。政府資訊科技總監辦公室亦為民航處的資訊科技基礎設施進行了網絡安全評估，結果令人滿意。

(三) 為方便參與民航處舉辦的國際和本地航空界會議的人士，資訊科技管理組開發和推出了一個新的流動應用程式，以發放最新的會議議程、會議文件和通告等電子訊息，並提供一個既有效率又可即時通訊的交流和討論平台。

(ii) To enhance IT security and data protection, ITMU designed and developed a secured internet website to provide a platform for air traffic control officers to share information. The Office of the Government Chief Information Officer also conducted a cyber security assessment on the IT infrastructure of the department with satisfactory outcomes.

(iii) A mobile application was developed and implemented to disseminate electronic information, including up-to-date agenda, conference papers, announcements, etc., to participants of international and local aviation conferences and meetings to be held at the CAD Headquarters, so as to facilitate effective and timely communication and discussion.



於二零一六年三月十日舉行的ISO 27001:2013認證證書頒發儀式。

ISO 27001:2013 Certification Presentation Ceremony was held on 10 March 2016.

# 飛行標準及適航

## Flight Standards and Airworthiness

飛行標準及適航部負責簽發航空運輸企業營運人許可證（航空營運人許可證），以及在發出許可證後監察所有持證公司的運作，確保這些公司遵守國際民用航空組織（國際民航組織）所訂定有關飛行安全及適航的標準和建議措施。

The Flight Standards and Airworthiness Division is responsible for the grant of Air Operator's Certificate (AOC) and the subsequent monitoring of all AOC holders to ensure their compliance with the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO) on flight safety and airworthiness.





# 飛行標準及適航

## Flight Standards and Airworthiness

本部的其他職責包括簽發空勤人員和飛機維修執照，監察在香港登記的飛機的適航標準和維修水平，巡查飛機維修機構，監督輕型飛機和直升機的運作，以及監察外地航空公司在香港國際機場運作的安全水平。

Other functions of the division include the issue of flight crew and aircraft maintenance licences, monitoring of airworthiness and maintenance standards of aircraft registered in Hong Kong, inspection of aircraft maintenance organisations, supervision of light aircraft and helicopter operations, and safety oversight of foreign airline operators at Hong Kong International Airport (HKIA).

### 飛行標準組

### FLIGHT STANDARDS OFFICE

#### 簽發和續發航空營運人許可證

#### Issue and Renewal of AOC

截至二零一六年三月三十一日，獲民航處簽發航空營運人許可證的本地公司有十家，計為：

As of 31 March 2016, there were ten Hong Kong AOC holders, namely:

香港華民航空有限公司 (華民航空)	AHK Air Hong Kong Limited (AHK)
國泰航空有限公司 (國泰航空)	Cathay Pacific Airways Limited (CPA)
直升機服務 (香港) 有限公司 (直升機服務)	Heliservices (Hong Kong) Limited (HLS)
香港航空有限公司 (香港航空)	Hong Kong Airlines Limited (CRK)
香港航空公務機管理有限公司 (香港商務航空)	Hong Kong Airlines Corporate Jet Management Limited (HKJ)
港龍航空有限公司 (港龍航空)	Hong Kong Dragon Airlines Limited (HDA)
香港快運航空有限公司 (香港快運)	Hong Kong Express Airways Limited (HKE)
美捷香港商用飛機有限公司 (香港商用飛機)	Metrojet Limited (MTJ)
空中快線直升機有限公司 (空中快線)	Sky Shuttle Helicopters Limited (EMU)
TAG Aviation Asia Limited (TBJ)	TAG Aviation Asia Limited (TBJ)



飛行標準組的航空營運督察在航機起飛前進行審核。

A Flight Operations Inspector of Flight Standards Office conducts an in-flight check before departure.





航空營運督察抵達外站進行外站檢查。  
A Flight Operations Inspector arrives at an  
outport for conducting station inspection.

年內，本部通過全面巡查和審查，繼續監察本地航空營運人許可證持證公司的安全表現和營運水平。飛行標準組巡查人員執行了148次飛行和機艙安全檢查，並對航空營運人許可證持證公司作出共407次其他巡查，包括外站巡查、停機坪巡查、檢查運作記錄、視察訓練情況和審批核准考核人員。本部也按照檢查程序，評審和視察本港航空公司所使用的46台位於海外和香港的飛行模擬器，並重新簽發使用許可。此外，本部又負責監察政府飛行服務隊直升機和定翼機的運作情況。

#### 安全監督

本部繼續對香港的航空營運人許可證持證公司實施安全監察計劃。計劃的主要目的，是利用風險管理模式編排和統籌各項審查工作。

另外，本部年內接獲航空業界858份強制呈報事故報告，並與各航空公司、維修機構、機場經營人和航空交通服務機構保持緊密聯繫，調查和跟進所有強制呈報的事故，務求改善航空安全，防止同類事故再次發生。

During the year, the safety performance and operating standards of Hong Kong AOC holders were monitored through a comprehensive programme of inspections and audits. In addition to 148 flight operations and cabin safety inspections, the Inspectorate staff of the Flight Standards Office conducted 407 other inspections on the AOC holders, including station inspections, ramp inspections, operational record inspections, training inspections and approval of authorised examiners. Forty-six flight simulators located worldwide and in Hong Kong and used by local airlines were evaluated, inspected and reapproved for use in accordance with the inspection procedures. The division was also tasked with the responsibility of monitoring helicopter and fixed-wing aircraft operations of the Government Flying Service (GFS).

#### Safety Oversight

FSAD continued to implement the surveillance programme for the safety oversight of Hong Kong AOC holders. The key purpose of the programme is to apply a risk management approach to the schedule and coordination of inspection activities.

Also, a total of 858 Mandatory Occurrence Reports (MOR) from the industry were received during the year. Through close liaison with airline operators, maintenance organisations, aerodrome operator and air traffic service provider, all MORs were investigated for the purpose of enhancing aviation safety and preventing recurrence.

### 適航事務組

適航事務組監察所有在香港登記的飛機的維修和適航標準。該組的適航主任經驗豐富，定期審查本港航空公司的飛行站，又定期審查認可的維修和設計/生產機構，以及在香港、內地、中東、印度、亞洲其他地方、歐洲和北美洲各地城市檢查飛機，以持續監察航空營運人許可證持證公司、批核認可的維修和設計/生產機構，以及為在香港登記的飛機簽發或續發適航證。

#### 飛機維修

適航事務組繼續通過機庫檢查、公司運作審查和產品審查，定期監察所有香港認可的飛機維修和飛機部件維修機構。截至二零一六年三月三十一日，共有31家公司取得香港認可維修機構的資格。適航事務組藉持續審查和定期視察，監察多家主要維修公司，包括香港飛機工程有限公司、香港航空發動機維修服務有限公司和廈門太古飛機工程有限公司。

### AIRWORTHINESS OFFICE

The Airworthiness Office monitors the maintenance and airworthiness standards of all Hong Kong registered aircraft. With a team of experienced Airworthiness Officers, the office carries out regular AOC line station audits, approved maintenance and design/production organisation audits, and aircraft surveys locally in Hong Kong as well as in cities in the Mainland, Middle East, India, other parts of Asia, Europe and North America, for the purpose of continual monitoring of AOC holders, approval of maintenance and design/production organisations, and the issue and renewal of Certificates of Airworthiness for Hong Kong registered aircraft.

#### Aircraft Maintenance

The Airworthiness Office continued to monitor all Hong Kong approved aircraft and aircraft component maintenance organisations regularly through hangar surveys, company audits and product audits. As of 31 March 2016, there were 31 Hong Kong approved maintenance organisations. Major maintenance companies, including Hong Kong Aircraft Engineering Company Limited (HAECO), Hong Kong Aero Engine Services Limited, and Taikoo (Xiamen) Aircraft Engineering Company Limited, are regulated through rolling audits and regular visits.





### 飛機維修訓練

截至二零一六年三月三十一日，本港和內地共有五家維修訓練機構獲發《香港航空要求—147》許可證，可以就維修香港登記的飛機舉辦基本和指定飛機機種的維修訓練課程。

### 飛機和相關產品/零件的設計與生產

截至二零一六年三月三十一日，共有十家設計和生產機構獲發《香港航空要求—21》許可證，可以審定飛機相關產品/零件，包括這些產品/零件的設計和生產。

### Aircraft Maintenance Training

As of 31 March 2016, there were five HKAR-147 Aircraft Maintenance Training Organisations located in Hong Kong and the Mainland which were approved to provide basic and specific aircraft type training for the maintenance of Hong Kong registered aircraft.

### Design and Production of Aircraft and Related Products/Parts

As of 31 March 2016, ten HKAR-21 Design and Production Organisations were approved to provide certification of aircraft related products/parts including their design and production.



適航事務組人員到飛機部件維修機構進行產品審查。  
Airworthiness Officers conduct product audits at an approved aircraft component maintenance organisations in Hong Kong.



## 民航處指定認證機構

截至二零一六年三月三十一日，共有七家機構獲發《香港航空要求—183》許可證，可以就簽發飛機適航證進行相關認證工作。

## CAD Designated Organisations

As of 31 March 2016, there were seven HKAR-183 Organisations approved to carry out airworthiness related activities in support of the issue of Certificates of Airworthiness to aircraft.

## 適航事務組統計數字

(二零一五年四月一日至二零一六年三月三十一日)

## Airworthiness Office Statistics

(between 1 April 2015 and 31 March 2016)



適航主任檢查直升機維修情況。  
Airworthiness Officers examine the maintenance status of an helicopter.



## 航空人員執照事務組

### 空勤人員執照

二零一五至一六年度，航空人員執照事務組（執照事務組）共處理了4 462份申請，當中包括首次簽發和續期簽發空勤人員執照、審定可駕駛的飛機型號和儀表飛行等級、英語能力認證和轉換海外執照為香港執照。為配合業界的需求，民航處接納航空公司聘用設於香港及新西蘭的新測試服務供應商，進行英語能力評估。年內，執照事務組共批閱了6 749份空勤人員執照筆試試卷。此外，又向香港空勤人員執照或航空交通管制執照持有人/申請人簽發共5 437份體檢合格證明書。

### 飛機維修執照

截至二零一六年三月三十一日，執照事務組共處理了817份首次簽發飛機維修執照、執照續期和加簽可維修飛機機種的申請。年內，該組和香港飛機工程有限公司設於將軍澳的認可考試中心，舉辦了涉及共4 381份飛機維修執照試卷的考試。

## PERSONNEL LICENSING OFFICE

### Flight Crew Licensing

During 2015-16, the Personnel Licensing Office (PELO) processed 4 462 applications, including initial grant and renewal of flight crew licences, aircraft and instrument ratings, language proficiency endorsements and conversion of foreign flight crew licences into Hong Kong licences. To meet industry demand for language proficiency assessments, CAD accepted those made by airline operators' new Testing Service Providers based in Hong Kong and New Zealand. During the year, PELO and the authorised examination centres in Australia and New Zealand processed 6 749 CAD flight crew licensing written examinations. In addition, 5 437 medical certificates were issued to holders/applicants of Hong Kong flight crew licence or air traffic controller's licence.

### Aircraft Maintenance Licensing

As of 31 March 2016, PELO processed 817 applications for initial issue and renewal of aircraft maintenance licences, and endorsement of additional aircraft types in such licences. During the report period, 4 381 examination papers regarding aircraft maintenance licensing were processed by PELO and the authorised examination centre at HAECO in Tseung Kwan O.



航空人員執照事務組處理空勤人員執照及飛機維修執照等申請。PELO handles applications of flight crew licenses and aircraft maintenance licences.

## 協調本地空域使用者

為加強航空安全，由本地空域使用者組成的香港非控制區飛行安全小組繼續定期召開會議，協調香港空域的安全事宜。這些本地空域使用者包括使用定翼機和旋翼機的機構（政府飛行服務隊、中國人民解放軍駐香港部隊、空中快線、直升機服務和香港飛行總會）、香港滑翔傘協會，以及私人飛機擁有人。

## 飛機登記

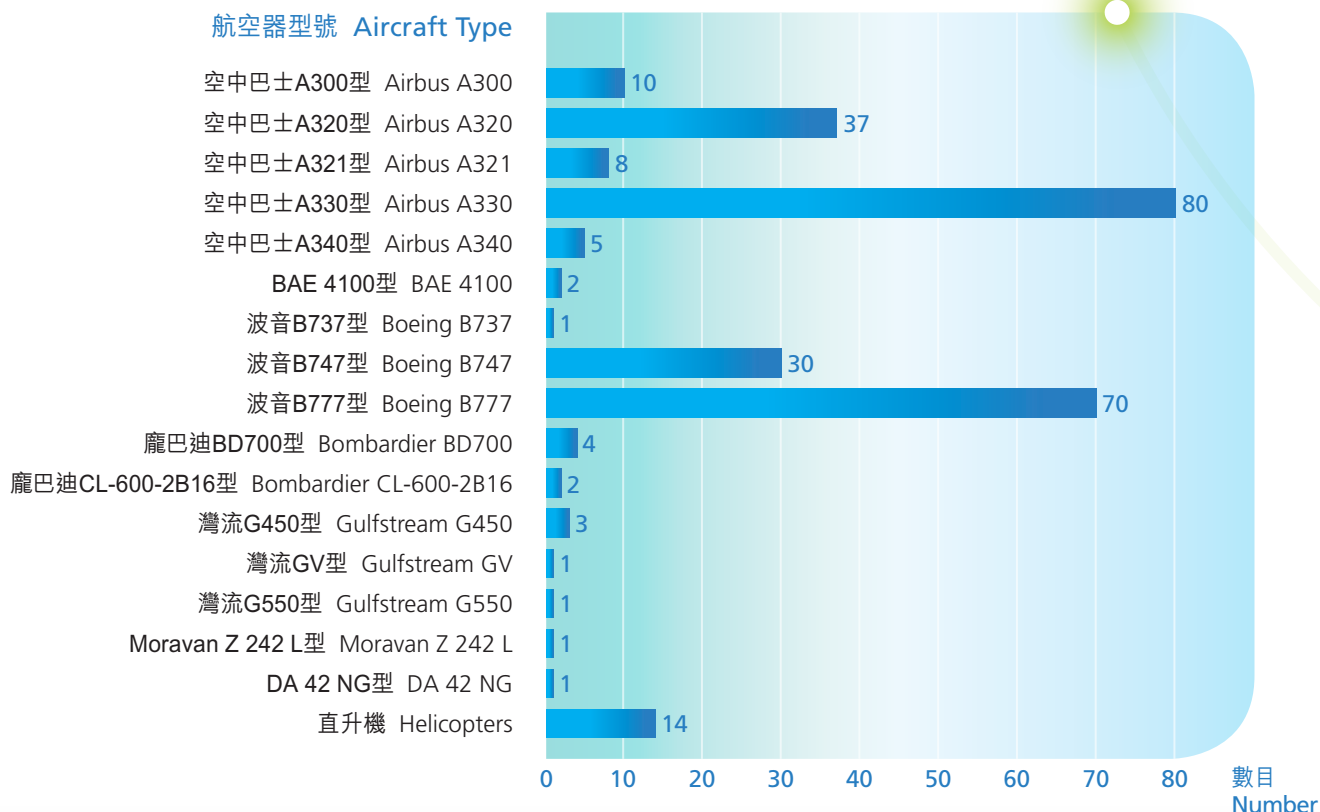
年內，香港民用航空器登記冊共新增了22架航空器，同期另有四架波音B747型飛機、六架空中巴士A340型飛機、一架灣流G200型飛機、一架灣流G550型飛機和一架賽斯納680型飛機取消登記。截至二零一六年三月三十一日，香港民用航空器登記冊一共登記了312架民用飛機，當中270架由香港的航空營運人許可證持證公司和政府飛行服務隊擁有，詳情如下：

## COORDINATION WITH LOCAL AIRSPACE USERS

To promote flight safety, the Hong Kong Sector Flight Safety Committee comprising local airspace users continued to meet regularly to coordinate safety issues in the local airspace. These local airspace users include fixed wing operators and rotary wing operators (GFS, Hong Kong Garrison of the People's Liberation Army, EMU, HLS and Hong Kong Aviation Club), Hong Kong Paragliding Association and private aircraft owners.

## AIRCRAFT REGISTER

During the year, 22 aircraft were put on the Hong Kong Civil Aircraft Register. In the same period, four Boeing 747, six Airbus A340, one Gulfstream G200, one Gulfstream G550, one Cessna 680 were removed from the Register. As of 31 March 2016, the total number of civil aircraft in the Hong Kong Civil Aircraft Register was 312, of which 270 were registered under Hong Kong AOC holders and the GFS as follows:





## 持續訓練巡查人員

為確保巡查人員的專業知識和能力與時並進，本部安排同事接受各項飛行運作和適航事宜的訓練，範疇包括個別型號飛機的設計、飛行模擬器評審、各式運作的審批、審查技巧，以至安全管理訓練。此外，他們也參與國際和地區會議、研討會和工作組會議，與國際專家交流，分享經驗和良好的作業方式。這些國際會議包括國際民航組織就以下議題所舉行的會議/研討會：遙控航空器系統、亞太地區航空安全小組會議和安全管理國際合作組會議。此外，本部人員又參加了歐洲航空安全局/美國聯邦航空局國際安全會議、以風險為本的型號合格審定工作坊、新飛機型號的合格審定和維修審查委員會的會議，以及各地民航當局舉辦的會議等。

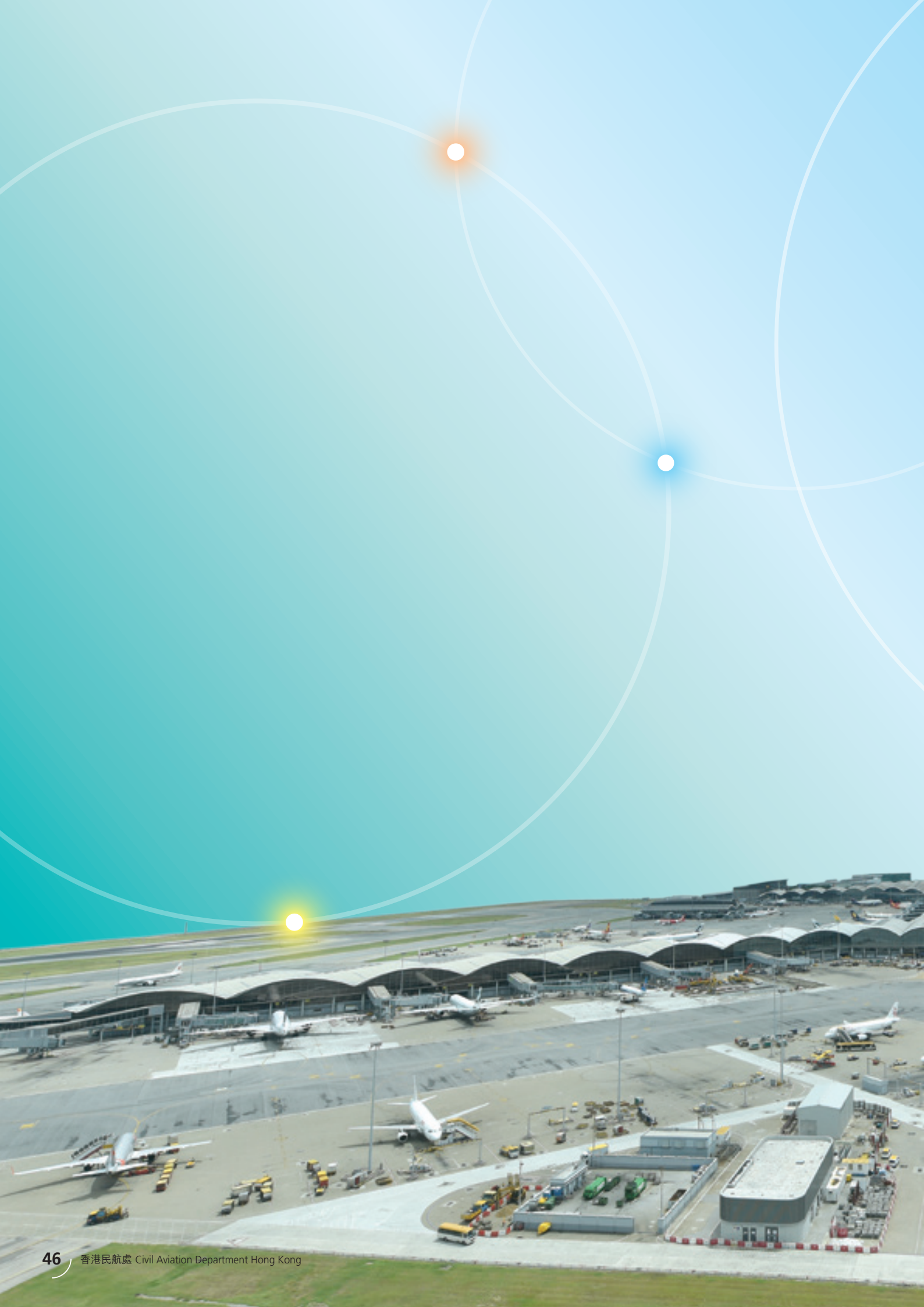
飛行標準組舉辦了歐洲航空安全局合規管理課程，加強員工有效監管航空公司合規管理及安全管理系統的認識。

Flight Standards Office has arranged an European Aviation Safety Agency Compliance Management System Course for enhancing staff effectiveness on flight operations' oversight of compliance management and Safety Management System of operators.

## CONTINUOUS TRAINING FOR INSPECTING STAFF

To maintain the technical knowledge and competence of inspecting officers in pace with the latest aviation development, the division arranged a wide spectrum of training for them on flight operations and airworthiness matters. These included training in the design of specific types of aircraft, simulator evaluation, operational approvals, auditing techniques as well as safety management. In addition, the officers participated in international and regional conferences, seminars and working group meetings to exchange and share experiences and best practices with international experts. These international events included ICAO conferences/seminars on the Remotely Piloted Aircraft Systems, Asia Pacific Regional Aviation Safety Team Meeting, Safety Management International Collaboration Group Meeting; European Aviation Safety Agency – Federal Aviation Administration International Safety Conference, Risk Based Type Certification Workshop; and Certification and Maintenance Review Board of some new aircraft types and meetings with various aviation authorities.







# 機場安全標準

## Airport Standards

機場安全標準部負責監管機場安全、航空保安、障礙物管制和空運危險品的工作。本部也負責促進直升機場的發展，監察直升機場的運作安全和保安水平，制定和執行飛機噪音消減措施，並肩負協調機場簡化手續的任務。

The Airport Standards Division (APSD) is responsible for the regulatory functions in respect of airport safety, aviation security, control of obstructions and the safe transport of dangerous goods by air. The division also facilitates the development of heliports, monitors the safety and security of heliport operations, develops and implements noise mitigating measures and assumes the role in coordinating airport facilitation.



# 機場安全標準

## Airport Standards

### 機場安全

#### 簽發機場牌照

香港機場管理局（機管局）獲民航處簽發機場牌照，營運香港國際機場。機場安全標準部繼續執行對機管局的安全監督，以確保該局的表現符合《機場牌照發牌規定文件》的規定。

為確保機場持續符合機場牌照發牌規定，本部在年內進行了14次審計和128次巡查，範圍包括機場限制區內的臨時和定期維修工程、飛行區路面狀況、目視助航設備、飛機運作所需的其他設施、安全管理系統的實施、緊急應變計劃、機場救援和滅火服務、由機管局和地勤服務公司為飛機提供的地面支援服務，以及飛行區擴建項目。本部也參與機管局對機場特許經營公司進行的審計，並監察機管局對飛機地面事故的調查工作，以確保機管局有效地監督各機場特許經營公司的安全表現，以及確定相關各方已採取適當改善措施，防止同類事故重演。

年內，機管局繼續在飛行區進行大型維修計劃，包括以混凝土取代路磚，重鋪北客運廊及西北客運廊廊前停機位的路面，以及以瀝青取代路磚，重鋪這些停機位後方道路的路面。停機位後方道路的路面重鋪工程，於二零一四年七月展開，並已於二零一五年十二月完成。廊前停機位的路面重鋪工程於二零一五年二月展開，整項計劃預計於二零一八年五月完成。此外，機管局於年內檢查了飛行區內的引導標誌，並決定於二零一六年第三季至二零一八年第四季期間，分階段把現有的熒光燈管燈箱更換為發光二極管燈箱。

### AIRPORT SAFETY

#### *Aerodrome Licensing*

Airport Authority Hong Kong (AAHK) is granted an aerodrome licence by the CAD to operate Hong Kong International Airport (HKIA). APSD continued to exercise safety oversight on the performance of AAHK to ensure compliance with requirements stipulated in the Aerodrome Licensing Requirements Document.

To ensure HKIA's continued compliance with the aerodrome licensing requirements, the division carried out 14 audits and 128 inspections during the year covering both ad-hoc and scheduled airside maintenance works, conditions of airfield pavements, visual aids, other facilities required for aircraft operations, implementation of the Safety Management System, emergency planning, airport rescue and fire fighting services, aircraft ground operations provided by AAHK and its ground handling agents as well as airfield expansion projects. The division also participated in the franchisee audits carried out by AAHK and monitored AAHK's investigation of aircraft ground incidents to ensure that effective oversight was exercised by AAHK on franchisees' safety performance and appropriate remedial measures had been taken by relevant parties to prevent recurrence.

Ongoing large-scale airfield maintenance projects undertaken by AAHK during the year included the replacement of block pavement with concrete and asphalt at the parking stands and the back-of-stand roads respectively in the North and Northwest Concourse. Commenced in July 2014, replacement works at the back-of-stand roads were completed in December 2015. Replacement works of block pavement at the parking stands commenced in February 2015. The whole project was scheduled for completion by May 2018. In addition, AAHK had conducted a review of the Movement Area Guidance Signs and decided to replace all the existing fluorescent tube lighting boxes with LED lighting boxes in phases from the third quarter of 2016 to the fourth quarter of 2018.



首班以空中巴士A350型客機運作的商業航班於二零一六年三月飛抵香港國際機場。

The first commercial flight operated by Airbus A350 aircraft landed at HKIA in March 2016.



為應付航班持續增長，機管局繼續積極確保機場中場範圍發展計劃如期進行。中場範圍第一期發展計劃所興建的一座客運廊和20個停機位，已於二零一五年十二月啟用。在該20個停機位當中，19個為廊前停機位，而其中兩個更可容納基準代字為F的飛機。在新設施啟用前，本部已確定這些設施符合機場牌照發牌規定，以及機管局已制定所有相關程序。

至於可為機場提供更多遠方停機位的中場範圍第二期發展計劃及中場餘下範圍發展計劃，預計分別於二零一八年和二零二一年完成。本部會繼續密切監察中場範圍各項發展，務使機場在提升處理客貨運能力之餘，飛行區的運作亦得以維持在高度安全的水平。

空中巴士A350型客機於二零一四年七月到訪香港國際機場作航線驗證後，首班以該型號客機運作的商業航班於二零一六年三月飛抵香港國際機場。本部已檢視該航班抵港後的運作，以確保機場和地勤服務器材可為該型號客機提供安全的地勤服務。

To cater for the continuous traffic growth, AAHK continued to ensure that the development of the Midfield Area of HKIA proceeded as scheduled. During the year, a concourse and 20 parking stands under Midfield Development Phase One were commissioned in December 2015. Among the 20 parking stands, 19 of them are frontal stands with two capable of accommodating Code F aircraft. Prior to the commissioning, APSD had ensured that the new facilities were in compliance with the aerodrome licensing requirements and that AAHK had developed all the relevant procedures.

As regards Midfield Development Phase Two and Midfield Remaining Area which will provide additional remote parking stands, the development projects are planned for completion by 2018 and 2021 respectively. The division will continue to closely monitor the progress of the development to facilitate the enhancement of the airport's handling capability while maintaining a high level of airfield operational safety.

Subsequent to the Airbus A350 route proving flight to HKIA in July 2014, the first commercial flight operated by this aircraft type landed at HKIA in March 2016. The division conducted inspection on its arrival operations in order to ensure the safe provision of ground handling services by the airport and ground servicing equipment.

為測試緊急應變程序，以及加強機場營運者與各個相關應變單位在處理飛機意外時的協調能力，機管局於年內舉行了多次緊急應變演習。本部一直積極參與籌劃，並定期視察這些演習，其中一次是於二零一五年十二月十一日舉行的年度大型飛機意外救援演習。是次演習模擬一架抵港的空中巴士A320型客機於降落後滑出北跑道，在改變方向後跌落海面，因而在機場海上救援西局進行海上救援。不同應變單位，包括機管局、政府相關部門和航空公司，均參與演習，以測試各單位處理飛機事故的緊急程序和應變能力。從籌備至完成演習，本部一直監察各階段的進展，並提出意見和建議，讓機管局和相關應變單位進一步改善緊急程序和提高應變能力。

《國際民用航空公約》（《國際民航公約》）附件19所載的安全管理國際標準和建議措施，已於二零一三年十一月生效。年內，本部繼續監察機管局，確保安全管理規定得以遵行。在此方面，本部對機管局為新發展計劃而設立的風險評估持續記錄系統，尤為重視。該系統用作記錄因新發展計劃引致運作環境轉變而衍生的風險，記錄範圍涵蓋所有新發展計劃的設計、建築及運作階段。

For the purpose of testing the emergency response procedures and enhancing the coordination between the aerodrome operator and relevant responding parties in dealing with aircraft accidents, AAHK conducted a number of drills and exercises throughout the year. APSD actively participated in the planning meetings and conducted regular inspections on these drills and exercises. One of them was the full-scale annual aircraft crash exercise conducted on 11 December 2015. The exercise simulated a sea rescue operation at the West Sea Rescue Berth for an arrival Airbus A320 aircraft which overshot the North Runway and veered onto the sea. Different responding parties, including AAHK, relevant government departments and the participating airline, took part in the exercise to test the emergency procedures and responses in dealing with an aircraft accident. The division oversaw the preparation and operation of the exercise from planning until completion and provided comments and recommendations for AAHK and relevant responding parties to further enhance their emergency procedures and responses.

The Annex 19 to the Convention on International Civil Aviation containing the international standards and recommended practices of Safety Management became effective in November 2013. During the year, the division continued to monitor AAHK's compliance with the safety management requirements. The division targeted its specific attention to the efforts of AAHK in setting up ongoing risk assessment register for new development projects to record any risk arising from the changes to existing operational environment. The register would cover the design, construction and operational phases of all the new development projects.



## 安全監督

### 直升機場的運作和發展

機場安全標準部繼續監察直升機場的運作安全，並就規劃和設計區內直升機場，以及發展跨境直升機場，提供意見。

### 管制障礙物

民航處制定機場高度限制，以保障飛機航道及無線電導航儀器不受障礙物影響。本部審核了多項建築和發展計劃及可行性研究，並提供意見，確保各個項目均符合機場高度限制和其他航空安全規定。年內，經本部審核的大型項目和研究，在機場範圍以外的有港珠澳大橋工程的香港口岸和香港接線、港珠澳大橋香港口岸上蓋發展、屯門至赤鱸角連接路、東涌餘下的發展計劃、欣澳填海的研究，以及東涌新市鎮擴展研究。在機場範圍內的大型項目，則包括中場範圍第一期、中場範圍第二期及中場餘下範圍的發展計劃。此外，在機管局籌劃擴建機場成為三跑道系統的工程項目方面，本部就擴建機場後的機場高度限制和相關的海上限制區，積極提供意見，以確保新航道安全。

## SAFETY REGULATION

### Heliport Operations and Development

APSD continued to monitor the safety of heliport operations and to provide advice on the planning and design of the domestic heliports as well as on the development of cross-boundary heliports.

### Control of Obstructions

Airport Height Restrictions (AHR) are established to protect aircraft flight paths and radio navigational aids. APSD assessed and provided advice on various building and development projects and feasibility studies to ensure their compliance with AHR and other applicable aviation safety requirements. The major projects and studies outside HKIA assessed during the year included the Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) and the Hong Kong Link Road (HKLR), the Topside Development of the HKBCF, the Tuen Mun-Chek Lap Kok Link, the Remaining Development in Tung Chung, the Sunny Bay Reclamation and the Tung Chung New Town Extension. The major projects within HKIA assessed included HKIA's Midfield Development Phase One, Midfield Development Phase Two and Midfield Remaining Area development projects. In addition, regarding the project to expand HKIA into a three-runway system planned by AAHK, the division provided advice on AHR requirements and the associated Marine Exclusion Zones (MEZs) for an expanded airport system in order to ensure aviation safety of the new flight paths.

機場中場範圍第一期發展計劃的設施於二零一五年十二月落成啟用。  
The facilities of Midfield Development Phase One of HKIA were commissioned in December 2015.

港珠澳大橋香港口岸的填海工程於機場東北對開水域進行，承建商必須調派大量工作船建造人工島，以便在該島上興建相關的基礎設施。由於這項重要工程的填海位置靠近機場，並在兩條跑道的航道之下，為了確保飛機的安全和避免機場運作受到建築工程干擾，本部主動要求港珠澳大橋香港口岸的項目顧問和承建商使用船舶/機械高度監測系統。該系統全日24小時運作，監測在機場附近填海位置工作的船隻/機械的最高高度，以監督承建商遵守機場高度限制的規定。這項安排對本部考慮是否臨時批准高身船隻豁免遵守機場高度限制的申請，尤其重要。本部

As the reclamation works at the waters off the northeast of HKIA for the HKBCF proceeded, a large number of working vessels were deployed by contractors to construct an artificial island on which infrastructures would be built. The HKBCF reclamation site was in close proximity to HKIA under the flight paths of the two-runway airport. To ensure aircraft safety and avoid any disruption to airport operations due to construction works of this strategic project, APSD took a proactive approach to require the project consultant and contractor to commission a vessel/machinery height monitoring system. It was designed to operate round the clock for monitoring the highest altitude of vessels/machinery working at the reclamation site near HKIA and enhancing the contractor's compliance with the AHR requirements. This arrangement was particularly important for the division's consideration of applications for AHR exemption involving high air draft

由於香港口岸人工島上的屯門至赤鱗角連接路一北面連接路海底隧道段的部分施工位置，位於機場南跑道的航道之下，其承建商為工作船隻/機械安裝了船舶/機械高度監測系統，以保障機場運作不受影響。機場安全標準部人員在人工島上視察該監測系統的實地測試情況。

As part of the works area of the Tuen Mun-Chek Lap Kok Link Northern Connection Sub-sea Tunnel Section on the artificial island of HKBCF is under the flight paths of the South Runway of HKIA, a vessel/machinery height monitoring system was commissioned by the contractor for the vessels/machinery to ensure that airport operations would not be affected by the works. APSD officers inspect the site trial of the monitoring system.





也密切監察承建商在遵守機場高度限制方面的表現，並視乎需要要求承建商採取改善措施。在機場周邊的其他主要項目和工程，亦須採用該類高度監測系統。

年內，本部共批准了85宗臨時豁免遵守機場高度限制的申請，以方便在香港境內進行建築工程及機場島附近的海事運作，當中54宗涉及港珠澳大橋香港口岸和香港接線的工程，八宗涉及擴建機場成為三跑道系統的前期研究工作。

本部得到海事處通力協助，繼續盡力防止船隻駛進機場島附近的海上限制區，以免航機和無線電導航儀器運作受到干擾。年內，海事處針對非法闖入限制區的事件，共提出了五次檢控。

#### *禁止使用會危害飛機航行的燈光*

為確保航空安全不受威脅，本部繼續監察各類激光、探射燈和煙花表演，如「幻彩詠香江」燈光匯演、農曆新年煙花匯演等，以及大廈外牆的燈光，尤其是有照明的廣告招牌，並提供意見。

#### *一般飛行活動*

本部繼續規管康樂飛行活動，包括滑翔傘、風箏、模型飛機、無人駕駛飛機系統等，確保這些活動在符合飛行安全規例的情況下進行，而且不會影響民航飛機的運作。

vessels. The performance of the contractor in complying with the AHR requirements was also closely monitored by staff of the division who would require remedial actions from the contractor as and when necessary. Such monitoring systems are also required for other major projects and works around HKIA.

This year, the division issued 85 temporary AHR exemptions to facilitate construction works in the territory and vessel operations in the vicinity of the Airport Island, of which 54 were issued to facilitate the works of the Hong Kong-Zhuhai-Macao Bridge HKBCF and HKLR projects and eight for the preliminary assessment of the expansion of HKIA into a three-runway system.

With the assistance of the Marine Department, APSD continued to ensure the integrity of the MEZs established in the vicinity of the Airport Island to safeguard the operation of aircraft and radio navigational aids. During the year, five prosecutions against illegal entry into the MEZs were instituted by the Marine Department.

#### *Prohibition of Lights Endangering Aircraft Operation*

To ensure that aviation safety would not be compromised, APSD continued to monitor and give advice on the use of laser, search lights and fireworks displays at different shows such as "A Symphony of Lights", the Chinese New Year Fireworks Displays as well as other lighting displays at building facades, especially illuminated advertisement signs.

#### *General Aviation Activities*

APSD continued to monitor the safety of recreational aviation activities, including paragliding, kite flying, model aircraft flying and unmanned aircraft systems flying to ensure that these activities were conducted in compliance with applicable aviation safety regulations and would not affect civil aircraft operations.

### 運載危險品

機場安全標準部的危險品事務組根據國際民用航空組織（國際民航組織）和本地法例的規定，監管空運危險品。危險品事務組設立了一套危險品許可證制度，航空公司若能符合所有相關的安全規定，可獲發運載危險品進出或飛越香港的許可證。年內，危險品事務組共處理了四宗新的危險品許可證申請及37宗許可證續期申請。於二零一六年三月底，共有90家航空公司獲發許可證。此外，危險品事務組批准了34家機構為航空公司、空運貨站、貨運代理人及付運人開辦危險品訓練課程。該組人員又定期和突擊巡查航空公司、空運貨站、貨運代理人、付運人和培訓機構，確保他們遵從空運危險品的安全規定。

#### 發布安全規定

為加強業界及公眾對空運危險品的安全規定的認識，危險品事務組繼續透過多個途徑宣傳安全規定。除派發單張和海報外，該組並會解答業界對空運危險品的安全規定的查詢。年內，該組發出六份危險品通告，向空運業界發布空運危險品的安全規定，其中包括空運鋰電池的新要求。

#### 法例

為使本地兩套規管空運危險品的法例與國際民航組織最新的《危險品安全空運技術指令》的規定一致，危險品事務組於年內繼續進行相關的修例工作。

### CARRIAGE OF DANGEROUS GOODS

The Dangerous Goods Office of APSD regulates the transport of dangerous goods by air based on the International Civil Aviation Organization (ICAO) and local legal requirements. The Dangerous Goods Office has established a dangerous goods permission system whereby airlines which satisfy all pertinent safety requirements will be granted a permission to carry dangerous goods to, from or over Hong Kong. During the year, four new and 37 renewal applications for dangerous goods permissions were processed. At the end of March 2016, 90 airlines have been granted permissions. The Office also approved 34 organisations for conducting dangerous goods training programmes for airlines, air cargo terminals, freight forwarders and shippers. Officers from the Dangerous Goods Office conducted regular and ad-hoc inspections of the airlines, air cargo terminals, freight forwarders, shippers and training organisations to ensure their compliance with the safety requirements on air transport of dangerous goods.

#### Promulgation of Safety Requirements

To enhance the awareness of the industry and the public of the safety requirements on air transport of dangerous goods, the Dangerous Goods Office continued to promulgate the safety requirements through various means. The Office continued to distribute leaflets and posters, and responded to enquiries from the industry about the safety requirements on air transport of dangerous goods. During the year, the Dangerous Goods Office issued six advisory circulars to the air cargo industry concerning the safety requirements on air transport of dangerous goods including the new requirements for shipping lithium batteries.

#### Legislation

To align the two sets of local legislation with the latest requirements of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air, the Dangerous Goods Office continued to take forward the related legislative amendment process during the year.



### 危險品事故

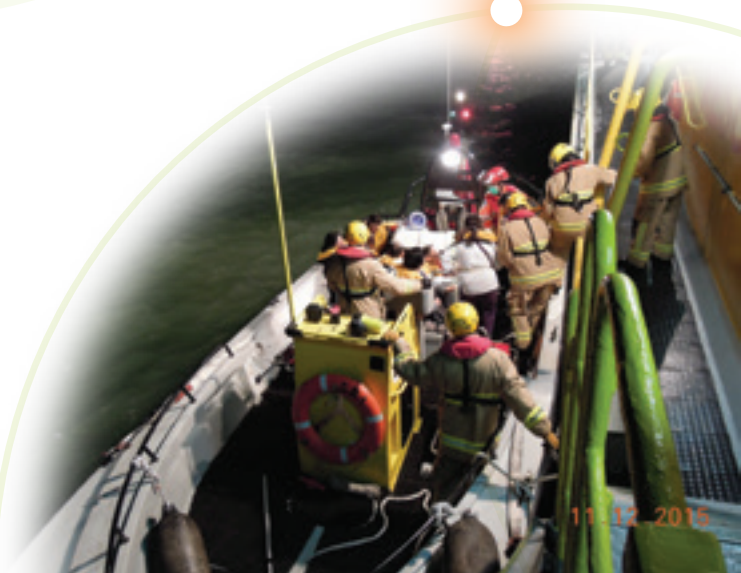
年內發生的危險品事故，主要涉及未經申報的危險品。為防止類似事件重演，危險品事務組調查所有事故，並向香港空運業界及其他航空當局發布具有參考價值的危險品事故資訊。

### Dangerous Goods Incidents

The incidents which occurred in the year were mainly related to undeclared dangerous goods. The Dangerous Goods Office conducted investigations into all these incidents for the purpose of preventing recurrence. In this connection, useful incident information was disseminated to the air cargo industry in Hong Kong and other aviation authorities.



年度大型飛機意外救援演習於二零一五年十二月十一日舉行。  
A full-scale annual aircraft crash exercise was conducted on 11 December 2015.



### 飛機噪音管理

民航處一向關注飛機噪音對居民的影響，並根據國際民航組織的指引，實施了一系列噪音消減措施。本部使用飛機噪音及航迹監察系統，監察各項噪音消減措施的實施情況和各地區的飛機噪音水平。該系統由16個戶外噪音監察站和一台中央電腦伺服器組成。電腦會把雷達提供的飛行資料，與噪音監察站記錄的飛機噪音數據連繫起來。

年內，本部共處理了422宗飛機噪音投訴。為加深社區對各項噪音消減措施和噪音監察工作的認識，本部多次派員出席立法會、區議會和地區居民團體的會議。

### 航空保安

#### 對機場各個營運者的保安監察

機場安全標準部通過審計和檢查，確保機管局和機場的各個營運者，包括租戶禁區營運者、航空公司，以及航機膳食和物品供應商，符合《香港航空保安計劃》的規定。

年內，本部根據《航空保安條例》處理了三宗禁區的指定個案，其中包括把香港商用航空中心有限公司新擴建的停機坪，由機場禁區改定為租戶禁區，以及重新劃定香港空運貨站有限公司和亞洲空運中心有限公司的租戶禁區範圍，以配合相關的運作規定。在這些禁區改動生效前，本部人員均已作出實地巡查，確保有足夠的禁區保安通行管制措施。

### AIRCRAFT NOISE MANAGEMENT

CAD is conscious of the impact of aircraft noise on the community and has implemented a series of noise mitigating measures based on the guidelines of ICAO. The division monitored the implementation of various noise mitigating measures and the aircraft noise situations in various districts through the Aircraft Noise and Flight Track Monitoring System. The system comprises 16 outdoor noise monitoring terminals and a central computer server which correlates the flight data provided by radars and the noise data recorded by the noise monitoring terminals.

During the year, the division handled 422 aircraft noise complaints. With a view to enhancing the understanding of the noise mitigating measures and the noise monitoring work, representatives of the division attended various meetings organised by the Legislative Council, District Councils, and local residential organisations.

### AVIATION SECURITY

#### Security Oversight of Operators at HKIA

APSD ensured that AAHK and the operators at HKIA, including tenant restricted area operators, aircraft operators and aircraft catering supplies and stores operators, complied with the requirements in the Hong Kong Aviation Security Programme through audits and inspections.

During the report period, the division processed three proposals of restricted area designation under the Aviation Security Ordinance. The designation proposals involved were to convert the newly expanded apron of Hong Kong Business Aviation Centre Limited from airport restricted area into tenant restricted area, and to re-designate the tenant restricted area of the Hong Kong Air Cargo Terminals Limited and the Asia Airfreight Terminal Company Limited for meeting their respective operational requirements. Officers of the division conducted inspections prior to the commencement of the designations to ensure that sufficient protection was provided for controlling access to the restricted areas.



### 空運貨物保安

根據管制代理人制度，每一名向民航處登記成為管制代理人的貨運代理，均須為空運貨物實施保安管制措施，並檢查指定來源的貨物。截至二零一六年三月三十一日，本處的登記冊上共有1 427名管制代理人。本部繼續透過定期檢查，監察已登記的管制代理人，確保他們遵守管制代理人制度的各項規定。

此外，本部與政府相關部門合作，繼續研究優化管制代理人制度的方案，並於二零一五年年底諮詢了空運業界代表團體。優化方案會在制訂執行細節後正式實施。

機場安全標準部人員巡查空運貨物的檢查設施。  
APSD officers inspect air cargo screening facilities.



### Air Cargo Security

Under the Regulated Agent Regime (RAR), a cargo agent registered as a Regulated Agent (RA) with CAD is required to provide security control measures on consignments of air cargo and apply screening on prescribed sources of air cargo. As at 31 March 2016, there were 1 427 RAs registered with CAD. APSD continued to monitor the compliance of the RAs with the requirements of the RAR through regular inspections.

Moreover, the division, in collaboration with relevant government departments, continued to study measures for further enhancement of the RAR. The air cargo industry representative bodies were consulted on the enhancement proposals at the end of 2015 and implementation details of the proposals will be developed before formal launching.

### 難受管束人士的行為

為針對民航機上難受管束和擾亂秩序人士的行為，香港制定了《航空保安(修訂)條例》，對干犯罪行的人士施加懲罰。年內，根據該條例成功檢控的個案共有兩宗。

### 簡化手續

機場安全標準部藉參與機場簡化手續委員會，監察《國際民航公約》附件9所訂的標準和建議措施在機場實施的情況。此外，本部按《國際民航公約》附件9的規定，為香港註冊的航空公司的機組人員發出空勤人員證書，以便他們執行飛行職務。鑑於空勤人員證書的有效期限即將屆滿，以及為符合國際民航組織的新要求，本部推出可供機器閱讀的新空勤人員證書，並於年內的證書更換工作中發出共17 826張新的空勤人員證書。

### Unruly Behaviour

To fight against unruly or disruptive behaviour committed by persons on board civil aircraft, the Aviation Security (Amendment) Ordinance was enacted to impose penalties on such offences. During the report period, there were two cases of successful prosecution under the Ordinance.

### Facilitation

Through the participation in the Airport Facilitation Committee, APSD monitored the implementation of the Standards and Recommended Practices of ICAO Annex 9 at HKIA. Besides, to facilitate crew members of Hong Kong registered aircraft operators to discharge their flight duties, APSD issued Crew Member Certificates (CMC) in accordance with ICAO Annex 9. Due to the expiry of the CMC and new ICAO requirement, APSD developed new CMC with machine readable capability and issued 17 826 new CMC in its replacement exercise during the year.

機場安全標準部人員實地巡查機場中場範圍第一期發展計劃的設施，確保新設施符合機場牌照發牌規定。

An APSD officer inspects the facilities of Midfield Development Phase One of HKIA to ensure that the new facilities were in compliance with the aerodrome licensing requirements.







機場安全標準部人員巡查機場禁區周邊的保安設施。  
APSD officers inspect the physical security at the perimeter of the restricted area of HKIA.

## 國際事務

機場安全標準部繼續與海外航空當局溝通，就最佳的保安措施分享資訊，以提升香港航空保安的水平，並參與國際會議及計劃，以密切留意保安措施的最新發展。

### *國際民航組織亞太地區互助航空保安計劃*

香港自二零零四年起，參加國際民航組織亞洲太平洋地區互助航空保安計劃，並繼續參與該計劃的工作。該計劃旨在協助亞太地區的成員遵行《國際民航公約》附件9和附件17所訂的航空保安標準和建議措施，以及提高航空保安能力。

### *國際民航組織航空保安專家組會議*

機場安全標準部一直派員以中國代表團成員身分，參與每年在加拿大蒙特利爾舉行的國際民航組織航空保安專家組會議。該專家組會議的目標是制定國際標準和建議措施，以保護民用航空免受非法行為干擾，以及識別和研究民用航空所面對的新威脅。

## INTERNATIONAL ACTIVITIES

APSD continued to communicate with overseas aviation authorities to share information on best practices of security measures for enhancing the aviation security in Hong Kong, and participate in international meetings and programmes for monitoring the development of aviation security measures.

### *ICAO Cooperative Aviation Security Programme - Asia Pacific (CASP-AP)*

Hong Kong has joined the CASP-AP established by ICAO since 2004 and has continued to participate in the programme. The programme aims at assisting states and administrations in the Asia Pacific region to comply with the standards and recommended practices for aviation security in ICAO Annexes 9 and 17, and to enhance their competence in aviation security.

### *ICAO Aviation Security Panel (AVSECP) Meeting*

APSD has been participating, as part of the Chinese delegation, in the ICAO AVSECP Meeting held annually in Montreal, Canada. The objectives of the AVSECP are to develop standards and recommended practices for the purpose of safeguarding civil aviation against acts of unlawful interference, and to identify and examine new and emerging threats against civil aviation.

# 航班事務及安全管理

## Air Services and Safety Management

航班事務及安全管理部負責的工作包括：監察航空公司的空運服務；就本地航空公司的空運牌照申請及民航運輸談判向有關當局提供資料；制定和實施航空安全管理政策，以促進航空系統安全和提升安全水平；以及監管香港的空中導航服務。該部也負責處理有關民航的立法事宜、為飛機意外及嚴重事故的調查工作提供行政支援，以及向國際組織提供航空交通統計數字。

The Air Services and Safety Management Division is responsible for monitoring air services provided by airlines; providing information to relevant authorities regarding air transport licence applications by local airlines and for air services negotiations; developing and implementing safety policy to promote and enhance safety in the aviation system; and regulating Hong Kong air navigation services. The Division is also responsible for handling civil aviation legislative matters; providing administrative support to the investigation of aircraft accidents and serious incidents; and providing air traffic statistics to international organisations.









# 航班事務及安全管理

## Air Services and Safety Management

### 航空服務

#### 航空交通量增長

二零一五至一六年度的客運量達6 930萬人次，按年上升了8%；飛機升降量亦達410 065架次，按年增加了4%。貨運量則為430萬公噸，按年減少1%。

截至二零一六年三月底，提供定期航班服務往來香港的航空公司有107家，服務網絡涵蓋共約196個城市/機場。

#### 本地航空公司的服務

截至二零一六年三月底，國泰航空公司（國泰）營辦的定期航班服務遍及全球73個目的地，當中包括客運航班的新航點波士頓、杜塞爾多夫和蘇黎世，以及貨運航班的新航點金邊。

截至二零一六年三月底，港龍航空公司（港龍航空）營辦的定期客運航班服務遍及44個目的地，包括新增的航點廣島和東京（羽田）。

香港華民航空公司（華民航空）繼續經營亞洲區定期貨運航班服務。截至二零一六年三月底，華民航空營辦往來亞洲12個目的地的定期航班服務。

截至二零一六年三月底，香港航空公司（香港航空）營辦往來40個目的地的定期航班服務，包括客運服務新航點凱恩斯、喀比、南昌、宮崎、熊本、黃金海岸、金邊和鹽城。

香港快運航空公司（香港快運）定位為低成本航空公司，是本港目前唯一的低成本航空公司。截至二零一六年三月底，香港快運的定期航班服務涵蓋17個目的地，新增的航點包括濟州、峴港、曼谷（廊曼）、廣島、銀川、蘭州、暹粒和無錫。

### AIR SERVICES

#### Air Traffic Growth

Traffic throughput in the year 2015-16 reached 69.30 million passengers, representing a year-on-year growth rate of 8%. Aircraft movements also reached 410 065 movements, representing a year-on-year growth rate of 4%. Cargo throughput was 4.3 million tonnes, representing a year-on-year decrease of 1%.

By the end of March 2016, the number of scheduled airlines serving Hong Kong was 107. The total number of cities/airports served by scheduled services to and from Hong Kong was around 196.

#### Services by Local Carriers

By the end of March 2016, Cathay Pacific Airways (CPA) operated scheduled services to 73 destinations worldwide, including new destinations to Boston, Dusseldorf and Zurich for scheduled passenger services, and Phnom Penh for scheduled cargo services.

Hong Kong Dragon Airlines Limited (HDA) operated scheduled passenger services to 44 destinations by the end of March 2016, including new destinations to Hiroshima and Tokyo (Haneda).

AHK Air Hong Kong Limited (AHK) continued to operate scheduled all-cargo services in Asia. By the end of March 2016, AHK operated scheduled services to 12 destinations in Asia.

Hong Kong Airlines Limited (CRK) operated scheduled services to 40 destinations by the end of March 2015, including new destinations to Cairns, Krabi, Nanchang, Miyazaki, Kumamoto, Gold Coast, Phnom Penh and Yancheng for passenger services.

Hong Kong Express Airways Limited (HKE) positioned itself as a low cost carrier (LCC). It was also the only LCC in Hong Kong. By the end of March 2016, HKE operated scheduled services to 17 destinations, adding Jeju, Da Nang, Bangkok (Don Mueang), Hiroshima, Yinchuan, Lanzhou, Siem Reap and Wuxi to its network.



美捷香港商用飛機有限公司、TAG Aviation Asia Limited和香港航空公務機管理有限公司繼續營辦不定期客運航班服務，接載乘客到世界各地。

空中快線直升機有限公司繼續營辦香港與澳門之間的不定期客運航班服務。

直升機服務(香港)有限公司繼續在本地提供客運包機和空中作業服務。

#### 非本地航空公司的服務

年內，共有六家航空公司首次開辦往來香港的定期客運服務，包括：阿提哈德航空於二零一五年四月開辦往來阿布扎比的航班；亞航飛龍航空於二零一五年五月開辦往來馬尼拉的航班；捷星太平洋航空於二零一五年九月開辦往來芽莊及河內的航班；北歐航空於同月開辦往來斯德哥爾摩的航班；緬甸國家航空於二零一五年十二月開辦往來仰光的航班；以及馬印航空於二零一六年二月開辦往來吉隆坡的航班。

定期貨運服務方面，Sky Lease 於二零一五年八月開辦往來邁阿密的航班。

年內，有四家航空公司停辦往來香港的定期航班服務，計有：塞舌爾航空(二零一五年四月)、宿鸞航空(二零一五年九月)、俄羅斯全祿航空(二零一五年十月)，以及馬丁航空(二零一五年十二月)。

年內，民航處合共簽發了138張經營許可證予航空公司，以供營辦往來香港的定期航班服務，並處理了大約4 700宗更改定期航班服務的申請，另又簽發了924張經營香港境內和往來香港包機服務的許可證。

Metrojet Limited, TAG Aviation Asia Limited and Hong Kong Airlines Corporate Jet Management Limited continued to operate non-scheduled passenger services to cities around the world.

Sky Shuttle Helicopters Limited continued to operate non-scheduled passenger services between Hong Kong and Macao.

Heliservices (Hong Kong) Limited (HEL) continued to operate local passenger charters and aerial work services.

#### Services by Non-Hong Kong Carriers

Six foreign operators commenced new scheduled passenger services during the year. Etihad Airways commenced services from Abu Dhabi in April 2015. Philippines AirAsia started services from Manila in May 2015. Jetstar Pacific commenced services from Nha Trang and Hanoi and Scandinavian Airlines Systems commenced services from Stockholm in September 2015. Myanmar National Airlines started services from Yangon in December 2015. Malindo Air launched services from Kuala Lumpur in February 2016.

For scheduled all-cargo services, Sky Lease commenced services from Miami in August 2015.

During the year, four airlines suspended their scheduled services to and from Hong Kong. They were Air Seychelles in April 2015, CEBGO in September 2015, Transaero Airlines in October 2015, and Martinair in December 2015.

During the year, CAD issued 138 operating permits to airlines for operation of scheduled services to and from Hong Kong, and processed around 4 700 applications for changes to the schedules. A total of 924 permits were also issued for the operation of charter services to, from and in Hong Kong.



### 運價

年內，民航處共處理了1 627宗涉及修訂往來香港客運和貨運定期航班服務的運價申請（不包括燃油附加費的申請）及1 266宗調整燃油附加費的申請。鑑於航油價格已處於穩定而合理的水平，而相應的燃油附加費已大幅降低，航空公司只獲准繼續收取客運燃油附加費至二零一六年一月三十一日，而貨運燃油附加費則至二零一六年三月三十一日。

### 國際民航組織的活動

為遵行《基本法》的規定，保持香港國際和區域航空中心的地位，以及方便履行國際民用航空組織（國際民航組織）區域航行程序所定職責，民航處繼續積極參與國際民航組織的活動。年內，民航處代表以中華人民共和國代表團成員身分，出席了五次只限國家參加的國際民航組織會議，另以「中國香港」的名義，參加了28次並非以國家為單位的國際民航組織會議。以上33次會議的詳情見附錄。此外，本處與國際民航組織往來的函件共有296份，主要就民航技術事宜提供意見及資料。

### 亞太經合組織的活動

民航處繼續以「中國香港」的名義，支持亞太經合組織的民航活動和措施。年內，本處因應亞太經合組織的17項要求，提供了民航技術事宜的意見及資料。

### 空運牌照

根據《空運（航空服務牌照）規例》（第448A章），香港註冊航空公司如欲營辦定期航班運載乘客、郵件或貨物，必須先向空運牌照局申請營運牌照。年內，民航處就一宗牌照申請及兩宗更改牌照申請，向空運牌照局提供了與航班事務相關的資料和統計數字。

### TARIFFS

During the year, CAD processed 1 627 tariff filings (excluding filings concerning fuel surcharges) for carriage of passengers and cargo on scheduled services to and from Hong Kong and 1 266 filings on the adjustment of fuel surcharges. In view that aviation fuel prices have stabilised to a reasonable level and that the corresponding fuel surcharges have been greatly reduced, airlines were allowed to continue levying passenger fuel surcharges up to 31 January 2016 and cargo fuel surcharges up to 31 March 2016.

### ACTIVITIES OF ICAO

To maintain the status of Hong Kong as a centre of international and regional civil aviation in accordance with the provisions of the Basic Law, and to facilitate the discharge of Hong Kong's responsibilities under the regional air navigation procedures of the International Civil Aviation Organization (ICAO), CAD continued to participate actively in ICAO's activities. During the year, representatives of the department attended five ICAO meetings which were limited to states as part of the delegation of the People's Republic of China, and 28 ICAO meetings which were not so limited, using the name "Hong Kong, China". Details of these 33 meetings are provided in the Appendix. The department also exchanged 296 letters with ICAO, the majority of which involved comments and information on technical matters related to civil aviation.

### ACTIVITIES OF APEC

CAD continued to support aviation related activities and initiatives of APEC using the name "Hong Kong, China". During the year, the department handled 17 requests relating to APEC, which involved provision of comments and information on technical matters related to civil aviation.

### AIR TRANSPORT LICENSING

In accordance with the Air Transport (Licensing of Air Services) Regulations (Chapter 448A), Hong Kong-registered aircraft operator intending to operate scheduled services to carry passengers, mail or cargo must apply to the Air Transport Licensing Authority for a licence for such operations. During the year, CAD provided the Air Transport Licensing Authority with air services-related information and statistics with regard to one application for licence and two applications for variation of licence.

## 安全策略辦公室

安全策略辦公室負責落實安全管理措施和規定，統籌和協調本處推展安全方案和持續監察方法的工作，並與意外調查辦公室合作，促進安全管理和預防飛機意外及嚴重事故發生。

### *持續監察方法的落實工作*

國際民航組織自二零一三年一月起，採用持續監察方法，取代以往對締約國展開周期安全監督審計的方法。持續監察方法要求各締約國及民航當局，向國際民航組織提供相關資料，以供國際民航組織持續審計，從而加強各國及民航當局監督航空安全的能力，保障全球航空安全。

根據持續監察方法的最新發展，民航處通過持續監察方法協調工作小組，協調制定行動計劃及執行的細節，積極落實相關工作，當中包括向國際民航組織提供所需資料，並依循持續監察方法安排內部安全審計等事宜。年內，落實持續監察方法的工作進展良好。

### *國家安全方案的實施*

年內，民航處繼續推行《香港安全方案》，並根據國際民航組織最新的安全管理標準和指引，對方案進行檢討和更新。

為促進安全協作和推廣安全文化，並加深香港航空業界對《香港安全方案》的認識，民航處於二零一五年五月十三日舉辦題為「有效落實安全管理框架」的安全管理論壇，吸引了逾130位來自30家機構的業界人士參加。

民航處會繼續按部就班，分階段推行相關的全球航空安全策略和安全管理條文，不斷改進航空安全的規管工作。

## STRATEGIC SAFETY OFFICE

The Strategic Safety Office is responsible for implementing safety management initiatives and requirements. It plans and coordinates the State Safety Programme (SSP) and Continuous Monitoring Approach (CMA) activities for the department, and collaborates with the Accident Investigation Office on the promotion of safety management principles, and the prevention of aircraft accidents and serious incidents.

### *Continuous Monitoring Approach (CMA) Implementation*

The implementation of the CMA by ICAO since January 2013 has substituted the previous cyclical audits on states by ICAO. Under the CMA, all states and administrations are required to provide the required information to ICAO for the latter's continuous review, with a view to enhancing the safety oversight capability of states and administrations and promoting global aviation safety.

In the light of the latest CMA developments, CAD has proactively implemented the CMA activities through the coordination of the CMA Coordination Working Group in the formulation of the action plans and associated tasks, which include provision of the required information to ICAO and conduct of CMA internal audits. Positive progress in the CMA implementation was achieved during the year.

### *State Safety Programme (SSP) Implementation*

CAD continued to implement SSP according to the "Hong Kong Safety Programme" (HKSP), which was reviewed and updated with reference to the latest ICAO's requirements and guidance on safety management.

To promote safety partnership, safety culture and awareness of HKSP amongst the aviation community, a Safety Management Forum was held on 13 May 2015. Themed as "Effective Implementation of Safety Management Framework", the forum attracted over 130 participants from 30 organisations.

CAD will continue to adopt a phased approach to implement the related global aviation safety strategies and safety management provisions with a view to continually enhancing our safety regulation.

## 飛機意外及嚴重事故調查

民航處是本港的飛機意外調查當局，負責調查於香港發生的飛機意外及嚴重事故。調查工作由訓練有素的意外調查主任，根據《國際民航公約》附件13的標準和建議措施進行，目的是確定發生事故的情況及因由，避免事故再次發生。

年內，民航處公布了下列意外的調查報告：

- 二零一三年九月二十八日，一架香港飛行總會之塞斯納172P型定翼機，在石崗機場中斷著陸後復飛不成功，導致飛機於11號跑道的北面草地上著地，最後機身翻轉停於草坪上。機上有兩名乘客受輕傷。



- 二零一三年十月六日，一架香港飛行總會的Robinson R22 Beta II型直升機，在石崗機場進行懸停訓練期間，向右翻倒。在意外中，飛行學員受輕傷。

## AIRCRAFT ACCIDENT AND SERIOUS INCIDENT INVESTIGATIONS

CAD is also the aircraft accident investigation authority for aircraft accidents and serious incidents occurred in Hong Kong. These investigations are carried out by trained Inspectors of Accidents in line with the ICAO Annex 13 Standards and Recommended Practices with the purpose of determining the circumstances and causes of the occurrences to prevent recurrence in future.

During the year, CAD published reports on the investigation of the following accidents:

- On 28 September 2013, a Cessna 172P aircraft of the Hong Kong Aviation Club made an unsuccessful bailed landing manoeuvre at Shek Kong Airfield. The aircraft landed on grassy area to the northern side of Runway 11 and came to a stop in an upside down position. Two passengers suffered minor injuries.

- On 6 October 2013, a Robinson R22 Beta II helicopter of the Hong Kong Aviation Club rolled over during a hover training exercise and came to rest on its right side at Shek Kong Airfield. The student pilot suffered minor injuries.





另外，仍在調查中的意外事故如下：

- 二零一六年二月二十七日，一架香港飛行總會的Zlin Z242L型定翼機，在大埔赤門虎頭沙近岸位置墜毀水中。該飛機由一名飛行員以目視飛行規則操作，機上沒有搭載乘客。飛行員在意外中死亡。

所有調查報告，包括初步報告及意外調查公報，均已上載民航處網頁([www.cad.gov.hk/chinese/reports.html](http://www.cad.gov.hk/chinese/reports.html))。

## 航空交通管理標準組

航空交通管理標準組(空管標準組)負責確保本港提供的空中導航服務，達到並維持在所訂的最高安全水平。

### 安全監督工作

空管標準組在安全監督工作中肩負重任，定期對航空交通管理部和航空交通工程服務部進行審計和安全檢查。年內，共進行了28次審計和安全檢查。審計內容包括根據國際民航組織的安全管理框架，查核和認證空中導航服務機構的安全管理系統。二零一五年十二月，空管標準組對航空交通工程服務部的安全管理系統展開續期審查，過程順利。該系統其後獲續期至二零二零年。

安全檢查範圍包括航空交通管理及通訊、導航和監察服務的運作、程序、培訓和考試，安全管理系統的應用，空管設備/系統，安全事故調查，設備維修保養的安排，內部審核，以及安全建議的跟進行動。檢查人員巡查了多個設施和工作單位，包括空管中心、控制塔、航空情報管理中心、航空網絡中心、備用空管中心、備用控制塔、培訓組、雷達模擬器和塔台模擬器。曾經接受檢查的其他空中導航服務領域包括通訊、導航和監察，航空氣象，搜索和救援，涉及飛機運作的空中導航服務程序，以及航空情報服務(包括繪製航圖)。

In addition, the following accident is under investigation:

- On 27 February 2016, a Zlin Z242L aircraft of the Hong Kong Aviation Club crashed into water offshore of Fu Tau Sha at Tolo Channel, Tai Po. The aircraft was operated under Visual Flight Rules by one pilot with no passengers on board. The pilot was fatally injured.

All the investigation reports, including the preliminary reports and accident bulletins, are published on the CAD's website ([www.cad.gov.hk/english/reports.html](http://www.cad.gov.hk/english/reports.html)).

## AIR TRAFFIC MANAGEMENT STANDARDS OFFICE (ATMSO)

ATMSO is responsible for ensuring that a high standard of safety is set, achieved and maintained in the provision of air navigation services in Hong Kong.

### Safety Oversight Activities

As an important part of the safety oversight function, ATMSO conducted regular audits and safety inspections on the Air Traffic Management Division (ATMD) and Air Traffic Engineering Services Division (AESD). A total of 28 audits and safety inspections were conducted in 2015-16. The audits covered the regulatory compliance and certification of the service providers' Safety Management System (SMS) in accordance with ICAO SMS framework. In December 2015, ATMSO conducted an SMS renewal inspection on AESD SMS and consequently, it was successfully renewed up to 2020.

The safety inspections included Air Traffic Management and Communication, Navigation and Surveillance (CNS) activities in operations, procedures, training, examinations, SMS implementation, ATC equipment/systems, safety occurrences investigations, maintenance arrangement, internal audits and follow-up actions arising from safety recommendations. Facilities visited by the inspectors included the ATCC, Control Tower, Aeronautical Information Management Centre, Aeronautical Network Centre, Backup ATCC and Backup Tower, Training Unit, Radar Simulator and Aerodrome Simulator. Inspections on CNS, meteorological information, search and rescue, Procedures for Air Navigation Services–Aircraft Operations, as well as Aeronautical Information Services (including aeronautical charting) domains of air navigation services were also conducted.

為配合航空網絡中心和航空情報管理中心分別在十月和十二月的提早過渡安排，空管標準組調整了監察計劃，優先在七月和十月分別為該兩個中心進行安全檢查，以確定該兩個中心已為提早過渡準備就緒。

通過空中導航服務標準協調會議，空管標準組定期和空中導航服務提供單位檢討應用安全管理系統的事宜，共同努力持續發展並改進該系統。

空管標準組的職責之一，是聯同航空交通管理部的調查人員，就所有空管事故展開初步調查，以確定事故的類別和嚴重程度，然後再按既定指引，決定之後調查的形式。

航空交通安全評核委員會繼續每半年召開會議，檢討空管事故和其他安全事故。委員會成員包括飛行標準及適航部、空管標準組和航空交通管理部的代表，以及本地主要航空公司和政府飛行服務隊負責航空安全的人員。

年內，空管標準組為履行安全監督職責，繼續積極參與更換空管系統的項目並提供意見，確保現有系統安全過渡至新系統。

### 文件編製

空管標準組定期覆檢和修訂現有的規管文件，確保內容準確有效和符合現況。年內，經修訂的規管文件包括《空管標準組手冊》(CAD610)、《航空交通管制認可考官守則》(CAD620)和《航空交通事故調查指引》(CAD636)。年內，該組並出版了《空管標準組指引手冊》，在規管和行政實務方面提供更詳盡的資料，作為該組人員的內部參考。

Prior to the early transition of Aeronautical Network Centre (ANC) and Aeronautical Information Management Centre (AIMC) in October and December 2015 respectively, ATMSO adjusted the surveillance programme and made prioritised provisions to inspect ANC and AIMC in July and October respectively with an objective to verifying their readiness for early transition implementation.

Through the Air Navigation Services Standards Coordination Meeting, ATMSO regularly reviewed in collaboration with air navigation service provider (ANSP) issues pertinent to the implementation of SMS to promote continual development and improvement.

As part of its duties, ATMSO participated in the preliminary investigations of all ATC incidents jointly with ATMD investigators to determine the category and severity of the incident. A decision would then be made as to the form of investigation to be conducted in accordance with established provisions.

Review of ATC incidents and other safety occurrences continued to be conducted half-yearly by the Air Traffic Safety Assessment Committee, which comprised representatives from the Flight Standards and Airworthiness Division, ATMSO, ATMD, and flight safety personnel of major local airline operators and the Government Flying Service.

As part of the safety regulatory oversight responsibilities, ATMSO continued to participate actively in the ATC systems replacement project to provide inputs with a view to facilitating the safe transition to the new systems.

### Documentations

ATMSO reviews and updates existing regulatory documents periodically to ensure that they remain accurate, valid and up-to-date. In the report year, the ATMSO had issued amendments to the ATMSO Exposition (CAD 610), the ATC Approved Examiner Handbook (CAD 620) and the Guidance for Air Traffic Incident Investigation (CAD 636). An internal working reference, the ATMSO Guidance Manual, had also been published in 2015 to provide more information for ATMSO staff on the regulatory and administrative practices.

### 空管人員執照

空管標準組的重要職責之一，是根據《國際民航公約》附件1的標準和《1995年飛航（香港）令》的規定，執行空管主任執照簽發制度。年內，該組共發出了72份首次簽發的空管主任執照、空管級別執照和合格證書，另續發了242份空管級別執照和合格證書。

為提高執行空管主任執照簽發制度的效率，空管標準組繼續優化空管主任執照電子數據庫系統。自二零一五年四月起，空管標準組及航空交通管理部人員可同步存取系統內的數據。此外，空管主任執照申請表格和續期表格亦已完成修訂和上載至系統。

在簽發空管主任執照方面，航空交通管理標準組在航空交通管理部支援下，在年內舉辦了認可考官培訓課程，並有十名空管主任修畢課程。

### 認可培訓機構

根據《國際民航公約》和《1995年飛航（香港）令》的規定，航空交通管理部獲批准成為認可培訓機構，可為航空交通管制員提供培訓。航空交通管理部舉辦的空管培訓課程，必須依據《國際民航公約》附件1的規定開辦，並須接受空管標準組監管。

### ATC Personnel Licensing

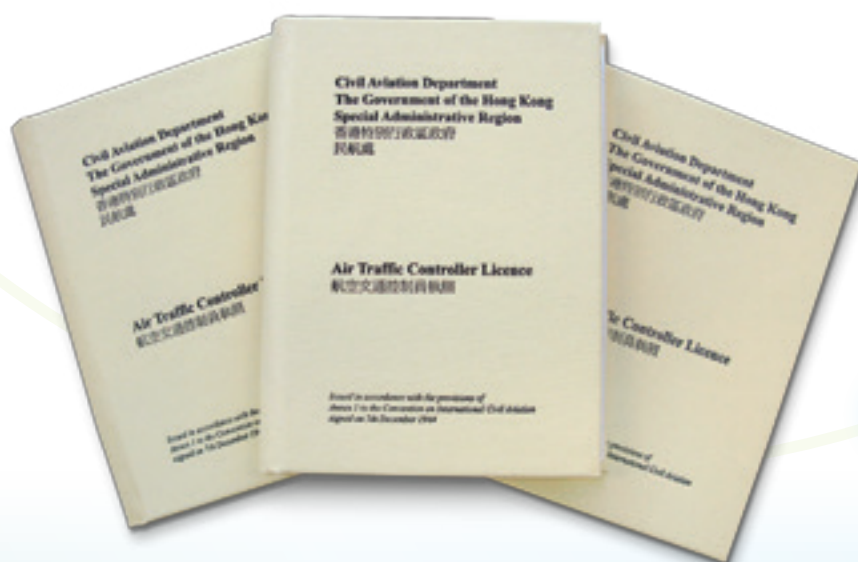
One of the important functions of ATMSO is to administer the ATC licensing scheme in accordance with the standards in ICAO Annex 1 and the requirements of Air Navigation (Hong Kong) Order 1995. During the report period, ATMSO processed 72 initial awards of ATC Licences, ATC Ratings and Certificates of Competency, as well as 242 renewals of Ratings and Certificates.

In order to improve the efficiency in administrating the personnel licensing system, the Air Traffic Control Licence electronic database had been continuously enhanced. Parallel input of licence data by ATMSO and ATMD was successfully launched in April 2015. The ATC licence application and renewal forms were also revised and uploaded to the system.

In connection with personnel licensing requirements, ATMSO, with support from ATMD, conducted during the year an Approved Examiner Training Course in which 10 Air Traffic Control Officers successfully completed the training.

### Approved Training Organisation

In accordance with requirements of ICAO and the Air Navigation (Hong Kong) Order 1995, ATMD was recognised as an approved training organisation for conducting training for air traffic controllers. ATC training conducted by ATMD shall be run pursuant to stipulations in ICAO Annex 1 and subject to regulatory oversight of ATMSO.





### 安全推廣工作

為推廣安全訊息，空管標準組定期為空中導航服務提供單位和維修服務承辦商的職員，舉辦安全文化和安全管理系統的簡報會，以鞏固安全監督和安全管理的概念。此外，空管標準組也定期於本處內聯網發布規管資訊和安全管理資料，方便所有空中導航服務人員查閱。

### 培訓及發展組

培訓及發展組為培訓及發展委員會提供支援，以制定部門培訓政策，以及就通過部門培訓計劃作出建議。該組會與各分部負責統籌培訓事宜的人員緊密合作，協助委員會監察經核准的部門培訓計劃是否有效推行，並與各分部適時協調，在有需要時修訂培訓計劃。培訓及發展組的其他主要職務包括落實已獲委員會通過在整個部門推行的培訓/學習方案，以及舉辦知識管理活動，促進部門的持續學習文化。

### 知識管理活動

培訓及發展組定期舉辦知識管理活動，弘揚部門的持續學習文化。這些活動包括最新的航空發展或趨勢講座、拜訪航空業界伙伴及持份者等，而最受歡迎的活動是「學習星期三」(Learning Wednesday)。自二零一五年九月首次舉辦以來，同事在每月第一個星期三都踴躍參與這個為時約一小時的講座。當中與講者互動討論的最後環節，更是同事分享工作知識和經驗的有效平台。為發掘更多既有用又有趣的航空主題，培訓及發展組正着手聯絡其他持份者，例如消防處機場消防隊和飛行服務隊，並邀請他們擔任主講嘉賓，為同事闡述其角色、功能、責任及最新的工作領域。

### Safety Promotion

For safety promotion, ATMSO conducted periodic briefings to ANSP colleagues and the staff of the maintenance services provider on safety culture and SMS to reinforce safety oversight and safety management concepts. In addition, ATMSO regularly published regulatory information and safety management materials on the intranet for convenient access by all air navigation services staff.

### TRAINING AND DEVELOPMENT OFFICE (TDO)

The TDO supports the Training and Development Committee (TDC) of the Department in formulating the departmental training policy and making recommendations on the endorsement of the departmental training programme. By maintaining close liaisons with divisional training coordinators, the TDO assists the TDC in monitoring the effective implementation of the approved departmental training programme and coordinating timely with divisions to make necessary adjustments to the programme. Other core functions of the TDO include taking forward department-wide training/learning initiatives duly endorsed by the TDC and promoting continuous learning culture within the department through organising Knowledge Management activities.

### Knowledge Management Activities

The TDO regularly coordinates Knowledge Management activities such as talks on latest aviation developments or trends, visits to industry partners and stakeholders in order to foster a strong continuous learning culture within the department. Amongst these activities, the "Learning Wednesday", a one-hour talk taking place on the first Wednesday of every month, has been favourably received since it started in September 2015. The talk, incorporating as its last session as interactive discussions between speakers and audience, proved an effective forum for colleagues to share work-related knowledge and experiences. To explore more useful and interesting aviation-related topics, the TDO has started liaising with stakeholders such as the Airport Fire Contingent of the Fire Services Department and the Government Flying Service for them to deliver talks on their role, functions, responsibilities and latest endeavours.

### 航空教育徑

自開幕以來，參觀航空教育徑（教育徑）的人數持續上升，當中以中小學生為主。教育徑是有效的教育工具，能增進市民大眾的航空知識，包括香港民用航空的發展歷程、民航處的角色和責任，以及航空安全的重要性。

### 成立民航訓練學院

行政長官在二零一四年《施政報告》公布，在經濟發展委員會航運業工作小組的支持下，政府會就成立民航訓練學院進行可行性研究，以期提高本地和海外航空從業員的技術水平，為航空業界培養人才，提升航空運輸的安全水平和效率，並進一步鞏固香港作為區內主要航空樞紐的領導地位。可行性研究已於二零一五年年底完成。行政長官在二零一六年《施政報告》中公布，為進一步鞏固香港作為區內主要航空樞紐的優勢，香港機場管理局（機管局）將成立民航學院，培訓本地及區域空運管理人才。機管局亦表示會在二零一六年內就民航學院的培訓範圍、課程設計、運作細節等進行詳細研究，同時亦會與政府及航空業界保持緊密聯繫，致力盡快成立民航學院。

### Aviation Education Path

The number of visitors to the Aviation Education Path showed a steady increase since its opening, the majority of which were primary and secondary school students. The Path continued to fulfil its role as an educational tool for effectively raising the awareness of the public about the historical developments of civil aviation in Hong Kong, the functions and responsibilities of the CAD and the importance of aviation safety.

### Establishment of a Civil Aviation Training Institute

The Chief Executive announced in the Policy Address 2014 that with the support of the Working Group on Transportation under the Economic Development Commission, the Government would conduct a study on the feasibility of establishing a civil aviation training institute, with a view to enhancing the skills for local and overseas practitioners of the aviation industry, thereby nurturing talented practitioners for the aviation industry, enhancing the level of safety and efficiency of air transport, and further strengthening Hong Kong's leading status as a major aviation hub in the region. The feasibility study has been completed in late 2015. The Chief Executive announced in the Policy Address 2016 that to further strengthen Hong Kong's edge as a major regional aviation hub, the Airport Authority Hong Kong (AAHK) will establish a civil aviation academy to nurture local and regional aviation management talent. AAHK also said it would develop the training scopes, curriculum design and operational details of the civil aviation academy within the year. AAHK added that it would continue to work closely with the Government and other members of the aviation industry to launch the academy expeditiously.



## 附錄

二零一五年四月至二零一六年三月期間，民航處人員參加的國際民航組織會議：

會議名稱	地點	日期
1. 亞太地區航空安全小組第六次會議	泰國曼谷	二零一五年四月六日至十日
2. 航空安保專家組第26次會議	加拿大蒙特利爾	二零一五年四月十三日至十七日
3. 廣播式自動相關監察系統實施專責小組第14次會議	新西蘭基督城	二零一五年四月十四日至十七日
4. 事故調查專家組第一次會議	加拿大蒙特利爾	二零一五年四月二十一日至二十四日
5. 國際民航組織航空情報服務—航空情報管理實施專責小組第十次會議	泰國曼谷	二零一五年四月二十七日至三十日
6. 頻譜檢討專責小組第二次會議	泰國曼谷	二零一五年五月十二日至十四日
7. 區域共同虛擬專用網絡專責小組第四次會議	泰國曼谷	二零一五年五月十八日至十九日
8. 航空通訊服務實施協調小組第二次會議	泰國曼谷	二零一五年五月二十日至二十二日
9. 機場營運及規劃專責小組第三次會議	馬來西亞浮羅交怡	二零一五年六月二日至四日
10. 基於性能導航實施協調小組第二次會議	泰國曼谷	二零一五年六月十一日至十二日
11. 亞太地區民航委員會工作組第一次會議	泰國曼谷	二零一五年六月二十二日至二十三日
12. 亞太地區航空安全小組轄下意外調查專責小組第三次會議	斯里蘭卡科倫坡	二零一五年六月二十三日至二十四日
13. 亞太地區航行規劃和實施小組轄下架構研究工作組第二次會議	泰國曼谷	二零一五年六月二十四日至二十五日
14. 亞太地區搜索與救援專責小組第四次會議	泰國曼谷	二零一五年七月六日至十日
15. 亞太地區航行規劃和實施小組轄下通訊/導航及監察分組第19次會議	泰國曼谷	二零一五年七月二十日至二十四日
16. 南中國海主要航空交通流量檢討專責小組第二次會議	中國海口	二零一五年七月二十二日至二十四日
17. 亞太地區航行規劃和實施小組轄下航空交通管理分組第三次會議	泰國曼谷	二零一五年八月三日至七日



## Appendix

ICAO conferences and meetings attended by representatives of CAD between April 2015 and March 2016:

<i>Name of Conference or Meeting</i>	<i>Venue</i>	<i>Dates</i>
1. 6 <sup>th</sup> Meeting of the Asia Pacific Regional Aviation Safety Team	Bangkok, Thailand	6 - 10 April 2015
2. 26 <sup>th</sup> Meeting of the Aviation Security Panel	Montréal, Canada	13 - 17 April 2015
3. 14 <sup>th</sup> Meeting of Automatic Dependent Surveillance-Broadcast Study and Implementation Task Force	Christchurch, New Zealand	14 - 17 April 2015
4. 1 <sup>st</sup> Meeting of the Accident Investigation Panel	Montréal, Canada	21 - 24 April 2015
5. 10 <sup>th</sup> Meeting of ICAO Aeronautical Information Services - Aeronautical Information Management Implementation Task Force	Bangkok, Thailand	27 - 30 April 2015
6. 2 <sup>nd</sup> Meeting of Spectrum Review Working Group	Bangkok, Thailand	12 - 14 May 2015
7. 4 <sup>th</sup> Meeting of the Common Regional Virtual Private Network Task Force	Bangkok, Thailand	18 - 19 May 2015
8. 2 <sup>nd</sup> Meeting of the Aeronautical Communication Services Implementation Coordination Group	Bangkok, Thailand	20 - 22 May 2015
9. 3 <sup>rd</sup> Meeting of the Aerodromes Operations and Planning Working Group	Langkawi, Malaysia	2 - 4 June 2015
10. 2 <sup>nd</sup> Meeting of Performance based Navigation Implementation Coordination Group	Bangkok, Thailand	11 - 12 June 2015
11. 1 <sup>st</sup> Meeting of the Asia and Pacific Civil Aviation Commission Task Force	Bangkok, Thailand	22 - 23 June 2015
12. 3 <sup>rd</sup> Meeting of the Asia Pacific Regional Aviation Safety Team – Asia Pacific Accident Investigation Group	Colombo, Sri Lanka	23 - 24 June 2015
13. 2 <sup>nd</sup> Meeting of the Asia Pacific Air Navigation Planning and Implementation Regional Group Contributory Bodies Structure Review Task Force	Bangkok, Thailand	24 - 25 June 2015
14. 4 <sup>th</sup> Meeting of the ICAO Asia/Pacific Search and Rescue Task Force	Bangkok, Thailand	6 - 10 July 2015
15. 19 <sup>th</sup> Meeting of the Communications/Navigation and Surveillance Sub-Group of the Asia Pacific Air Navigation Planning and Implementation Regional Group	Bangkok, Thailand	20 - 24 July 2015
16. 2 <sup>nd</sup> Meeting of the South China Sea Major Traffic Flow Review Group	Haikou, China	22 - 24 July 2015
17. 3 <sup>rd</sup> Meeting of the Air Traffic Management Sub-Group of the Asia Pacific Air Navigation Planning and Implementation Regional Group	Bangkok, Thailand	3 - 7 August 2015

會議名稱	地點	日期
18. 亞太地區航空安全小組第七次會議	泰國曼谷	二零一五年八月三十一日至九月四日
19. 亞太地區航行規劃和實施小組第26次會議	泰國曼谷	二零一五年九月七日至十日
20. 亞太地區區域航空安全小組第五次會	菲律賓馬尼拉	二零一五年十月二十六日至二十七日
21. 亞太地區航空保安協調論壇第三次會議	菲律賓馬尼拉	二零一五年十月二十六日至二十七日
22. 第52次亞太地區民航局局長會議	菲律賓馬尼拉	二零一五年十月二十六日至三十日
23. 亞太地區民航委員會工作組轄下專家組第一次會議	泰國曼谷	二零一五年十一月十一日
24. 亞太地區飛行程序計劃主導委員會第七次會議	中國澳門	二零一五年十一月十一日至十三日
25. 國際民航組織世界航空論壇	加拿大蒙特利爾	二零一五年十一月二十三日至二十五日
26. 航空環境保護委員會第十次會議	加拿大蒙特利爾	二零一六年二月一日至十二日
27. 南亞及印度洋航空交通管理協調小組第六次會議暨東南亞航空交通服務協調小組第23次會議	泰國曼谷	二零一六年二月二十九日至三月四日
28. 互助發展運作安全和持續適航計劃東南亞區主導委員會第17次會議	泰國曼谷	二零一六年三月一日至二日
29. 基於性能導航實施協調小組第三次會議	泰國曼谷	二零一六年三月八日至十日
30. 航空安保專家組第27次會議	加拿大蒙特利爾	二零一六年三月十四日至十八日
31. 區域共同虛擬專用網絡專責小組先行成員評估會議	新加坡	二零一六年三月二十二日至二十四日
32. 亞太地區航空安全小組第八次會議	泰國曼谷	二零一六年三月二十八日至四月一日
33. 國際民航組織各地區舉辦關於基於市場的措施以應對國際航空二氧化碳排放的國際民航組織全球航空對話(GLADs)	印尼峇里	二零一六年三月二十九至三十日

<i>Name of Conference or Meeting</i>	<i>Venue</i>	<i>Dates</i>
18. 7 <sup>th</sup> Meeting of the Asia Pacific Regional Aviation Safety Team	Bangkok, Thailand	31 August - 4 September 2015
19. 26 <sup>th</sup> Meeting of the Asia Pacific Air Navigation Planning and Implementation Regional Group	Bangkok, Thailand	7 - 10 September 2015
20. 5 <sup>th</sup> Meeting of the Regional Aviation Safety Group – Asia and Pacific Regions	Manila, Philippines	26 - 27 October 2015
21. 3 <sup>rd</sup> Meeting of the Regional Aviation Security Coordination Forum – Asia and Pacific Regions	Manila, Philippines	26 - 27 October 2015
22. 52 <sup>nd</sup> Conference of Directors General of Civil Aviation, Asia and Pacific Regions	Manila, Philippines	26 - 30 October 2015
23. 1 <sup>st</sup> Meeting of the Expert Group established by APAC Civil Aviation Commission Task Force	Bangkok, Thailand	11 November 2015
24. 7 <sup>th</sup> Meeting of the Asia-Pacific Flight Procedure Programme Steering Committee	Macau, China	11 - 13 November 2015
25. ICAO World Aviation Forum	Montréal, Canada	23 - 25 November 2015
26. 10 <sup>th</sup> Meeting of the Committee on Aviation Environmental Protection	Montréal, Canada	1 - 12 February 2016
27. Combination of 6 <sup>th</sup> Meeting of the South Asia/Indian Ocean Air Traffic Management Coordination Group and 23 <sup>rd</sup> Meeting of the South-East Asia Air Traffic Services Coordination Group	Bangkok, Thailand	29 February - 4 March 2016
28. 17 <sup>th</sup> Steering Committee Meeting of the Co-operative Development of Operational Safety and Continuing Airworthiness Programme - South East Asia	Bangkok, Thailand	1 - 2 March 2016
29. 3 <sup>rd</sup> Meeting of Performance based Navigation Implementation Coordination Group	Bangkok, Thailand	8 - 10 March 2016
30. 27 <sup>th</sup> Meeting of the Aviation Security Panel	Montréal, Canada	14 - 18 March 2016
31. Pre-evaluation Meeting of the Pioneer States of the Common Regional Virtual Private Network Task Force	Singapore	22 - 24 March 2016
32. 8 <sup>th</sup> Meeting of the Asia Pacific Regional Aviation Safety Team	Bangkok, Thailand	28 March - 1 April 2016
33. ICAO Global Aviation Dialogues (GLADs) on market-based measures to address CO2 emissions from international aviation	Bali, Indonesia	29 - 30 March 2016



## 財務 Finance

### 開支

在二零一五至二零一六年度，本處在政府財政預算總目下的開支為9.10億元；按有關會計準則計算的總經營支出（包括政府其他部門提供服務的成本）則為12.32億元。同期資本開支為3.98億元，主要項目包括衛星通訊、導航及監察/航空交通管理系統，以及更換航空交通管制系統。

### EXPENDITURE

In the year of 2015-2016, the departmental expenditure under the relevant Head of Government Budget amounted to \$910 million, while the total operating expenditure (including costs of services provided by other government departments) for the same period amounted to \$1,232 million according to the relevant accounting practice. Capital expenditure during the year amounted to \$398 million, and major items included Satellite-based Communications, Navigation and Surveillance/Air Traffic Management Systems and Replacement of Air Traffic Control System.



民航處 CIVIL AVIATION DEPARTMENT

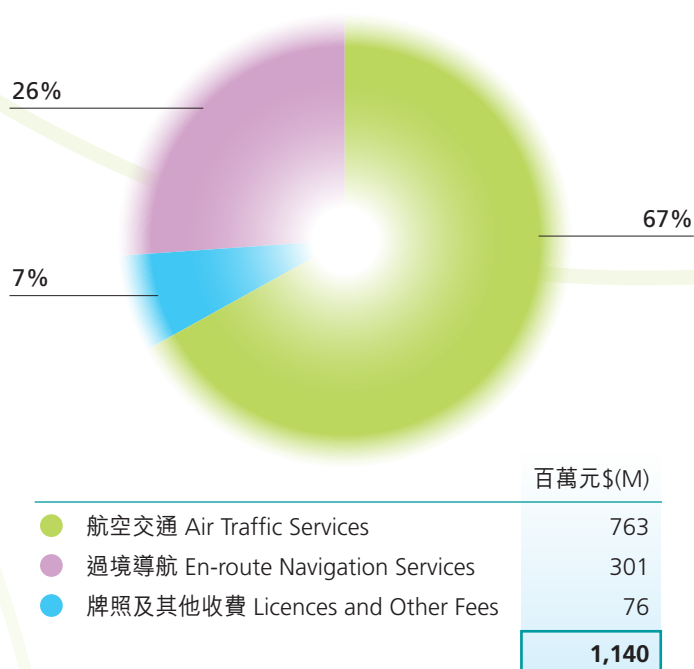
## 收入


本處提供服務時以「用者自付」為原則，即透過相關費用及收費向用者收回服務所有成本。收費服務主要包括：提供航空交通服務、過境導航服務及簽發牌照予本地航空公司、空勤人員、飛機維修機構、飛機工程師、培訓機構及香港國際機場，在二零一五至二零一六年度的總收入為11.40億元。另外，本處亦按《飛機乘客離境稅條例》（第140章）協助政府透過航空公司收取離境稅款，在二零一五至二零一六年度的相關稅款為25.16億元。

## REVENUE

The department provides services according to the "user-pay" principle, i.e., the relevant fees and charges should recover the full cost of service provision. Fee-charging services provided by the department include: the provision of air traffic services, en-route navigation services and licensing of local airlines, aircrews, maintenance organisations, aeronautical engineers, training organisations and the Hong Kong International Airport, and total revenue in 2015-2016 amounted to \$1,140 million. Separately, the department assisted the Government to collect taxes through airlines under the Air Passenger Departure Tax Ordinance (Chapter 140), the tax revenue collected amounted to \$2,516 million in 2015-2016.

### 收入分析 Analysis of Revenue (2015-2016)





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