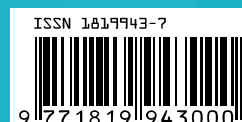
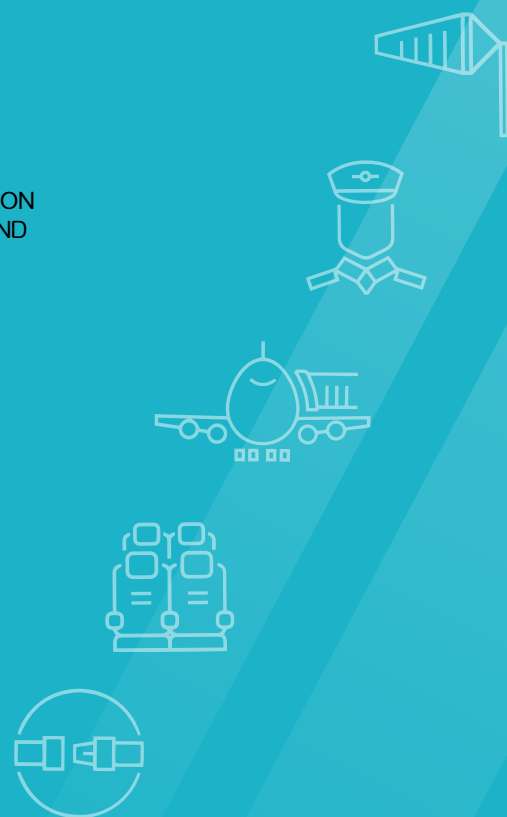




交通部民用航空局

CIVIL AERONAUTICS ADMINISTRATION
MINISTRY OF TRANSPORTATION AND
COMMUNICATIONS, R.O.C.

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交通部民用航空局 106 年年報

CIVIL AERONAUTICS
ADMINISTRATION
2017 ANNUAL REPORT

FLY WITH YOU



交通部民用航空局

106 年年報

CIVIL AERONAUTICS
ADMINISTRATION
2017 ANNUAL REPORT



FLY WITH YOU



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回顧 106 年的全球航空運輸市場，受惠於國際經濟景氣復甦與貿易持續活絡，全球航空旅客數及貨運量都有亮眼的成長；其中，匯集了世界十大國際航線的亞太地區，是全球航空產業競爭最劇烈、發展潛力最強盛的區域；身處其中的我們擁有許多機會，同時也面臨眾多挑戰，因此更需全力以赴、孜孜矻矻的推動各項業務與建設，為國人提供更安全、舒適、便捷的空運服務。

在這快速成長又劇烈競爭的空運市場，我們積極拓展航權、綿密空運網絡，以強化國籍航空公司及機場競爭力。106 年我國已與 57 個國家地區簽署通航協定，國際及兩岸客貨運航線達到 296 條，連結全球 141 個城市，並且創下全年旅客人數 6,598 萬人次的歷史新高。在新南向政策推動方面，近年陸續擴增越南、菲律賓及澳大利亞等國家的班次容量，再輔以鼓勵航空公司增加航班、新闢航點的降落費優惠措施，讓飛航新南向國家的班次數量更加頻密，106 年我們達成每週 554 個航班飛航，相較 105 年增加 15%，有益加速區域經貿合作，促進觀光交流。

我們深知飛航安全是空運服務的根基，是永續經營的圭臬，因此致力配合國際民航組織 (ICAO) 政策，階段性導入安全管理系統 (SMS)，循序踏實輔導國籍航空公司於 106 年達成 SMS 建置之目標，我們更優先完成飛航國際航線之航空公司之 SMS 有效性評估，以及擴大推廣至航空器維修廠、地勤業者及本局所屬航空站，完整建構我國航空安全體系。

為健全我國民用航空運輸業者經營體質，保護消費者權益，我們通盤檢討航空業者設立門檻，107 年起申請籌設的資格除應具備財務能力外，航空專業團隊及飛安技術能力亦需同步到位，期引導業者做好全方位的營運準備；另輔導航空公司機隊汰換及協助新機引進，以降低國內航線服務機隊機齡，提供旅客更安心、更貼心的飛航體驗。

面對熱門的遙控無人機與近年航空公司無預警停航事件，我們以興利及除弊的精神，推動我國民用

航空法修正。在興利部分，借鏡美國、歐盟與日本等立法經驗，並多方參詢國內相關意見，以兼顧社會秩序、民衆生命財產安全及產業應用發展，在民用航空法新訂專章管理，讓無人機之註冊與檢驗、人員操作與檢定，及活動範圍與限制，有適宜管理機制；而除弊部分，就民用航空法對於航空公司退場機制規範不足之處，建立相關課責制度及合理退場機制，避免航空公司恣意停止或結束營業損害社會公益。本次修法涉及中央各部會及地方政府權責，經集思研議、密集溝通，始讓相關規範更臻完備，歷經多次折衝協調，終獲立法院三讀通過，並於 107 年 4 月 25 日經總統公布。

配合國家整體發展藍圖，我們持續不斷精進飛航服務品質、推動機場建設；在臺北飛航情報區 (Taipei FIR) 空域及航路結構上，我們繼 Q11 新航路增設後，於 106 年 8 月再啓用 Q12、Q13 及 Q14 新航路，順利暢通臺灣南端的航路瓶頸，有效減少飛行距離及提

升飛航安全；而桃園國際機場新塔臺亦持續建設中，以 108 年啓用為目標，為桃園國際機場未來發展做好準備。臺北松山機場及高雄國際機場則陸續展開跑道整建工程，為持續成長的空運需求，鋪築堅毅翱翔的翅膀；臺中機場啓用新聯絡滑行道，大幅提升運作效率，107 年將接續增建停機坪、整建國內航廈，持續擴大營運服務能量；此外，金門機場完成建置終端航管雷達，提供精確近場航管服務，有效增進飛航效率。

臺灣位處東北亞和東南亞空中必經通路，具優越空運位置，我們以亞太地區的空運樞紐自許，不斷精益求精，在旅客服務需求多樣化、飛航安全與服務要求更嚴格的環境下，背負重責大任的關鍵點上，汲取經驗並以創新思維突破既有框架，持續推動各項民航發展建設，並以培養國際性前瞻民航人才為己任，持續提升我國民航產業競爭力，為交通運輸產業寫下輝煌的一頁。

交通部民用航空局局長

林國慶



Words from the Director General

Looking back at the global aviation market in 2017, the number of passengers and cargo shipments achieved spectacular growth due to the global economic recovery and continuous growth in trade. As the world's top ten international routes located in the Asia Pacific region, it develops with the most intense competition and greatest potential in the global aviation industry. We are strategically positioned to have many opportunities and at the same time, we also have to face various challenges. We must therefore do our best to actively advance all operations and projects to provide people with safer, more comfortable and convenient air travel services.

In an air transport market with rapid growth and intense competition, we seek to expand air traffic rights and build a dense air transport network in order to strengthen the competitiveness of national airlines and airports. As of 2017, Taiwan has signed air services agreements with 57 countries or areas, and maintained 296 international and cross-strait scheduled passenger and cargo routes connecting 141 cities worldwide. We also created a record high annual volume of 65.98 million passengers. With regard to the advancement of the New Southbound Policy, we've recently increased frequencies and capacity in the agreements with Vietnam, the Philippines and Australia. In addition, in order to encourage airlines to increase the number of flights and new destinations, discount for landing fees were offered. These measures greatly increased the

frequency of flights to New Southbound countries. In 2017, weekly flights to those countries averaged 554, a 15% increase compared to 2016. We believed it did help accelerate regional economic and trade cooperation as well as tourism.

We are deeply aware that flight safety is the basis of air transport services and the key to sustainable development of the industry. We have therefore exerted full efforts to comply with policies of the International Civil Aviation Organization (ICAO) and implemented the Safety Management System (SMS) stage by stage. The assistance we provided to national airlines facilitated the completion of their SMS establishment in 2017. Moreover, we completed conducting the effectiveness evaluation of airlines that operated international flights as our first priority, and we also promoted to cover all aircraft repair and maintenance stations, airport ground handling service providers as well as airports affiliated to CAA. The set goal of establishing a sound and solid aviation safety system was consequently achieved.

To strengthen the structure and operation quality of national civil air transport operators so as to protect consumer interests, we have reviewed the qualifications for establishing an airline. In addition to sufficient financial capabilities, applicants must also have a professional aviation team and flight safety technical capabilities starting from 2018. It is expected that the measures will encourage operators to be fully prepared for operations. We also assisted airlines in phasing out their aging fleet and introducing new aircraft to lower the average age of the fleet serving domestic flights, expecting that passengers could experience a more secure and thoughtful flight service.

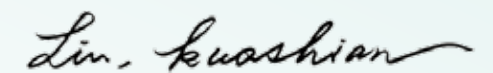
To cope with the upsurging activities of unmanned aircraft systems (UAS) and airline's ceasing operation and disbanding without application in advance in recent years, we, upholding the spirit of initiating the useful and abolishing the harmful, advanced the amendments to the Civil Aviation Act. In terms of initiating the useful, by referencing legislative experiences in the United States, European Union, and Japan and consulting the opinions of related domestic experts, we established a new dedicated chapter in the Civil Aviation Act to provide appropriate management mechanisms for the registration, inspections, personnel operations and certification of UAS, and the scope and restrictions on UAS activities. In the process, social order, the safety of people and their property and the development of industrial applications were all taken into account. In terms of abolishing the harmful, we have established related accountability systems and reasonable mechanisms for operator's withdrawals to supplement deficiencies in the Civil Aviation Act with regard to the disbanding of airlines. The amendments are intended to prevent airlines from arbitrarily suspending or ceasing operation and damaging public interest. These amendments involved the collective comprehensive researches and intense communications among central ministries and competent authorities of local governments. After multiple rounds of negotiations and coordination, it ultimately passed the third reading in the Legislative Yuan and was promulgated by the President's Decree on April 25, 2018.

Based on the overall national development blueprint, we continued to improve the quality of flight services and advance airport construction projects. In respect of the airspace and structure of air routes in Taipei Flight Information Region (FIR), we launched the Q12, Q13, and Q14 routes in August 2017 after the establishment of the new Q11 route. These new routes smoothed out

the traffic bottlenecks in the south of Taiwan, effectively reduced flight distances and improved flight safety. In addition, a new control tower at Taoyuan International Airport is also under construction and our goal is to inaugurate the tower in 2019 for the future development of Taoyuan International Airport. Furthermore, runway renovation works have begun at Taipei Songshan Airport and Kaohsiung International Airport, symbolizing our determination to build durable infrastructures to support the growing demands for air transportation. In Taichung Airport, a new connecting taxiway was activated and it has greatly improved operating efficiency. In 2018, we will continue to build new aprons and renovate the terminal buildings in domestic airports with a view to expanding service capacity. Also, the ATC terminal radar at Kinmen Airport was completed and it provides accurate approach air traffic control services and effectively improves flight efficiency.

Taiwan is located at a pivoting point and serves as an indispensable passage between Northeast Asia and Southeast Asia. With such a superior position for air transport, we are fully aware that we are at the heart of the Asia Pacific region, and therefore we must always make further improvements. We exist in an environment with diverse passenger services demand and more rigorous requirements for flight safety and services. At this pivotal point, we bear great responsibilities, and so we must gain more experiences and adopt innovative thinking to break through the existing framework. In addition to continually advancing civil aviation development and construction projects, cultivating forward-looking international civil aviation professionals is also our another important responsibility. Thereby, we are able to unceasingly upgrade the competitiveness of Taiwan's civil aviation industry and open up a brand new chapter for the transportation industry.

Director General
Civil Aeronautics Administration



2 邁步全球， 掌握時代的脈動

Venture into the World; Master the Trend of the Era

我國民航現況簡介

跨步東亞的優勢位置

臺灣居於亞洲與西太平洋的交通要衝，北臨日本、琉球群島，南接菲律賓群島，飛航東北亞及東南亞主要城市平均 2.55 個小時，是東亞交通的樞紐；至 106 年底我國已與 57 個國家地區簽署通航協定，在臺營運的航空公司共有 88 家，經營定期客運及貨運航線達 296 條，連結全球 141 個城市，全年旅客人數高達 6,598 萬人次。

「臺北飛航情報區」（Taipei Flight Information Region, 簡稱 Taipei FIR）共有 18 條國際航路及 4 條國內航路，銜接福岡、馬尼拉、香港及上海飛航情報區，106 年提供的飛航服務超過 166 萬管制架次，為東亞航空運輸往來不可或缺的一環。

同步世界的飛安監理

我國的飛航安全監理機制與世界同步，依據國家民用航空安全計畫（State Safety Program, 簡稱 SSP），106 年已輔導國籍航空公司建置安全管理系統（Safety Management System, 簡稱 SMS），針對經營國際航線的航空公司完成有效性評估，確保各項安全措施有效落實；此外，擴大推動安全管理系統至 6 家航空器維修廠、3 家航空站地勤業者及本局所屬 16 個航空站，建構我國完整的航空安全體系；至於航空保安管理系統（Security Management System, 簡稱 SeMS）部分，亦完成國籍航空公司及我國入出境機場之建置工作，並加強空運危險物品之管理與監督。



Overview of Civil Aviation in Taiwan

A Geographic Advantage for East Asia Access

Taiwan is a transportation hub located between the Asian continent and the West Pacific; it is adjacent to Japan and the Ryukyu Islands to the north and connected to the Philippines to the south; flights from Taiwan to major cities in Northeast and Southeast Asia average 2.55 hours. As of 2017, Taiwan has signed air services agreements with 57 countries or areas; 88 domestic and foreign airlines operated in Taiwan; they operated 296 scheduled passenger and cargo routes, connecting 141 cities worldwide, and recorded an annual passenger volume up to 65.98 million.

In Taipei Flight Information Region (Taipei FIR), there are 18 international and 4 domestic airways. It connects to FIRs in Fukuoka, Manila, Hong Kong, and Shanghai. In 2017, Taipei FIR provided air traffic services for over 1.66 million flights and served an indispensable role in East Asian air transport.

Globally Synchronized Flight Safety Oversight

Taiwan's flight safety oversight mechanism is globally synchronized. According to the State Safety Program (SSP), Civil Aeronautics Administration (CAA) has assisted national airlines in establishing safety management systems in 2017 to ensure each safety measure is effectively implemented; besides, effectiveness assessment were made especially for those airlines operating international services. In addition, CAA has further promoted the Safety Management System (SMS) to 6 repair stations, 3 ground handling agencies, and 16 airports affiliate to CAA. Thereby, Taiwan's flight safety system was profoundly consolidated. As to the Security Management System (SeMS), CAA has also completed the establishment of SeMS for all national airlines as well as international airports. In the meanwhile, management and supervision of dangerous goods handling on air transportation was also reinforced.

106 年度臺灣地區民航服務
2017 Civil Aviation Service in Taiwan



106 年我國渦輪噴射飛機全毀 5 年移動平均失事率為 0 次 / 百萬離場次，優於全球近 5 年（102 至 106 年）0.29 次 / 百萬離場次；因近年 2 次 ATR 72 型機失事影響及總營運架次減少，渦輪螺旋槳飛機全毀 5 年移動平均失事率為 6.32 次 / 百萬離場次，較全球近 5 年（102 至 106 年）1.80 次 / 百萬離場次高；本局將持續依循國際民航組織（International Civil Aviation Organization, 簡稱 ICAO）標準健全相關飛安法規，並落實執行飛安監理制度，以提供更安全的飛航服務。

循序周穩的機場發展

臺灣地區有 17 座機場提供民航服務，考量國家整體經濟與資源最適配置，本局以宏觀及前瞻思維勾勒各機場發展藍圖。桃園國際機場為我國最主要國家門戶，以成為東亞樞紐機場為目標；臺北松山機場為首都商務機場，並擔當國內航線樞紐機場；臺中機場與高雄國際機場配合地方需求及優勢產業，

拓展國際空運服務網絡，並提供中、南部地區國內航空服務；而花蓮、臺東、金門、澎湖（馬公）、臺南與嘉義等 6 座機場負責國內運輸，並具備飛航國際及兩岸包機能力，恆春機場於 106 年起試辦國際及兩岸包機，共同協助地方產業及觀光發展；至於南竿、北竿、蘭嶼、綠島、七美及望安等 6 座機場，提供離島偏遠地區與臺灣本島空運服務。

邁步全球的民航事業

依據我國民用航空法成立之民用航空事業，截至 106 年底，共有民用航空運輸業 7 家、普通航空業 10 家，適航的國籍民用航空器達 263 架；另有航空站地勤業 7 家（其中 2 家單項經營空橋操作、1 家單項經營機艙清潔）、空廚業 5 家、航空貨運承攬業 1,292 家、航空貨物集散站經營業 7 家（另有 2 家外籍航空公司自營其承運貨物）。此外，檢定合格之航空器維修廠計 24 家，民用航空人員訓練機構計 7 家，其中術科飛行訓練機構 1 家。

In 2017, the 5-year moving average of accident rate of national airlines turbojet was 0 per million departures, lower than the global average of 0.29 per million departures in the past 5 years (2013–2017). However, the figure for turboprop aircraft was 6.32 per million departures, still higher than the global average of 1.8 per million departures. Obviously it was affected by the 2 ATR 72-type aircraft accidents of TransAsia Airlines and the reduction in total operating flights in recent years. CAA will continue to enforce relevant flight safety regulations in accordance with SARPS (Standards and Recommended Practices) published by the International Civil Aviation Organization and strictly implement the oversight system to provide safer air services.

Progressive and Steady Airport Development

Civil aviation services are provided in 17 airports in Taiwan. CAA considers the overall national economy and optimal resource distribution in outlining blueprints for each airport on the bases of macroscopic, advanced concepts. Serving as Taiwan's primary international gateway, Taiwan Taoyuan International Airport is aimed as a hub airport for East Asia. Taipei Songshan Airport is identified as a capital business airport and also serves as a domestic hub. Taichung Airport and Kaohsiung International Airport are expanding their international service networks and providing domestic services

for Central and Southern Taiwan catering to local advantageous industrial requirements. Additionally, the 6 airports in Hualien, Taitung, Kinmen, Penghu (Magong), Tainan, and Chiayi are responsible for domestic transport and capable of serving international and cross-strait chartered flight. In 2017, Hengchun Airport started trial flights for international and cross-strait chartered services trying to assist local tourism industry. Six other airports, namely Nangan, Beigan, Lanyu, Lyudao, Qimei and Wang-An, provide services between offshore remote areas and Taiwan main island.

Globalizing Civil Aviation Businesses

As of the end of 2017, 7 civil air transport enterprises and 10 general aviation enterprises are in operation according to the Civil Aviation Act. They owned and operated a total of 263 airworthy civil aircraft. Peripheral businesses include 7 airport ground handling service providers (including 2 providers specializing in air bridge operation and 1 provider in cabin cleaning), 5 catering services providers, 1,292 air freight forwarders, and 7 air cargo entrepots (including 2 self-handling entrepots operated by foreign airlines. There were also 24 certified repair and maintenance stations and 7 airman training institutes, among them only one providing pilot actual fly training.

組織架構 Organizational Structure



局本部 CAA HEADQUARTERS

企劃組
Planning Division

空運組
Air Transport Division

飛航標準組
Flight Standards Division

飛航管制組
Air Traffic Services Division

助航組（航站管理小組）
Air Navigation Facilities Division
（Airport Operation and Management Unit）

場站組
Aerodrome Engineering Division

供應組
Logistics Division

資訊室
Information Management Office

秘書室
Secretariat

主計室
Budget, Accounting and
Statistics Office

人事室
Personnel Office

政風室
Civil Service Ethics Office

局屬機關 SUBORDINATE AGENCIES

飛航服務總臺
Air Navigation and Weather Services

民航人員訓練所
Aviation Training Institute

臺北國際航空站
Taipei Songshan Airport

高雄國際航空站
Kaohsiung International Airport

花蓮航空站
Hualien Airport

馬公航空站
Magong Airport

臺南航空站
Tainan Airport

臺東航空站
Taitung Airport

金門航空站
Kinmen Airport

臺中航空站
Taichung Airport

嘉義航空站
Chiayi Airport

南竿航空站
Nangan Airport

北竿航空站
Beigan Airport

蘭嶼航空站
Lanyu Airport

綠島航空站
Lyudao Airport

七美航空站
Qimei Airport

望安航空站
Wang-An Airport

恆春航空站
Hengchun Airport



任務編組 TASK FORCE UNITS

機場工程處
Airport Engineering Department

桃園航空客貨運園區開發中心
Taoyuan Airport Industrial Park Development Center

飛航管制聯合協調中心
Air Traffic Control Joint Coordination Center

指揮監督 SUPERVISION UNITS

航空警察局
Aviation Police Bureau

航空醫務中心
Aviation Medical Center

國際及兩岸航網
International and Cross-Strait Air Network



註：
1. 包括客、貨運，且*表示為全貨機航點，**表示為技術降落航點。
2. 本表包含 106 年中停航之航點。
Note:
1. Including passenger and cargo transport; *represents cargo-only destinations; **represents technical landing destination.
2. This table includes destinations suspended in 2017.

美加地區 United States & Canada

美國 USA	休士頓、安克拉治*、西雅圖、辛辛那提*、亞特蘭大*、波特蘭、芝加哥、洛杉磯、紐約、曼菲斯*、達拉斯*、檀香山、邁阿密*、舊金山、關島 Houston, Anchorage*, Seattle, Cincinnati*, Atlanta*, Portland, Chicago, Los Angeles, New York, Memphis*, Dallas*, Honolulu, Miami*, San Francisco, Guam
加拿大 Canada	多倫多、溫哥華 Toronto, Vancouver

歐洲地區 Europe

荷蘭 Netherlands	阿姆斯特丹 Amsterdam
義大利 Italy	羅馬 Rome
盧森堡 Luxembourg	盧森堡 *Luxembourg*
奧地利 Austria	維也納 Vienna
英國 United Kingdom	倫敦（希斯洛、蓋威克） London (Heathrow, Gatwick)
法國 France	巴黎 Paris
德國 Germany	法蘭克福、科隆 *Frankfurt, Cologne*
捷克 Czech Republic	布拉格 *Prague*
喬治亞 Georgia	提比里斯 *Tbilisi*

美加地區 United States & Canada

17

中東地區 Middle East

阿拉伯聯合大公國 United Arab Emirates	杜拜（杜拜、阿勒馬克圖姆*） Dubai (Dubai, Al Maktoum*)
亞塞拜然 Azerbaijan	巴庫 *Baku*
阿曼 Oman	馬斯喀特 *Muscat*

大洋州地區 Oceania

澳大利亞 Australia	布里斯本、雪梨、墨爾本 Brisbane, Sydney, Melbourne
紐西蘭 New Zealand	奧克蘭、基督城 Auckland, Christchurch
帛琉 Palau	帛琉 Palau

歐洲地區 Europe

10

中東地區 Middle East

3

亞洲地區 Asia

105

大洋州地區 Oceania

6

亞洲地區 Asia

越南 Vietnam	河內、胡志明市、峴港 Hanoi, Ho Chi Minh City, Danang
印度 India	孟買*、德里 Mumbai*, Delhi
柬埔寨 Cambodia	金邊 Phnom Penh
俄羅斯 Russia	新西伯利亞*、伊爾庫茨克**、莫斯科（多莫傑多沃、謝列梅捷沃*） Novosibirsk*, Irkutsk**, Moscow (Domodedovo, Sheremetyevo*)
土庫曼 Turkmenistan	土庫曼巴西 *Turkmenbach*
土耳其 Turkey	伊斯坦堡 Istanbul
中國大陸 Mainland China	三亞、上海（浦東、虹橋）、大連、天津、太原、北京、石家莊、合肥、成都、汕頭、西安、西寧、呼和浩特、昆明、杭州、武漢、長沙、長春、青島、南京、南昌、南通、南寧、哈爾濱、威海、泉州、重慶、徐州、桂林、海口、烏魯木齊、常州、張家界、淮安、深圳、無錫、貴陽、黃山、廈門、溫州、煙臺、寧波、福州、銀川、廣州、鄭州、濟南、瀋陽、麗江、蘭州、鹽城、揚州、義烏、延吉 Sanya, Shanghai (Pudong, Hongqiao), Dalian, Tianjin, Taiyuan, Beijing, Shijiazhuang, Hefei, Chengdu, Shantou, Xi'an, Xining, Hohhot, Kunming, Hangzhou, Wuhan, Changsha, Changchun, Qingdao, Nanjing, Nanchang, Nantong, Nanning, Harbin, Weihai, Quanzhou, Chongqing, Xuzhou, Guilin, Haikou, Urumchi, Changzhou, Zhangjiajie, Huai'an, Shenzhen, Wuxi, Guiyang, Huangshan, Xiamen, Wenzhou, Yantai, Ningbo, Fuzhou, Yinchuan, Guangzhou, Zhengzhou, Jinan, Shenyang, Lijiang, Lanzhou, Yancheng, Yangzhou, Yiwu, Yanji

亞洲地區 Asia

日本 Japan	大阪、小松、仙台、札幌、石垣島、名古屋、旭川、函館、岡山、東京（羽田、成田）、宮崎、琉球、高松、鹿兒島、富山、新潟、福岡、廣島、熊本、靜岡 Osaka, Komatsu, Sendai, Sapporo, Ishigaki, Nagoya, Asahikawa, Hakodate, Okayama, Tokyo (Haneda, Narita), Miyazaki, Ryukyu, Takamatsu, Kagoshima, Toyama, Niigata, Fukuoka, Hiroshima, Kumamoto, Shizuoka
韓國 Korea	首爾（仁川、金浦）、釜山、濟州、大邱 Seoul (Incheon, Gimpo), Busan, Jeju, Daegu
香港 Hong Kong	香港 Hong Kong
澳門 Macau	澳門 Macau
泰國 Thailand	曼谷（蘇凡納布、廊曼）Bangkok (Suvarnabhumi, Don Mueang)
菲律賓 Philippines	克拉克*、長灘島、馬尼拉、公主港、宿霧 Clark*, Boracay, Manila, Puerto Princesa, Cebu
馬來西亞 Malaysia	吉隆坡、亞庇、檳城、古晉* Kuala Lumpur, Kota Kinabalu, Penang, Kuching*
新加坡 Singapore	新加坡 Singapore
印尼 Indonesia	泗水、峇里島、雅加達 Surabaya, Bali, Jakarta

3 放眼天下， 開創無限的可能

Embrace the World;
Create Infinite Possibility

空運服務成果

臺灣地處亞太的運籌樞紐，位於東北亞與東南亞必經的國際航道上，飛往東京、首爾、北京、上海、香港及新加坡等西太平洋主要城市，平均僅需 2.55 個小時，擁有優越的地理位置；106 年間在臺營運的航空公司有 88 家，296 條綿密的國際航線連結全球 141 個城市，締造全年旅客 6,598 萬人次的新高。

拓展國際航網

因應國際航權自由化的發展趨勢，本局以國家整體利益為考量，並兼顧機場競爭力及國籍航空業者需求，積極拓展國際航權，與各國家地區洽簽雙邊通航協定；目前共計與 57 個國家地區簽署航空服務協定，106 年間與盧森堡、俄羅斯、奧地利、索羅門群島及阿拉伯聯合大公國簽署或修訂雙邊通航協定，拓展航空公司對外營運空間。

調降國際航線降落費

為提供中、南及東部民衆便捷的空運服務，建構綿密的國際航空網絡，106 年 1 月 1 日起調降高雄國際機場與臺中等飛航國際包機（花蓮、臺東、金門、澎湖（馬公）、臺南及嘉義）機場之國際航班降落費，並延續新闢航線及增班的優惠措施，鼓勵航空公司營運拓展新市場；106 年度在花蓮機場與臺南機場獲得豐碩迴響，花蓮機場新闢曼谷航點，國際及兩岸旅客來到 97,956 人次新高，較 105 年大幅成長 161.3%，而臺南機場國際及兩岸旅客增加 60,935 人次，與前一年相較提升 56.62%。

Air Transport Service Achievements

Taiwan located on the pivoting point for the international airways connecting Northeast Asia and Southeast Asia. Flight from Taiwan to major cities in the West Pacific, such as Tokyo, Seoul, Beijing, Shanghai, Hong Kong, and Singapore, takes an average of only 2.55 hours. It thus commands a strategically important position. During 2017, 88 airlines operated in Taiwan, 296 web-like international routes connecting 141 cities worldwide, and creating a record high 65.98 million in annual passenger volume.

Expand International Air Network

In response to the trend of liberalizing international air traffic rights, CAA actively dedicated to expanding international air traffic rights through concluding air services agreements. The overall national interests, airport competitiveness and national airlines' requirement were all taken into consideration. To date, 57 air services agreements were signed with other countries or areas. In 2017, bilateral air services agreements were

signed or revised with Luxemburg, Russia, Austria, the Solomon Islands, and United Arab Emirates, and thereby gaining more operating flexibility for airlines.

Reduce International Landing Charges

To provide convenient air transport services to residents in Central, Southern, and Eastern Taiwan, starting January 1, 2017, landing charges for international services were reduced at Kaohsiung International Airport and Taichung Airport as well as those airports with international charter flights, such as Hualien, Taitung, Kinmen, Penghu (Magong), Tainan, and Chiayi Airports. All previous preferential measures to encourage new services or adding frequency remained effective, expecting airlines to create new market. In 2017, Hualien Airport and Tainan Airport gained positive results. Hualien Airport had a new destination -- Bangkok and achieved a record high 97,956 passenger volume in international and cross-strait services, a substantial growth of 161.3% comparing to 2016. At Tainan Airport, the increased passenger number was 60,935, equivalent to a 56.62% year-on-year gain.

暢旺新南向交流

本局配合新南向政策與業者共築大道，隨著近年陸續與越南、菲律賓、印度及澳大利亞等國家重新簽署或修訂通航協定，大幅擴充客貨運容量，再加上實施有成的新闢航點降落費優惠措施，106 年飛航新南向國家的班次平均每週達到 554 班，較 105 年成長了 15%；為加速與新南向國家經貿合作，促進觀光交流，107 年 1 月 1 日起加碼推出飛航新南向國家航線降落費再享八折優惠，鼓勵航空公司再擴增航班，攜手暢旺區域合作及人才、資源交流。

Facilitate Exchange with Southward Countries

To comply with the new policy of strengthening relationship with southward countries, CAA successively signed or revised air services agreements with Vietnam, Philippines, India, and Australia, whereby drastically expanded capacities for passenger and cargo services. Accordingly, the average weekly flights to those southward countries reached 554 flights, a 15% growth compared to 2016. The said increase certainly was stimulated by the measure of offering preferential charges for new services. An additional 20% discount will be offered starting from January 1, 2018 to encourage airlines to increase flights to those southward countries. All these practices were aimed to expedite regional economic and trade cooperation as well as facilitate exchange in tourism, human and other resources.

554 班 flights
106 年飛航新南向國家的平均班次
average weekly flights to the southward countries

飛航安全監理

飛航安全是民航發展的核心基石，需要航空業者、民間團體及政府機關攜手努力，把每個可能造成危害的小細節都當作大問題處理，堅持飛航安全零容忍的理念，才能將各種安全威脅降到最低。

接軌國際，深化 SMS

我國飛安監理機制接軌國際趨勢，歷經四個推動期程，如期於 106 年輔導國籍航空公司完成安全管理系統（Safety Management System, 簡稱 SMS）建置，其中針對經營國際航線的中華、長榮、華信、立榮與遠東等 5 家航空公司，超前完成有效性評估，確保 SMS 有效運作；此外，我們將安全管理系統的範疇擴大到其他作業，106 年度協助中華航空機務組織與長榮航太等 6 家航空器維修廠、臺灣航勤等 3 家航空站地勤業者及本局所屬 16 個航空站完成 SMS，透過數據化安全績效指標管理，精確改善並提升安全績效。

Flight Safety Oversight

Flight safety is the foundation of civil aviation development. It requires the collaboration of the aviation industry, non-government institution and government authorities. With a view to minimizing various threats to safety, zero tolerance is the core concept, that is, no matter how minor the threat is, it should be dealt with as a great threat that could potentially undermine flight safety.

Adopt International Standards to Strengthen SMS

After four phases in establishing the flight safety oversight mechanism in line with international standards, CAA has successfully guiding all national airlines in establishing their SMSs in 2017. For those airlines engaging in international operations (namely China Airlines, EVA Airways, Mandarin Airlines, UNI Airways, and Far Eastern Air Transport), effectiveness assessments were completed ahead of schedule. Additionally, CAA decided to expand the SMS to other aviation-related operations. In 2017, 6 repair stations, including CAL Engineering & Maintenance Organization and Evergreen Aviation Technologies Corp., 3 ground service operators, including Taiwan Airport Service Co., Ltd., and 16 airports affiliated to CAA had completed establishing their SMS under the guidance of CAA. Thus, through digital safety performance indicator management, safety was precisely enhanced.

自願報告，全民飛安

國際民航公約第 19 號附約要求會員國應建立飛航安全強制及自願報告系統。本局建立的飛航安全作業管理系統（Flight Safety Management Information System, 簡稱 FSMIS），已於 93 年起強制民航業者通報飛安相關事件，並運用系統督導業者確實改善；為廣泛收集可能影響飛航安全的回饋意見，主動發掘潛在危害因子，本局參考美國航空安全報告系統（Aviation Safety Reporting System, 簡稱 ASRS），106 年完成「飛航安全自願報告系統」開發，以非懲罰性及保密的方式，鼓勵飛行員、簽派員、機務維修員、空服員、超輕型載具操作人員、飛航管制員、地勤作業等第一線航空相關人員與民衆，提供可能危害飛安之各種情報，共同守護飛航安全。

汰新機隊，安全把關

另高齡機容易因器材籌補不易，導致地停維修所需時間較長，而且發生機械故障機率也會增加，造成航班延誤或取消次數增加，直接影響旅客消費權益；我們以飛航安全為基礎，謹慎評估、合理限制飛航時數，確保高齡機隊有充裕時間維修，並強化各項適航性監理；未來將修訂「民用航空運輸業管理規則」，循序引導業者適時汰新機隊，用最佳的營運模式，提供消費者更好的服務體驗。

為提升國內航線服務品質，本局積極鼓勵航空公司引進新機營運。106 年為協助華信及遠東航空引進 ATR 72-600 機隊，歷經 6 至 10 個月五階段詳實的檢定程序，為旅客把關業者營運新機型的能力及飛航組員的適職性。106 年 11 月 16 日遠東航空第一架的 ATR 72 型機，順利加入國內空運服務，首航臺中 - 澎湖馬公航線；華信航空的 ATR 72 新機亦於 107 年 2 月 14 日首航臺北 - 澎湖馬公航線。

保持警覺，深植保安

因應國際恐怖攻擊威脅，本局配合美國國土安全部運輸保安署（Transportation Security Administration, 簡稱 TSA）最新保安緊急修正案，於 106 年 7 月 17 日與 10 月 26 日分兩階段實施保安管控措施，加強飛美航班旅客隨身電子產品檢查及詢問相關保安問題，另外，為強化全體保安意識，深植保安文化，106 年將航空保安管理系統（Security Management System, 簡稱 SeMS）擴大至飛航國際包機機場，因此國籍航空公司及我國入出境機場已全數完成 SeMS 建置。

強化機場空側作業安全

為確保機場空側設施及作業符合國際民航公約規定，本局參考國際相關規範，訂定「民用機場設計暨運作規範」及「航空站空側作業管理手冊」，並據

Encourage Voluntary Reports to Ensure Flight Safety

Annex 19 to the Convention on International Civil Aviation requires member nations to construct mandatory and voluntary flight safety reporting systems. CAA established the Flight Safety Management Information System (FSMIS) in 2004 and mandated all airlines to report flight safety related events and then through FSMIS CAA supervised all airlines to improve relevant safety concerns. To extensively collect feedback on possible threats on flight safety and identify potential risk in advance, CAA developed a web-based On-line Aviation Safety Voluntary Reporting System in 2017 with reference to the Aviation Safety Reporting System (ASRS) of U.S.A. It adopts non-punitive and confidential methods to encourage front-line aviation-related workers including pilots, dispatchers, maintenance personnel, flight attendants, ultra-light vehicle operators, air traffic controllers, and ground service operators, to jointly ensure aviation safety by reporting information in potential threats to flight safety.

Renew Aging Fleets to Ensure Safety

AS the difficulty in replenishing the parts and accessories of the aging aircraft might cause longer maintenance downtime and increase mechanical failure rates, flight delays and cancellations, it subsequently will directly infringe passenger's consumer rights. On the basis of aviation safety, CAA carefully evaluated and appropriately restricted flight hours of aging aircraft to ensure its sufficient maintenance downtime. Furthermore, CAA also strengthen various oversight items to ensure its airworthy. In the future, CAA will encourage airlines to timely phase out aging fleet and adopt optimal operating models to offer consumers with best services.

To improve the service quality of domestic air services, CAA actively encourage all airlines to introduce new aircraft. In 2017, CAA assisted Mandarin Airlines and Far Eastern Air Transport to introduce the ATR 72-600 fleet through a 6-to-10 month five-stage certification processes. It was aimed to ensure that airlines are capable of operating new aircraft models and all flight crews have proper proficiency. On November 16, 2017, Far Eastern Air Transport's first ATR 72 successfully joined domestic air transport services and launched its first flight on Taichung- Penghu (Magong) service. Mandarin Airlines new ATR 72 launched its first flight on February 14, 2018 on Taipei- Penghu (Magong) service.

Maintain Alertness to Consolidate Security

In prevention of terrorist attacks and threats, CAA has implemented security control measures with two stages respectively from July 17 and October 26, 2017 in compliance with the latest emergency amendment to security promulgated by US Transportation Security Administration (TSA). For flights bound to the US, the inspection of passenger carry-on portable electronic devices (PED) and passenger prescreening interview were enhanced. Moreover, to reinforce overall security awareness and entrench security culture, CAA continues to expand the Security Management System (SeMS) to all airports with international scheduled or charter services. Presently, all national airlines and the aforementioned airports have SeMS in operation.

Strengthen Operational Safety on the Airside of the Airport

To ensure that airport airside facilities and operations are qualified with specifications of the Convention on International Civil Aviation, the CAA has

以辦理各機場空側查核；106 年實施嘉義、臺中、花蓮、南竿、北竿、高雄、澎湖（馬公）、七美、望安、桃園及臺北松山等 11 座機場定期查核。

完善無人機管理，兼顧飛安與產業發展

以鳥的視角俯瞰大地，用雲的高度探索新視界，飛行，是人類的夢想；隨著無人駕駛航空器系統（Unmanned Aircraft Systems, 簡稱 UAS）科技的躍進與普及，透過簡易組裝及智慧操縱模式，再搭配攝影機等多元外掛裝備，從空中看見更廣的世界，讓 UAS 成為近年興起的活動之一；不過多數 UAS 因為沒有感測與避讓裝置，加上臺灣地狹人稠且空中交通擁擠，越來越熱門的無人機活動已逐漸影響載人航空器使用空域及飛航作業，106 年發生 4 起無人機侵入機場事件，迫使航班暫停起降，對民眾生命財產及飛航安全存有重大威脅。

國際間無人機應用層面相當廣泛，舉凡國土測繪、交通調查、災害防救、空中噴灑，到發展中的物流運輸等……，為提供遙控無人機安全操作的規範及環境，我國於 101 年頒發「無人駕駛航空器系統（UAS）在臺北飛航情報區之作業」航空公報修

訂版（AIC 04/2012），管理無人機在機場周邊、要塞堡壘與政府重要設施等禁、限航區相關規範及作業程序。

為健全無人機管理機制，本局參考國際民航組織（ICAO）規範及美國、歐盟、日本等國家立法經驗，多方蒐集相關機關、民間團體與學術研究意見，研擬民用航空法專章規範遙控無人機之器材、人員、活動區域及操作等；民用航空法修正草案經行政院 3 次邀集中央各部會及直轄市、縣（市）政府共同審查後送立法院審議，立法院已於 107 年 4 月 3 日三讀通過，總統亦於 4 月 25 日公布，未來將有更合宜、全面性的管理制度。

為輔助、引導我國無人機活動應用及產業發展，本局已成立專案辦公室，統籌推動並及時處理無人機管理新制與應用發展所衍生的各項問題，促進無人機關聯產業持續發展；另外，為使民眾瞭解如何安全操作無人機，我們以「安全的玩」為主軸製做懶人包與宣導短片，用簡單、明確的方式介紹現在及未來的管理機制，讓遙控無人機活動更為安全。

established the "Civil Airport and Operation Regulations" and the "Airport Airside Operation Management Manual" in accordance with related international regulations and used them to inspect the airdises of each airport. Periodic reviews were conducted for 11 airports including Chiayi, Taichung, Hualien, Nangan, Beigan, Kaohsiung, Penghu (Magong), Qimei, Wangan, Taoyuan and Taipei Songshan Airports in 2017.

Improve Unmanned Aircraft Management to Promote Industry Development and Ensure Flight Safety

Expecting to view the earth from a bird's perspective and explore new horizons from the height of the clouds, mankind has always been bearing a dream to fly. Along with drastically advancing and widespread technologies in unmanned aircraft systems (UAS), easily-assembled and smart control modes paired with diverse external equipment, such as cameras, it provides a wider aerial view from the sky. Therefore, UAS has become an upserging popular activity in recent years. However, the majority of UAS lacked sensing and collision avoidance devices; moreover, the dense population, limited land space and congested air traffic in Taiwan have made unmanned aerial vehicle UAS affect the flight operation and airspace reserved for manned aircraft. In 2017, 4 airport intruding events resulted in suspensions of takeoff and landing of commercial flights and posed major threats to life, property, and flight safety.

UAS are extensively applied in various aspects all over the world, including land surveying and mapping, traffic surveying, disaster prevention and rescue, aerial spraying and lately developing logistics transportation. To provide safe operational environment for UAS, a revised edition of the Unmanned Aircraft System Operations in Taipei Flight Information Region (FIR) was published in the

Aeronautical Information Circulars (AIC 04/2012) in 2012. Thereby, the operational procedures of UAS in the prohibited area and restricted area in the vicinity of airports, fortresses and important government facilities were properly managed.

To improve UAS management mechanisms, a specific chapter in the Civil Aviation Act was drafted by CAA in order to properly regulate the vehicle, its equipment, personnel, activity area and operation. In the course of it, ICAO regulations and the legislative experiences of the United States (US), European Union (EU), and Japan were made reference to, and opinions from relevant agencies, non-government institutions and academic research were also taken into consideration. After 3 sessions of reviews jointly made by various central departments, municipal or county (city) governments, the draft amendment of the Civil Aviation Act was submitted to the Legislative Yuan for deliberation. The Legislative Yuan passed the third reading on April 3, 2018 followed by the announcement of Presidential decrees on April 25, 2018. After promulgation of relevant regulation, it is expected that the applicability and comprehensiveness of the management system will be further improved.

To provide aid and guidance to Taiwan's UAS activities, applications and industrial sustainable development, CAA has established a project management office to systematically implement the new UAS management systems and handle all problems caused. Additionally, to educate the public on safe UAS operations, CAA produced a "package for dummies" and a short film focusing on the theme of "Play Safe". They also express in a simple and straightforward manner on current and future management mechanisms, hoping that the safety of remote UAS activities could be ensured.



無人機安全使用宣導短片—
手翻書篇
The UAS shot film:
Flipbook episode



無人機安全使用宣導短片—
罰單篇
The UAS shot film:
Penalty episode

機場規劃布局

臺灣地區有 17 座機場提供民用航空服務，機場建設需要投入龐大資金，本局用國家整體經濟發展與資源利用最佳化角度，以宏觀及前瞻性思維擘劃全國機場功能定位、勾勒各機場未來發展藍圖。

機場布局

臺灣地區民用機場整體規劃配合著國土與區域發展，在北、中及南部地區布局發展 4 座國際機場；桃園國際機場為我國最主要國家門戶，以成為東亞樞紐機場為目標；臺北松山機場、臺中機場與高雄國際機場依其地利，並配合地方需求及優勢產業，拓展國際空運服務網絡；此外花蓮、臺東、金門、澎湖（馬公）、臺南與嘉義等 6 座機場亦開放經營國際及兩岸包機，協助地方產業及觀光發展。

在個別機場的發展部分，已為高雄國際機場及臺中機場構思未來 20 年的發展藍圖，綜合區域運量趨勢及經濟產業發展等因素，以穩健策略適度擴建並導入智慧機場科技，行政院於 107 年 2 月 26 日核定「高雄國際機場 2035 年整體規劃」，並持續審查「臺

中機場 2035 年整體規劃」；至於臺北松山機場，本局以臺灣地區整體旅運需求發展趨勢，著手探討北部區域機場區位及功能，並配合桃園國際機場設施規劃成果，適時啟動「松山機場 2040 年整體規劃」。另外，對於恆春機場未來發展及南、北竿機場跑道改善計畫，亦完成評估報告，將攜手地方政府共同推動。

擘劃藍圖

桃園航空城是國家重要的建設計畫，是引領經濟成長及產業升級的動力。106 年與內政部營建署城鄉發展分署展開已審定的「擬定桃園國際機場園區及附近地區特定區計畫」檢討修正，調整機場園區特定區區段徵收的範圍與面積，並循都市計畫審議程序完成再公開展覽，後續將配合內政部都市計畫委員會審定結果續辦區段徵收相關作業。為了確保我國民用機場整體布局能持續契合社會經濟發展需要，本局已啟動下一階段的發展計畫，推動「臺灣地區民用機場 2040 年（目標年）整體規劃」。

Airport Planning

There are 17 airports available for civil aviation services. As airport constructions require significant investment, CAA, in outlining future airport development blueprints and defining each airport's function, must take into consideration of the overall national economic development and the best utilization of resource, and macroscopic as well as forward-thinking concepts are essential.

Airport Layout

The overall planning of civil airports in Taiwan has to be in coordination with national land utilization and regional development. Four international airports were located separately in Northern, Central, and Southern Taiwan. Serving as Taiwan's primary international gateway, Taiwan Taoyuan International Airport is aimed at becoming an air transport hub for East Asia. Other three international airports, i.e. Taipei Songshan, Taichung and Kaohsiung, are expanding their service networks according to their respective geological advantages, local requirements, and competitive industrial advantages. Additionally, the 6 airports in Hualien, Taitung, Kinmen, Penghu (Magong), Tainan, and Chiayi are also permitted to serve international and cross-strait chartered flights to facilitate local industrial and tourism development.

Regarding individual airport development, CAA has blueprinted the next 20-year developments for Kaohsiung International Airport and Taichung Airport. All factors such as regional traffic volume trend, local economic and industrial development were taken into consideration, and the expansion will be conducted on

a prudent basis; besides, smart airport technologies will be introduced. The Overall Planning up to 2035 for Kaohsiung International Airport was approved on February 26, 2018 by the Executive Yuan and that for Taichung Airport was still under review. The Overall Planning up to 2040 for Taipei Songshan Airport will be initiated in due course after studying the airport function in northern Taiwan according to the trend of the overall tourism and transportation demands. It also has to be in coordination with the facility planning of Taoyuan International Airport. In addition, evaluation reports on future development of Hengchun Airport and runway improvement plans at Nangan Airport and Beigan Airport were also completed. Subsequently, those plans will be set into action jointly by CAA and local governments.

Lay Out Blueprint

Taoyuan Aerotropolis is a major national construction project aimed to driving the economic growth and industry upgrade. In 2017, CAA together with the Ministry of the Interior (MOI) started to review and amend the previously approved Taoyuan International Airport Park and Peripheral Area Specific Areas Project, trying to adjust the scope of zone expropriation. Then it needs to go through the urban planning review procedures and the subsequent public display. After that, zone expropriation will be put into practice pursuant to the decision made by the Urban Planning Commission of MOI. To ensure that the overall layout of civil airports is always able to fulfill social and economic development requirements, CAA already set forth to make the "Taiwan Civil Airport System Plan 2040".

場站建設推動

為維護飛航安全，提升機場服務品質，本局持續改善各機場空側及陸側設施，並隨著機場運量成長及地區發展情形，適時檢討並推動相關建設。

蓄積發展能量

我國近年運量屢創新高，高雄國際機場及臺北松山機場航機起降架次也持續成長，因為兩座機場都只有一條跑道運作，無法封閉跑道大刀闊斧整修，已逾 20 年未能大規模整建。為提供旅客安全舒適的跑道品質，利用深夜宵禁的時間施工，106 年底已展開高雄國際機場跑道及滑行道整建工程，臺北松山機場跑道及滑行道整建工程亦於 107 年上半年動工，兩機場跑道建設工程將在 108 年陸續完工。而臺中機場近年完成空側改善工程及國際線新航廈，為迎接 200 人座的 D 類飛機做好準備，並於 106 年啓用 W5 聯絡滑行道，以利降落航機快速脫離跑道，節省航油及旅客時間；因應日漸成長的航班數量，107 年將持續興建 7 個停機位，提供航機過夜並增加調度彈性，而既有的國內線航廈亦展開整建工程，將為大臺中地區提供全新的空運服務體驗。



優化離島航線

航空運輸攸關離島聯外交通，為離島民衆提供更好的機場服務一直是我們的使命。近年接續完成澎湖（馬公）機場跑道、滑行道道面設施整建及改善，為締造運量新高的澎湖地區旅客，提供安全的飛航服務；金門機場陸續啓用新建的東、西側兩側航廈，每年可為 390 萬旅客提供寬敞舒適的候機空間；對於屢受颱風侵襲的金門南側海灣，106 年已推動金門機場海側護岸堤防設施工程基本設計，預計 108 年完成堤防設施及機場界圍，保護機場跑道地帶；馬祖的南竿及北竿機場已展開航廈擴整建工程，並邀請地方政府及民意參與設計，108 年將有新風貌的候機環境迎接來訪旅客；而蘭嶼機場跑道整建工程亦已啓動，將於 111 年完成。

Airport Infrastructure

To maintain flight safety and improve airport service quality, CAA continues to improve airside and landside facilities for each airport and timely review and promote relevant construction projects based on traffic growth and local development conditions.

Accumulate Development Capacity

Traffic volume in Taiwan has continued to reach record-high year by year. Aircraft movements both at Kaohsiung International Airport and Taipei Songshan Airport had significant increase. As both airports relied on single runway operation, runway closure for an overhaul and a large-scale renovation has been impossible for the past 20 odd years. To provide passengers with a safe and comfortable runway, construction works must be carried out during late night curfew hours. The runway and taxiway renovation projects at Kaohsiung International Airport started from late 2017 and at Taipei Songshan Airport, it will start in the first half of 2018. Both projects will complete in 2019. At Taichung Airport, airside improvement projects and a new international terminal have also been completed in recent years to accommodate 200-seat Category D aircraft; the W5 cross-field taxiway was also opened for use in 2017 to shorten the taxiing time of landing aircraft on runway, thus saving fuel and passenger time. In response to the growing flight volume, CAA will continue to construct 7 aprons in 2018 to accommodate aircraft overnight parking and increase scheduling flexibility. Renovation projects will also

begin at the existing domestic terminal to provide a brand new air transport service experience for the Greater Taichung area.

Optimize Offshore Island Flight Routes

Air transport is crucial for offshore islands to connect with outside. Providing offshore island residents with better airport services has always been our mission. In recent years, the runway and taxiway surface facility renovation and improvement projects at Penghu (Magong) Airport have also been completed consecutively in recent years. They will provide safer services for record-setting passenger volumes in Penghu area. Kinmen Airport has also successively activated the newly constructed east and west terminals to provide spacious and comfortable environment for 3.9 million passengers each year. In Kinmen's southern bay area, which has been repeatedly attacked by typhoons, Kinmen Airport seaside revetment and embankment facility construction basic designs have also been kick-started in 2017; embankment facilities and airport boundary work are expected to complete in 2019 to protect the runway area. Matsu's Nangan Airport and Beigan Airport have started terminal expansion projects and invited local government and public to participate in the design process. It is expected that the visiting passengers will be welcomed by a brand new terminal environment in 2019. Lanyu Airport's runway renovation has also started and will be completed in 2022.



4 智慧領航， 開展世界的航圖

Intelligent Navigation;
Expand the Navigational Charts
of the World

民航產業健全

調整設立門檻，強化產業競爭力

國際航空市場變化迅速，全球空運量約每 15 年就會翻倍成長，為迎接充滿挑戰的經營環境，健全我國民用航空運輸業體質，經參酌美國及其他國家的管理機制，重新檢討航空公司設立門檻，修正「民用航空運輸業管理規則」；107 年 3 月 10 日起申請籌設航空公司除須具有一定財務能力外，更須具有航空專業團隊及飛安技術能力。

近年電子商務發展熱絡，為幫助航空貨運業者爭取商機，本局積極改善跨境電商物流中轉環境，協調相關單位釐清貨轉郵安檢各種問題，並協助業者排除實務作業所遇困難；桃園國際機場亦於 106 年 7 月 19 日啓用電子商務轉運中心，納入海空聯運、貨轉郵、郵轉郵等跨境電商物流模式，提升我國航空貨物服務加值能力，發揮聯運、轉運之綜效。臺灣優勢區位再結合跨境電商的發展潛力，未來有益發展臺灣成為貨物中轉樞紐。

維穩航線營運，促進良性競爭

105 年底復興航空無預警停航解散，本局竭力維穩國內航線空運服務，透過國際及兩岸相關航線航權分配作業，鼓勵立榮、華信及遠東航空接續營運，使東部及離島航線全部順利接軌；另為避免再發生業者恣意停止或結束營業損害社會公共利益之情形，本局參酌國際立法規範完成民用航空法部分條文修正，除建立民用航空運輸業退場機制，並將社會成本適度課責業者及其負責人，總統已於 107 年 4 月 25 日公布。

此外，為利各界瞭解航空公司營運狀況及本局相關財務監理情形，進而促成航空公司服務品質之良性競爭，自 106 年第 2 季起定期公布國籍航空公司營運及財務相關資訊，受惠於航空燃油價格維持低檔緩升及貨運需求暢旺，106 年國籍航空公司合計獲利新臺幣 96 億元，較 105 年度成長 34.9%。

Improve Civil Aviation Industry

Adjust Establishment Threshold, Strengthen Industry Competitiveness

Viewing that the international aviation market is changing rapidly and global air transportation volume doubles approximately every 15 years, In response to the challenging operating environment, to improve the quality of national airlines is essential. Therefore, having referred to the US and other countries' management mechanisms, CAA re-examined the thresholds of setting up an airline and accordingly amended the Regulations of Civil Air Transport Enterprise. Beginning from March 10, 2018, an applicant for running a civil air transport enterprise has to not only demonstrate a certain level of financial capacity but also possess a professional aviation team and flight safety technical skills.

E-commerce development has been upserging in recent years. For assisting air cargo operators to gain more business opportunities, CAA is actively improving the cross-border e-commerce logistic transit environment by coordinating relevant units in identifying cargo forwarding security inspection problems of postal transfer and assisting operators to eliminate technical difficulties. On July 19, 2017, Taoyuan International Airport also activated an e-commerce transit center including all kinds of cross-border e-commerce logistics models, such as sea and air intermodal transportation, cargo-to-postal transfer and postal-to-postal transfer. The value-added ability of air cargo services has thus been enhanced and the synergistic effects of inter-modal and transshipment greatly exerted. Taiwan's

advantageous geographic location together with the potential of cross-border e-commerce will surely facilitate Taiwan to develop into a cargo transshipment hub.

Maintain Route Operations, Promote Healthy Competition

In the end of 2016, TransAsia Airways ceased operations and disbanded without warning. CAA had the responsibility to maintain the stability of domestic air transport services. In order to encourage the continuous operations of air services to and from Eastern Taiwan and offshore island, CAA allocated extra air traffic rights of international and cross-strait destinations to those airlines willing to take over the said services. Consequently, UNI Airways, Mandarin Airlines, and Far Eastern Air Transport smoothly had the job done. In addition, to prevent operators from arbitrarily suspending or ceasing operation and damaging public interest, CAA has taken into account international legislative standards and completed partial amendment to the Civil Aviation Act. By that CAA not only established a withdrawal mechanism but also mandated the operator and the person in charge to account for the social costs involved. The President's decree on the amended Civil Aviation Act was issued on April 25, 2018.

Additionally, to disclose airlines operations and CAA's relevant financial oversight conditions so as to facilitate healthy competition in airline service quality, CAA began periodically publishing national airlines operation and finance information in Q2 of 2017. Benefiting from a relatively low however moderately rising jet fuel price and booming air freight demand, national airlines accumulated a total profit of NT\$9.6 billion in 2017, a growth of 34.9% compared to 2016.

飛航服務優化

臺北飛航情報區 (Taipei FIR) 位於東經 117.5 度至 124 度，北緯 21 度至 29 度，東面與南面比鄰日本福岡及菲律賓馬尼拉飛航情報區，西側與北側則接壤香港跟中國大陸的廣州及上海飛航情報區。是串聯東北亞與東南亞往來必經的國際航線，也是亞洲飛往西太平洋的重要樞紐，106 年為到訪臺灣天空的飛機，提供逾 166 萬管制架次的飛航服務。

打開航路瓶頸

配合國際民航組織 (ICAO) 推動性能導航 (Performance Based Navigation, 簡稱 PBN) 政策並導入關鍵技術，本局與國際專業團隊合作，完整規劃並優化臺北飛航情報區的空域與航路結構，首條 PBN 航路 Q11，已有效紓解北部航路匯集點 (鞍部) 壅塞，分流往返東北亞日、韓方向的航班，又於 106 年 8 月順利啟用 Q12、Q13 與 Q14 等 PBN 航路，接續打開南部航路匯集點 (恆春) 的瓶頸，並縮短飛航里程 1 至 5 哩，讓飛往東南亞各國的航情更為順暢、飛航更具安全，對環境永續更加友善。

維持系統穩定及可靠

本局以「一次採購，分年執行」的方式，自 106 年起分 5 期逐年汰換 9 座機場的助航設備及相關附屬設施，統一儀器降落系統 (Instrument Landing System, 簡稱 ILS) 型號，可有效降低原廠訓練費用與備件採購數量，並簡化後勤補給及庫存作業，對提升系統可靠度與穩定性具有助益。106 年已完成澎湖 (馬公) 機場 02 跑道及嘉義機場 36 跑道 ILS/DME 設備汰換，並將高雄國際機場 27 跑道的 LOC/DME 設備升級為 ILS/DME 設備。

國家門戶新地標

為滿足桃園國際機場未來 20 年航行量的飛航服務需求，展開桃園國際機場塔臺暨整體園區新建工程，其中最為重要的塔臺筒體採滑模工法施作，平均每小時可往上增高 10 至 15 公分，106 年 1 月 8 日已完成 55 公尺高的新塔臺筒體結構，107 年上半年將如期竣成塔臺主體，下半年進行塔臺自動化系統安裝及測試，預計於 108 年啟用。

總高度 **65** 公尺
Total Height **65** Meters

桃園國際機場新塔臺
預計 108 年啟用
The TTIA new air
traffic tower
is expected to
start operation
in 2019



Optimize Air Traffic Services

Taipei Flight Information Region (FIR) is located at 117.5° -124° E and 21° -29° N, next to the FIRs of Fukuoka (Japan) and Manila (Philippines) to the east and south, and is adjacent to the FIRs of Hong Kong, Guangzhou and Shanghai of Mainland China in the west and north. It is an essential corridor for the international routes connecting Northeast and Southeast Asia and a crucial hub between Asian continent and West Pacific. In 2017, more than 1.66 million controlled flights were provided with air traffic control services by Taipei FIR.

Breaking the Flight Route Bottleneck

To act in accordance with the International Civil Aviation Organization (ICAO) in promoting Performance Based Navigation (PBN) policies and introduce key technologies, CAA in cooperation with international professional teams completed planning and optimization for Taipei FIR's airspace and route framework. The first ever PBN route Q11 has effectively relieved congestion at the nodal point of Northern flight routes (Anbu) by diverting flights to and from Japan, Korea, and Northeast Asia. In August 2017, Q12, Q13, and Q14 PBN routes have also been successfully put into operation, easing the bottleneck in the nodal point of Southern flight routes (Hengchun). Furthermore, it also shortened flight distance by 1 to 5 nautical miles, thus accelerating the traffic flow, improving safety for flights to various Southeast Asian countries and at the same time benefiting environmental sustainability.

Maintain System Stability and Reliability

CAA has adopted the "One-time procurement with yearly execution" method since 2017 to replace navigation aids and auxiliary facilities in 9 airports during a 5 year-long period, and at the same time unified the models for the Instrument Landing System (ILS). This effectively reduces the training cost in OEM and spare part purchase quantity, simplifies logistics supply and inventory operations, thereby improving system reliability and stability. In 2017, ILS/DME equipment have been replaced for Penghu (Magong) Airport's Runway 02 and Chiayi Airport's Runway 36; and LOC/DME equipment for Kaohsiung International Airport's Runway 27 have been upgraded to ILS/DME equipment.

New National Gateway Landmark

To accommodate air traffic service requirements for traffic capacity at TTIA in the next 20 years, a TTIA air traffic control tower and overall airport park new construction project has been initiated. In the project, the most important cylindrical body of the air traffic control tower adopted the slip-forming method, which can build on an average of 10 to 15 cm in height per hour. As of January 8, 2017, a new 55-m tall cylindrical body structure has been completed. The main body of the air traffic control tower is expected to be completed in the first half of 2018. Tower automation systems installation and testing are expected to be carried out in the second half of 2018. The air traffic tower is expected to start operation in 2019.



優化助導航設施

為提供機場精確近場終端服務，強化低高度空域雷達涵蓋，106 年增設金門終端航管雷達，並同步增設廣播式自動回報監視（Automatic Dependent Surveillance-Broadcast, 簡稱 ADS-B）系統；為使航機清楚辨識機場跑道頭位置，本局接續啟用北竿機場跑道頭翼排燈、南竿機場簡式著陸區燈及臺東機場 22 跑道進場燈，主動提供更安全、安心的飛航服務；此外，南竿機場因受地形影響，飛機降落時易遭遇亂流或風切，本局克服機場腹地不足之限制，在牛角嶺架設風向風速計提供即時資訊，與立榮航空共同提供馬祖地區優質飛航服務。

Optimize Navigation Aids

To provide airports with terminal precision approach services and strengthen lower airspace radar coverage, a terminal radar along with an Automatic Dependent Surveillance-Broadcast (ADS-B) system was installed in Kinmen in 2017. To enable aircraft to clearly identify the position of runway threshold, CAA successively activated Beigan Airport's runway threshold wing bar lights, Nangan Airport's touch down zone lights (TDZL), and Runway 22 approach lighting system (ALS) at Taitung Airport. These efforts were aimed to provide safer and more secure air traffic services. Additionally, due to topographic limitation, aircraft landing at Nangan Airport are prone to encounter turbulence and wind shear. To overcome a lack of back land at the airport, CAA has erected wind vanes and anemometers at Niujaoling to provide real-time data. In this way, CAA together with UNI Airways could provide high-quality air traffic services to the Matsu area.

旅客權益保護

健全消費者保護

國際間航空公司通常參考歷史訂位、季節因素等，運用「超額訂位」等管理措施，讓有限的機位資源充分使用；為了維護旅客消費權益，與在臺營運的航空公司研商超賣機位時須拒絕旅客登機時的作業方式，不因旅客宗教、種族、性別及年齡不同而有差別待遇、不得以暴力、脅迫等方式拒絕旅客登機，並協助放棄機位旅客安排替代航班及適當補償，相關處理作法已揭露在航空公司網站，提供消費者瞭解。

本局汲取歐盟及日本等消費者保護措施，於 106 年 9 月 15 日增訂「民用航空乘客與航空器運送人運送糾紛調處辦法」第 3 條第 2 款，規定旅客因航班延遲 5 小時以上退票，航空公司不得收取退票手續費，此外研擬「民用航空運輸業管理規則」第 13 條之 1 修正草案，規範航空公司暫停或終止客運定期航線的申請期限，且需對已訂位乘客提報相關消費者保護措施。



Ensure Passenger Rights and Interests

Improve Consumer Protection

International airlines often refer to historical records on flight reservations and seasonal factors and allow overbooking to fully utilize limited seat resources. To protect passenger's consumer rights, for airlines operating in Taiwan, in the process of reject-boarding on an overbooking flight, it is not allowed to have differentiated treatment based on passenger's religion, race, gender and age, nor through violence or coercion. Meanwhile, the airlines shall assist those denied passengers to arrange alternative flights and offer appropriate compensation. Relevant information about processing methods was revealed to consumers on airline websites.

Referencing EU and Japan's consumer protection measures, CAA added Subparagraph 2, Article 3 to the Regulations Governing the Mediation of Disputes Arising from the Transportation between Civil Aviation Passengers and Air Carriers on September 15, 2017. Airlines are prohibited from charging refund fees for passengers applying for ticket refund due to 5 or more hours of flight delay. Additionally, CAA drafted Article 13-1 of the Regulations of Civil Air Transport Enterprise, requiring airlines a certain lead time in the application of suspending or terminating scheduled passenger flight routes, and that relevant consumer protection measures for reservation passengers shall also be submitted.

貼近旅客需求

機場是民航服務的第一線，看見旅客充滿笑容的臉，是我們最大的成就。臺北松山機場首開先河，與英國知名科技品牌開創異業合作契機，打造前衛舒適的盥洗空間；高雄國際機場以「微笑的環保機場」為服務願景，提供安全、多元、資訊、在地及環保等優質創新服務，榮獲行政院第9屆政府服務品質獎；肩負離島交通門戶的金門機場與澎湖（馬公）機場，因應在地特性並貼近民衆需求，分別推出國內航線「線上會員候補系統」與戶籍協查服務，便利旅客購票作業；而臺南機場及臺東機場運用活潑色彩繽紛候機室座椅，成功吸引大家焦點，創造機場服務新話題！

揭露航空碳排放

降低碳排放是國際重要趨勢，為提升旅客綠色消費與低碳旅遊的觀念，本局推動航空旅客運輸服務業碳標籤認證工作，與華航集團合作，運用行政院環境保護署審核通過的「航空旅客運輸服務—產品碳足跡類別規則」（Product Category Rule, 簡稱PCR），計算出華信航空飛航松山—金門航線每位旅客每公里碳排放為280公克之二氧化碳當量，總航程每人約排放88.2公斤二氧化碳當量。未來將持續推廣各航空公司、各條航線申請碳標籤，充分揭露航線碳排資訊，以持續擴大碳排放減量的成效。



Satisfy Passenger Needs

The airport is at the front line of civil aviation services. A smile on passenger's face is our greatest achievement. Taipei Songshan Airport established a precedent by cross-industry collaboration with a famous UK-based technology company in creating an advanced and comfortable toilet space. Based on the vision of serving as a "Smiling Environmental Friendly Airport," Kaohsiung International Airport provided high-quality, innovative, safe, diverse, digital, local and environmental friendly services. In light of which it has been awarded the 9th Government Service Quality Award. Undertaking the roles as offshore island transportation portals, Kinmen Airport and Penghu (Magong) Airport, in response to local features and residents' specific requirements, have respectively introduced Online Member Waiting List System and household registration inquiring services to facilitate passenger ticket purchase processes on domestic routes. As for Tainan Airport and Taitung Airport, they used vibrant colored seats in departure lounge, which successfully caught passengers' attention and sparked new topic about airport services.

Disclose Aviation Carbon Emission Information

Reducing carbon emission is an important international trend. To elevate passengers' awareness on green consumption and low-carbon tourism, CAA is promoting passenger air transport services carbon label certification process in collaboration with China Airlines Group. Calculation was made Pursuant to the "Carbon Footprint Product Category Rule (CFP-PCR) for Passenger Air Transportation" approved by the Environmental Protection Administration of the Executive Yuan, it got the result that carbon emission per km/per passenger on Mandarin Airlines' Taipei Songshan – Kinmen flight is 280g, which equals to 88.2 kg of CO₂ per person for the total distance of the flight. In the future, CAA will continue to urge each airline to apply for carbon labels for their respective routes. It is expected that by fully disclosing carbon emission information, more carbon emission reduction could be achieved.





人才培育及國際交流

民航運輸深具國際性、複雜性及專業性，所需專業能力涉及空運政策、飛航安全、飛航服務、機場建設與經營管理等各種範疇，而且從業人員的工作更需依循國際飛航安全規範及共通的民航標準執業；因此本局以國內自行訓練及派員出國訓練等方式，培養整合型民航專業人員。

奠基專業實力

本局所屬民航人員訓練所係我國專門培育飛航管制、航空電子、航空氣象、航空通信、飛航諮詢、航務管理、機場消防與航空安全檢查員等民航專業技術人員的行政機關，透過縝密的職前與在職訓練計畫，以及先進的「飛航管制塔臺模擬機」、「飛航管制雷達模擬機」及「飛航管制系統（ATM）塔臺模擬機」設備，提供民航專業技術人員完整紮實的訓練，106 年完成職前訓練 16 班 105 人、在職訓練

346 班 4,803 人；另外結合民間訓練資源，開辦空側 / 機坪安全管理、危險物品規則及作業風險管理等訓練 13 班，培訓 539 名相關民航產業人員。

汲取國際新知

依據國際民航市場趨勢及輔導我國民航產業發展，訂定各年度出國訓練主軸，選派人員汲取國際最新民航規範、航空科技及機場規劃管理等專精知識，計畫性培育專業人才，106 年選派 25 位種子人員赴美國、英國、比利時及新加坡等國，參加國際民航法規、航空經營、安全檢查員複訓、飛安調查分析、飛航管理系統、機坪作業管理、機場碳管理及規劃發展等課程，並舉辦國外訓練成果研討及交流會議，成功將最新國際新知擴大傳遞 254 人次，深化民航專業的知識力。



105 人
Persons

職前訓練
pre-job training

4,803 人
Persons

在職訓練
on-the-job training

539 人
Persons

民航相關人員培訓
training programs for civil
aviation industry personnel

Cultivation of Professionals and International Cooperation

Civil aviation is intrinsically an international, complex, and professional industry. Essential professional capacities involve various domains, such as air transport policies, flight safety, air traffic services, airport construction and operations management. Moreover, employers' duties must adhere to international flight safety norms and civil aviation standards and practices. Therefore, CAA provides both local and overseas training for its staff to nurture aviation professionals.

Laying the Foundation of Professional Competence

CAA's Aviation Training Institute dedicated to cultivating civil aviation professional and technical personnel in the areas of air traffic control, avionics, aviation meteorology, aviation communications, flight information, flight operations management, airport fire-fighting and aviation safety inspection. Intensive pre-job and on-the-job training programs together with advanced equipment, such as Air Traffic Control Tower Simulator, Air Traffic Control Radar Simulator, and Air Traffic Management System (ATM) Tower Simulator, provided aviation personnel with complete and solid technical training. In 2017, 105 trainees in 16 classes completed pre-job training and 4,803 staff in 346 classes completed on-the-job training. Additionally, non-government training resources were

integrated to offer 13 classes in airside/apron safety management, dangerous goods rules and operations risk management training programs; these programs trained 539 civil aviation industry personnel.

Keep Pace with Global New Knowledge

The major subjects of annual overseas training programs were decided according to international civil aviation market trends and aimed to provide assistance to our civil aviation industry. The selected staffs were sent to study the latest international civil aviation regulations, aviation technologies, and airport planning and management expertise, thereby strategically cultivating our professional personnel. In 2017, 25 seed staffs were sent to the US, UK, Belgium and Singapore to attend various courses, including: international civil aviation regulation, aviation management, safety inspector refreshment, flight safety investigation and analysis, air traffic management system, apron operation management and airport carbon management and planning development. CAA also organized seminars and meetings when these overseas trainees came back, and successfully exchanged viewpoints and shared the latest information in civil aviation with other 254 staffs.



建立儲訓能量

目前持有我國航空器駕駛員執照約 3,000 人，近年隨著亞太地區空運市場蓬勃發展，國籍航空公司的機隊規模亦持續擴大，對駕駛員的需求殷切，本局已於 103 年輔導成立我國第一家術科飛行訓練中心—安捷航空訓練中心，建立我國航空器駕駛員儲訓能量，106 年再輔導澳亞飛航訓練中心股份有限公司通過「航空人員適職訓練機構」五階段檢定給證作業，成為我國首家航空人員適職訓練機構，提供 A320/A321 型機駕駛員適職訓練，逐步構築我國駕駛員完整訓練系統。

擴大經驗交流

106 年本局與美國運輸保安署（TSA）、日本國土交通省航空局（Japan Civil Aviation Bureau, 簡稱 JCAB）及加拿大運輸部航空保安局（Transport Canada Aviation Security Operations）等航空保安機關開啓雙邊會談，強化飛美、加航班保安措施與評估，增進臺日航空保安措施與安檢作業經驗交流，讓我國航空保安工作持續接軌國際；而 106 年度東亞地區最重要的飛航管制會議—非正式東亞飛航管

制協調小組（The East Asia Air Traffic Management Coordination Group, 簡稱 EATMCG）第 10 屆會議，由國際飛航管制員協會、日本、韓國、菲律賓、香港及本局的代表在臺北舉行會談，促進臺北飛航情報區（Taipei FIR）與鄰近飛航情報區的交流，增進東亞區域整體航管效率及安全；此外，本局與中華民國台灣飛行安全基金會合辦「2017 年亞太暨國籍航空飛安年會」，邀請波音公司資深飛安專家來臺，聚焦國際關注飛安議題，透過案例探討、剖析原因及風險管理，預防危害飛安事件發生。

106 年首度舉辦「飛航標準法規講習」，藉由經驗分享與法規介紹，協助業者提升自我安全管理能力，並完成航空公司的飛安、航務、機務、機隊與品保等五大安全主管，以及航空器維修廠、製造廠的管理人及督導人員共 309 位種子人員的培訓，透過飛安專家的經驗暢談及密集交流，共同發掘安全弱點，提升安全管理績效。

Establish Training Capacity

At present, there are approximately 3,000 individuals possessing a pilot license issued by CAA. Along with the recent boom in Asia-Pacific's air transport market, national airline fleets have also continued to expand, thus resulting in growing demand for pilots. CAA provided assistance in the setup of Taiwan's first technical flying training center in 2014-Apex Flight Academy Taiwan, to establish pilots' training capability. In 2017, CAA further provided Ansett Aviation Asia Co., Ltd with assistance to completes the 5-phases certification process and became Taiwan's first aviation personnel vocational training institute. Ansett Aviation Asia Co., Ltd. offers A320/A321 aircraft type pilot vocational training. That was a great step of CAA's endeavors in constructing a sound pilot training system in Taiwan.

Expand Experiences Exchange

In 2017, CAA initiated bilateral meetings with aviation security agencies. With US Transportation Security Administration (TSA) and Transport Canada Aviation Security Operations, strengthening aviation security measures and assessment for flights to US and Canada was achieved; and with Japan Civil Aviation Bureau (JCAB), experiences exchanges regarding AVSEC measures and inspection practices were enhanced. All these could keep Taiwan's aviation security works maintain an international level. In addition, the most important air traffic control meeting of 2017 in East Asia, i.e. the 10th Meeting of the East Asia Air Traffic Management Coordination Group (EATMCG), was held in Taipei with representatives from the International Federation of Air Traffic Controllers' Associations (IFATCA), Japan, South Korea, Philippines, Hong Kong, and

CAA. The information exchanging and experiences sharing among adjacent FIRs could significantly improve the overall efficiency and safety in East Asia's air traffic management. Additionally, CAA and Flight Safety Foundation-Taiwan jointly organized the 2017 Asia-Pacific and National Airline Flight Safety Annual Meeting and invited Boeing's senior aviation safety expert to Taiwan. The meeting focused on important international flight safety issues and analyzed causes and risk management through case examples to prevent occurrence of flight safety events.

The Aviation Standards and Regulations Workshop was held for the first time in 2017. Through sharing experience and introducing laws and regulations, it is aimed to assist the industries to improve their own self-safety management capabilities. In total it trained 309 seed personnel. They included five major safety supervisors in flight safety, flight operations, maintenance, fleet and quality assurance in airlines, as well as managers and supervisors in maintenance and manufacturing plants. Through direct and intensive experience sharing and exchanges with aviation safety experts, participants could jointly discover safety vulnerabilities to help improve safety management performance.



5 匯萃新機， 見證豐碩的實績

Seize New Opportunities;
Witness Abundant Growth

統計數據 Statistics

總量 Total Volume

✈️ ↓ 3.4 %

總起降架次為 50 萬 9,181 架次，
較 105 年減少 3.4%。
Total number of aircraft
movements was 509,181, down
3.4% from 2016.

🚶 ↑ 4.3 %

總客運量為 6,597 萬 8,693 人
次，較 105 年增加 4.3%。
Total passenger volume was
65,978,693, up 4.3% from
2016.

🚚 ↑ 8.2 %

總貨運量為 241 萬 6,036 公噸，
較 105 年增加 8.2%。
Total cargo volume was
2,416,036 tons, up 8.2% from
2016.

國際及兩岸航線 International and Cross-Strait Flight Routes

✈️ ↓ 0.6 %

起降架次為 30 萬 8,799 架次，
較 105 年減少 0.6%。
Total number of aircraft
movements was 308,799, down
0.6% from
2016.

🚶 ↑ 4.7 %

客運量（含入出境及過境）為
5,488 萬 1,292 人次，較 105 年
增加 4.7%。
Total passenger volume (including
arrival/departure and transits) was
54,881,292, up 4.7% from 2016.

🚚 ↑ 8.4 %

貨運量（含進口、出口及轉口）
為 238 萬 5,681 公噸，較 105 年
增加 8.4%。
Total cargo volume (including
import, export, and transit) was
2,385,681 tons, up 8.4% from
2016.



國內航線 Domestic Routes

✈️ ↓ 7.4 %

起降架次為 20 萬 382 架次，較
105 年減少 7.4%。
Total number of aircraft
movements
was 200,382, down 7.4% from
2016.

🚶 ↑ 2.3 %

客運量（到、離站旅客）為 1,109
萬 7,401 人次，較 105 年增加
2.3%。
Total passenger volume (including
arriving and departing) was
11,097,401, up 2.3% from 2016.

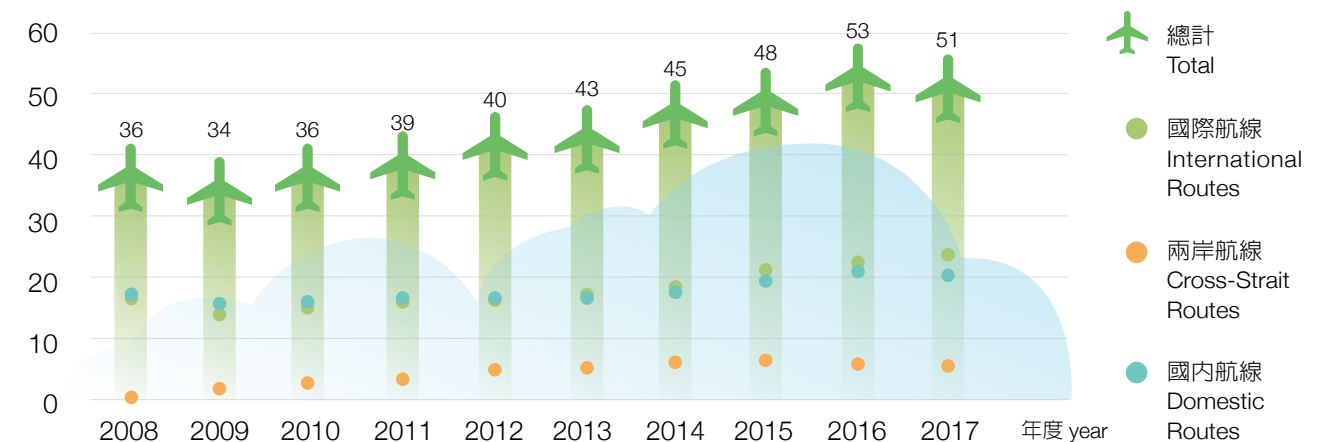
🚚 ↓ 4.6 %

貨運量為 3 萬 355 公噸，較 105
年減少 4.6%。
Total cargo volume was 30,355
tons, down 4.6% from 2016.

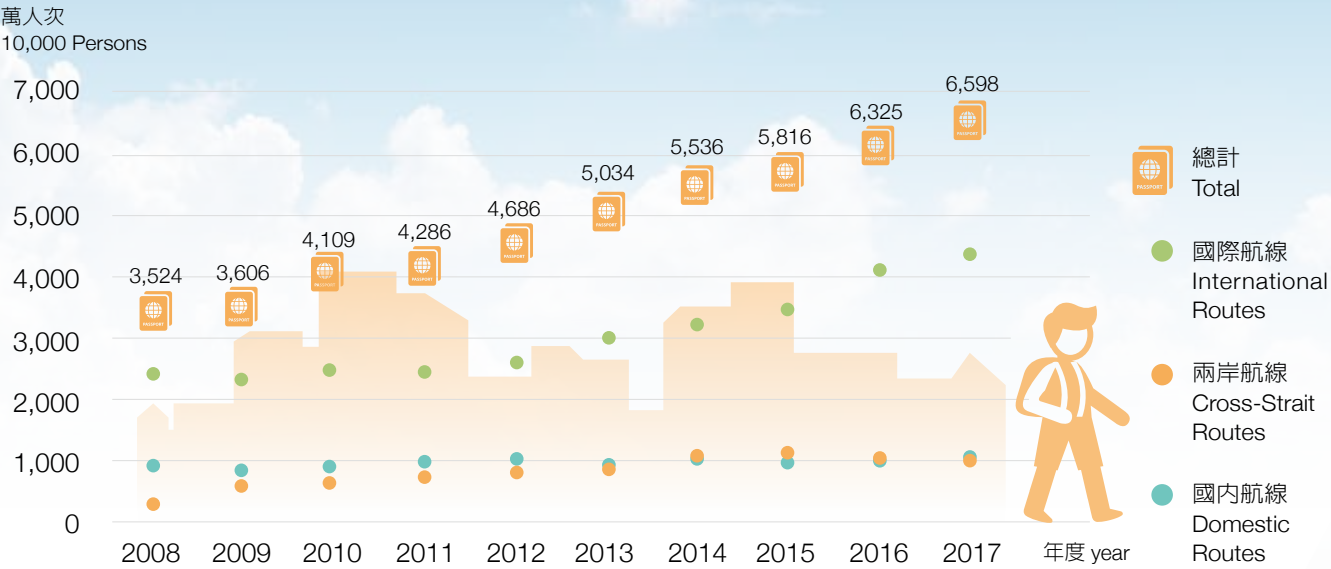
歷年總量 Annual Volume

97-106 年起降架次（單位：萬架次）
2008-2017 Aircraft Movements (Unit: 10,000 Movements)

萬架次
10,000 Movements

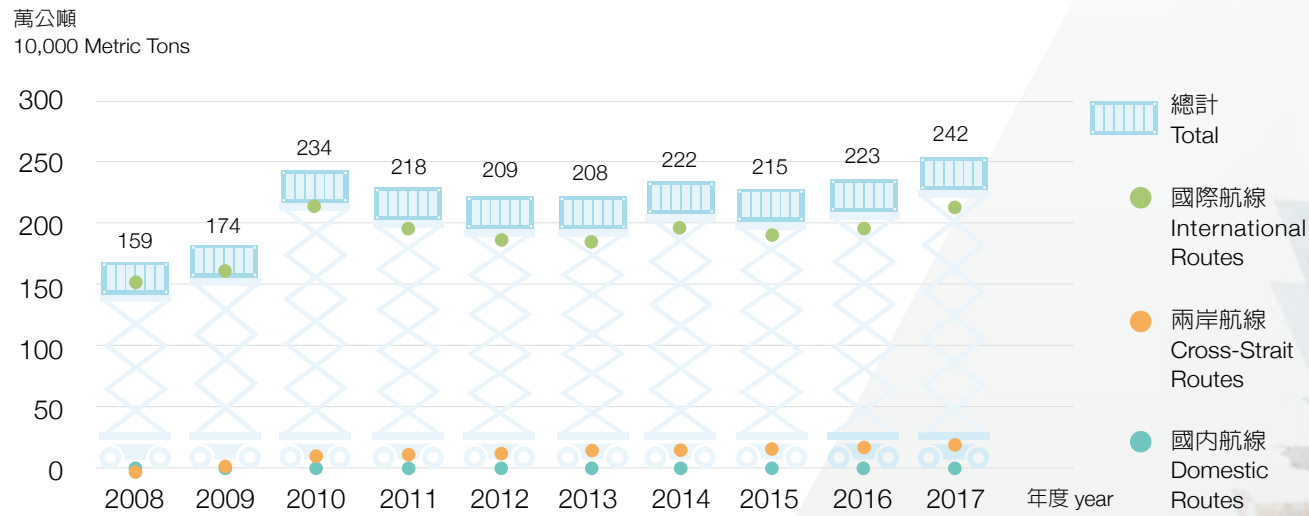


97-106 年旅客人數（單位：萬人次）
2008-2017 Total Passengers (Unit: 10,000 Persons)



註：國際航線旅客人數包含入出境及過境人數。
Note: International passenger volume includes arrival/departure and transit passengers.

97-106 年貨運噸數（單位：萬公噸）
2008-2017 Cargo Tonnage (Unit: 10,000 Metric Tons)

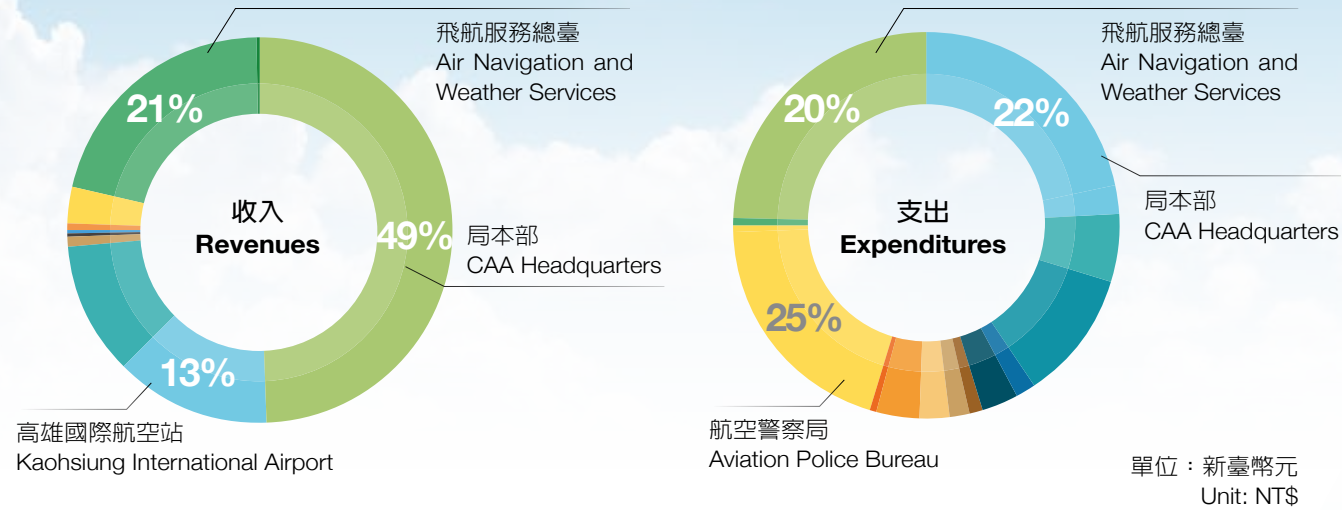


註：國際航線貨運量包括進出口及轉口貨運。
Note: International cargo volume includes import, export and transit cargo.

106 年主要機場營運量
2017 Operating Results of Major Airports

機場別 Airport	起降架次（次） Aircraft Movements	旅客人數（人次） Passengers	貨運噸數（公噸） Tonnage of Cargo
桃園國際機場 Taiwan Taoyuan International Airport	246,104	44,878,703	2,269,585
高雄國際機場 Kaohsiung International Airport	51,768	6,479,183	81,555
臺北松山機場 Taipei Songshan Airport	53,854	5,943,153	45,154
臺中機場 Taichung Airport	25,528	2,394,648	3,567
花蓮機場 Hualien Airport	4,522	235,386	191
澎湖（馬公）機場 Penghu (Magong) Airport	31,144	2,380,265	5,663
臺南機場 Tainan Airport	6,364	446,803	697
臺東機場 Taitung Airport	43,705	322,871	236
金門機場 Kinmen Airport	29,698	2,336,813	6,936
嘉義機場 Chiayi Airport	1,504	81,342	179
其他 Others	14,990	479,526	2,273
合計 Total	509,181	65,978,693	2,416,036

106 年民航事業作業基金收支統計表
2017 CAA Operating Fund Balance Sheet

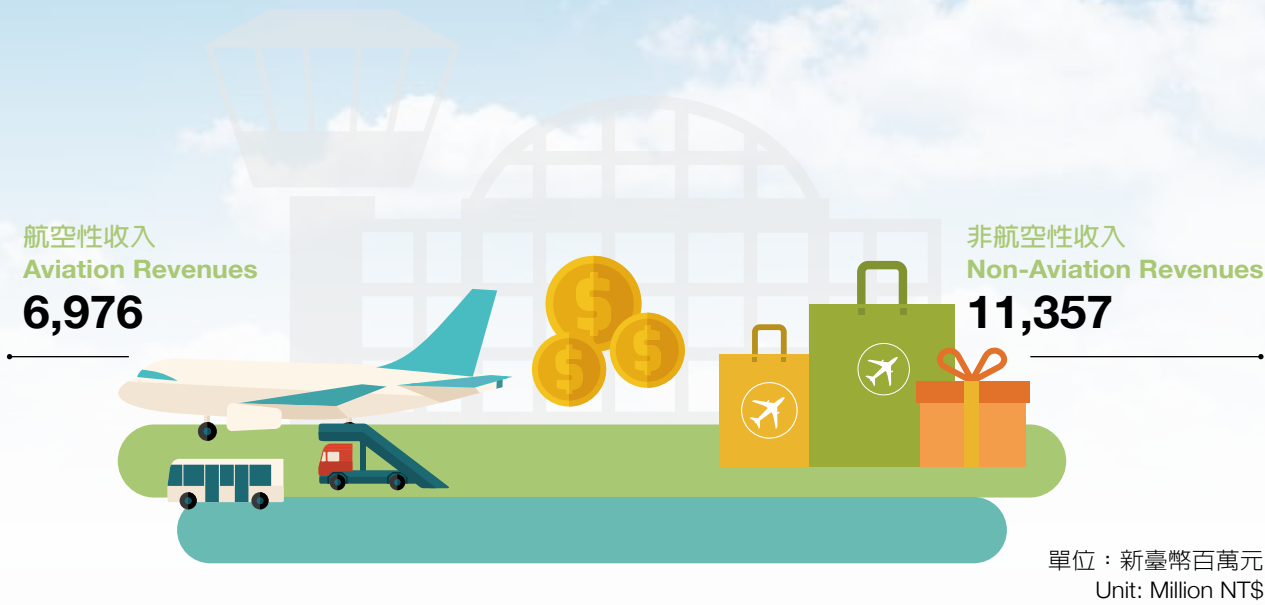


單位別 Operating Unit	收入 Revenues	支出 Expenditures	餘絀 Balance
局本部 CAA Headquarters	9,040,385,315	2,547,341,323	6,493,043,992
高雄國際航空站 Kaohsiung International Airport	2,315,236,861	945,675,313	1,369,561,548
臺北國際航空站 Taipei Songshan Airport	2,104,168,606	1,255,483,424	848,685,182
花蓮航空站 Hualien Airport	28,870,801	188,293,328	-159,422,527
馬公航空站 Penghu (Magong) Airport	137,918,788	371,098,052	-233,179,264
臺南航空站 Tainan Airport	46,187,837	120,386,828	-74,198,991
臺東航空站 Taitung Airport	39,760,702	192,451,427	-152,690,725
金門航空站 Kinmen Airport	136,778,324	312,634,945	-175,856,621
臺中航空站 Taichung Airport	548,678,287	409,484,165	139,194,122
嘉義航空站 Chiayi Airport	2,417,586	65,058,924	-62,641,338
飛航服務總臺 Air Navigation and Weather Services	3,926,905,083	2,318,562,496	1,608,342,587
民航人員訓練所 Aviation Training Institute	216,601	67,308,091	-67,091,490
航空警察局 Aviation Police Bureau	5,054,817	2,940,909,726	-2,935,854,909
合計 Total	18,332,579,608	11,734,688,042	6,597,891,566

註：
1. 高雄國際航空站資料包括恆春航空站收支資料。
2. 臺北國際航空站資料包括南竿、北竿航空站收支資料。
3. 馬公航空站資料包括七美、望安航空站收支資料。
4. 臺東航空站資料包括蘭嶼、綠島航空站收支資料。

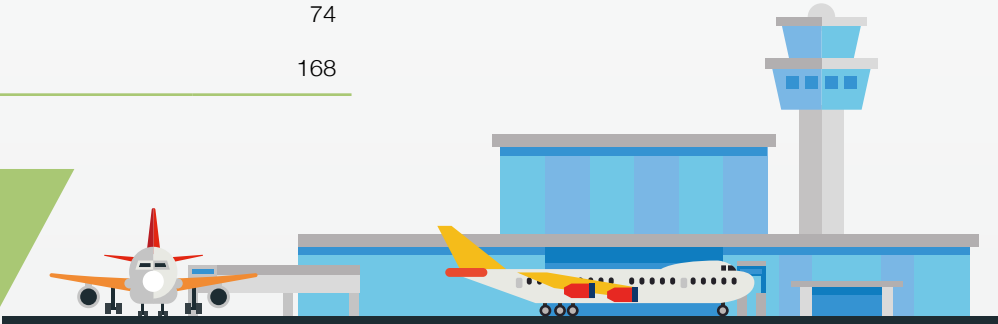
Note:
1. Kaohsiung International Airport data include the balance data for Hengchun Airport.
2. Taipei Songshan Airport data include the balance data for Nangan Airport and Beigan Airport.
3. Penghu (Magong) Airport data include the balance data for Qimei Airport and Wang-An Airport.
4. Taitung Airport data include the balance data for Lanyu Airport and Lyudao Airport.

106 年民航事業作業基金收入結構
2017 CAA Operating Fund Income Structure



航空性收入 Aviation Revenues	6,976 (38.05%)	非航空性收入 Non-Aviation Revenues	11,357 (61.95%)
場站降落費 Landing Charges	844	權利金 Concessions	1,733
機場服務費 Airport Service Fees	1,236	房屋使用費 Building Rent	476
噪音補償金 Noise Charges	218	土地租金 Land Rent	4,909
飛航服務費 Air Traffic Service Charges	1,852	其他租金收入 Other Rental Income	44
過境航路服務費 Air Navigation Facility Charges	2,054	維護機庫使用費 Maintenance Hangar Usage Fees	61
安全服務費 Security Charges	353	其他 Others	4,134
空橋使用費 Boarding Bridge Charges	119		
航空站地勤業機坪使用費 Apron Service Fees	58		
停留費 Aircraft Parking Fees	74		
其他 Others	168		

總收入 18,333 百萬元
Total Income:
NT\$18,333



6 深耕厚養， 帶動地方的輝煌

Strive for Greatness;
Advance Local Development

澎湖（馬公）機場

馬公航空站位於澎湖縣湖西鄉，距離馬公市區約 10 公里，自 46 年開航隸屬高雄國際航空站管轄，由民航空運公司以 C-46 型客機開始營運，66 年馬公航空站設立後逐漸開放民間航空公司營運，82 年升格為乙等航空站，並於 91 年正式啟用客運容量 440 萬人次 / 年的新航廈，93 年 8 月首航國際航線，97 年配合政府開放兩岸包機直航，開啓澎湖連結世界的新扉頁。

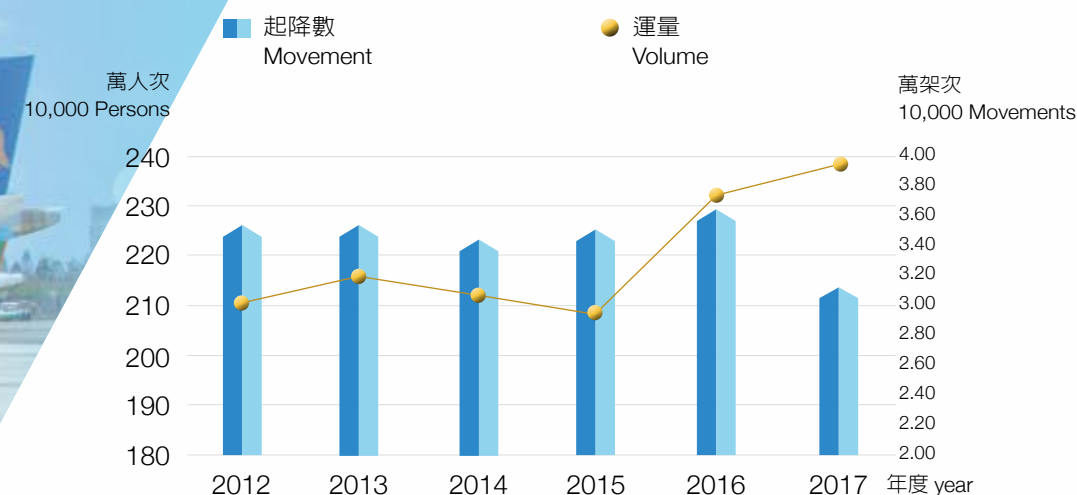
澎湖是臺灣地區最大的離島，「空運」是當地居民與到訪澎湖旅客最便捷的交通方式，每年負責

85% 的澎湖地區聯外交通服務，是澎湖最重要的交通樞紐。

營運現況

馬公航空站以服務國內航線為主，由立榮、華信、遠東與德安等 4 家航空公司，飛航臺北、臺中、高雄、嘉義、臺南、金門及七美等 7 條定期航線；國際與兩岸包機出入境動線及設備完備，配合航空公司與旅行社需要，不定期飛航國際及兩岸包機。100 年澎湖（馬公）機場旅客量突破 200 萬人次後，106 年攀升至 238 萬人次歷史新高。

澎湖（馬公）機場 101 至 106 年旅客量及起降架次
Penghu (Magong) Airport Passenger Volumes and Aircraft Movements



Penghu (Magong) Airport

Penghu (Magong) Airport is located in Huxi Township, Penghu County, approximately 10 km from Magong City, and under jurisdiction of Kaohsiung International Airport Office since being put into service in 1957, when operations started with Civil Air Transport Inc.'s C-46 passenger aircraft. After the establishment of Penghu (Magong) Airport Office in 1977, it started to open services to private airline operations, and then upgraded to a Level B airport in 1993. In 2002, Magong Airport officially inaugurated a new terminal with a capacity of handling 4.4 million passengers per year. Its first international services started in August 2004, and cross-strait chartered flights started in 2008 in compliance with government policies, thus marking a new milestone in Penghu's connection to the world.

Penghu is the largest offshore island of Taiwan. Air transport is the most convenient means of transportation for visitors and local

residents, accounting for 85% of external transportation services each year. Therefore, the airport is the most important traffic hub in Penghu.

Current Status

Penghu (Magong) Airport primarily serves domestic routes operated by 4 airlines: UNI Airways, Mandarin Airlines, Far Eastern Air Transport, and Daily Air, covering 7 scheduled routes to Taipei, Taichung, Kaohsiung, Chiayi, Tainan, Kinmen, and Qimei. The airport had designed smooth passenger movement paths and equipped with sufficient immigration facilities for in-bound and out-bound passengers; therefore, airlines were able to operate international and cross-strait non-scheduled or chartered flights according to travel agency's requirements. Penghu (Magong) Airport passenger volume exceeded 2 million in 2011, and climbed to 2.38 million in 2017, marking a historical high.

與世界接軌的五心航站

馬公航空站開站將近 40 個年頭，積極推動各項與世界接軌的創新連結，而各項軟、硬體建設都有長足的進步：硬體方面，各項建設適時更新，從擁擠的舊航站擴建成現代化的新航廈，空橋、島式櫃檯、自動行李轉盤等一應俱全；軟體部分亦精益求精，免費網際網路服務、免稅商店進駐、自動廣播及飛航資訊系統更新等工作已陸續完成，回顧近年重要的服務里程碑如下：

（一）99 年，啓用全國首座「離島免稅購物商店」

以往國人購買免稅商品，只能於出國時在機場國際線免稅商店購買，馬公航空站為提升服務品質，率先依據離島建設條例之「離島免稅購物商店設置管理辦法」，在內候機室設置離島免稅商店及提貨處，於 99 年 4 月 8 日正式開幕，整潔明亮的購物環境及人員主動親切的服務態度，頻獲旅客讚賞，讓旅客不必出國

亦可享受購買或參觀免稅商品之優質服務。目前旅行業者已將免稅商店購物列入澎湖觀光旅遊行程之一，機場內免稅商店販賣包括手錶、香水、名牌包等多種類精品，滿足不同旅客的購物需求。離島免稅店每年為航站挹注權利金收入，也讓航站服務更加多元化。

（二）102 年，完成澎湖（馬公）機場跑道整建

澎湖（馬公）機場為軍民合用機場，跑道、滑行道係軍方於 53 年興建並負責維護。因道面老舊、承載力不佳，部分空側設施不符合國際最新規範，為提升機場服務能量與品質，優化航空器操作環境，保障離島居民空運服務，行政院於 97 年核定機場跑道及滑行道道面設施整建改善工程計畫，102 年 12 月 30 日整建完成。整建完成後的澎湖（馬公）機場跑道長度 3,000 公尺，寬度 45 公尺，可供 4C 類航空器起降，目前最大營運機型為 A321，載客人數約 200 人。

澎湖（馬公）機場肩負重要疏運任務，機場跑道跟滑行道整建完成，除維護整體飛航安全，更是觀光旅遊的重要基礎建設，除有助於每年年節及旅遊旺季期間的人潮疏運，更有助於發展觀光事業。

The 5H Terminal Connected to the World

In nearly 40 years of operation, Penghu (Magong) Airport has been actively making various innovations in an effort to connect with the world, and has shown drastic improvements both in software and hardware. In terms of hardware, various construction projects have been timely updated: a congested old terminal was transformed to the current modern new terminal; other featuring amenities included jet bridges, island countes and automatic baggage carousels. In terms of software, the airport has also successively upgraded many services such as free Internet, duty-free shop, and a new automatic broadcasts and flight information system. A review of major service milestones through recent years is provided as follows:

1. In 2010, Taiwan's first duty-free shop offshore island was opened

In the past, locals can only purchase duty-free products at international terminals when going abroad. To improve service quality, Penghu (Magong) Airport took the lead to set up offshore island duty-free shops and delivery offices at gate lounge area pursuant to the Rules Governing Establishment and Administration of Offshore Island Duty-Free Shopping Stores in the Offshore Islands Development Act. These stores were officially opened on April 8, 2010. The neat, bright shopping environment and active, friendly service attitude of personnel garnered frequent visitor appreciation, while providing visitors quality services for purchasing or browsing duty-free products without leaving the country. Currently, duty-free shopping has been included by travel agencies in Penghu tourism itineraries. The

airport's duty-free shops sell various luxury goods including watches, perfumes and designer bags, to fulfill various travelers' shopping needs. Offshore island duty-free shops input royalties each year to the airport while diversifying airport services.

2. In 2013, Penghu (Magong) Airport runway renovation was completed

Penghu (Magong) Airport served both as a military airbase and civilian airport. The military constructed the runway and taxiways in 1964 and were responsible for relevant maintenance activities at that time. Due to aging surfaces and poor load bearing capacities, partial airside facilities did not meet the latest international standards. To improve airport service capacity and quality, optimize aircraft operating environment, and ensure offshore island resident's air transport services, the EY approved the airport runway and taxiway surface renovation improvement project in 2008. The project was completed on December 30, 2013. The Airport runway is now 3,000 m long and 45 m wide, and can support 4C-type aircraft movements. Currently, the largest operating aircraft model is A321, which has a passenger capacity of roughly 200 people.

The Penghu (Magong) Airport is responsible for crucial transportation missions. Completing the runway and taxiway renovation project not only maintains overall flight safety but also provides a significant infrastructure for tourism activities, which helps facilitate traffic during Holidays and peak season and furthermore promotes the development of tourism industry.





(三) 102 年，打造低碳綠能機場

澎湖（馬公）機場每年有超過 200 萬旅客進出，是推廣宣導節能減碳觀念最佳舞臺。為推動打造低碳綠能機場，結合澎湖縣政府推動低碳島計畫中「公共建築太陽光電示範計畫」，提供航空站站前土地，配合建置具低碳意象之指標性太陽光電光廊及機車停車棚，用海浪與飛翔的意象設計建築量體，傳達低碳環保的意象，並榮獲 102 年國家卓越建設獎－最佳規劃設計類金質獎的肯定。太陽光電光廊設置範圍由機場中央出口處橫越站前道路及綠帶，往前延伸涵蓋整個機車停車棚，每年發電量計 43 萬 3 千度電，約可減少二氧化碳排放量約 265 公噸，等於 0.75 座大安森林公園吸收量，相當造林面積 13.11 公頃、種植 2 萬 4,093 棵樹，不僅是澎湖推動綠能低碳的重要指標意義，也成功打造澎湖門戶的新地標。

(四) 104 年，啟動聯合候補系統服務

離島對外交通主要仰賴空中運輸，每逢連續假期大批旅客返鄉過節，導致機位候補需求大增，為便利旅客取得即時補位資訊及辦理補位，馬公航空站於 104 年設置 4 座聯合候補機檯，並在澎湖（馬公）機場網站建置「聯合候補即時查詢」專區，提供民眾手機上網查詢，提高資訊透明度。

每年三節、連續假日，尤其是颱風來襲前後期間，常有大量旅客需要請航空公司加開臨時加班機，或向國防部空軍司令部申請調派 C-130 運輸機，啟動軍機進行疏運作業；因軍機疏運是非常態、緊急性的疏運措施，過去以人工作業辦理候補登記，作業耗時且易發生資料抄錄錯誤，影響登機時間。106 年馬公航空站精進聯合候補登記系統，新增軍機候補作業並建置旅客報到作業系統，電子化作業可減少人力 4 人，每架軍機作業時間縮短至 30 分鐘，有效提升疏運效率，並於 106 年 6 月完成候補櫃檯即時影像直播，讓聯合候補現場資訊更為清楚透明。

3. In 2013, low-carbon green energy airport was built

Penghu (Magong) Airport accommodates over 2 million travelers each year, and serves as the perfect stage for promoting energy conservation and carbon reduction concepts. To promote the construction of a low-carbon green energy airport, the airport integrated the Public Building Solar Photovoltaic (PV) Demonstration Project in the Low Carbon Island Project promoted by the Penghu County Government, provided land in front of the terminal and built a matching symbolic low-carbon solar PV light corridor and motorcycle parking shed. The building structure adopted waves and flying images to deliver a low-carbon and environmentally friendly image. The design won the gold award in Planning & Design category of the FIABCI-Taiwan Prix D'Excellence Awards. The setup range of solar PV light corridor starts from the airport's central exit across the road and green belt in front of the terminal, and further extends to cover the entire motorcycle parking shed. The facility generates an estimated 433,000 kWh of electricity each year and can reduce approximately 265 metric tons of carbon emissions, which is equivalent to the absorption capacity of 0.75 Daan Forest Parks, 13.11 hectares of forested area, or 24,093 planted trees. The corridor not only is of key significance to Penghu's promotion of green energy and low-carbon architectures but it has also successfully created a new landmark for the gateway to Penghu.

4. In 2015, the joint waiting-list system services was activated

Offshore islands' external traffic relies on air transport. During long holiday period, large numbers of passengers return home, which drastically increase demand for waiting lists. To facilitate travelers acquire real-time waiting list information and process relevant ticketing confirmation, Penghu (Magong) Airport set up 4 waiting counters and a Joint Waiting List Real-time Query information on the Penghu (Magong) Airport website in 2015 to provide mobile search support to the public and increase information transparency.

During the three major holidays and long holidays each year, particularly during typhoon periods, large passenger volumes often require airlines to provide additional extra flights or CAA to request Air Force Command Headquarters (MND) to dispatch C-130 transport aircraft for relief operations. Because military aircraft using in civil transport operations are abnormal and emergency relief measures, a manual waiting list registration process was adopted in the past, which is time-consuming and prone to human errors, thus affecting boarding time. In 2017, Penghu (Magong) Airport improved the joint waiting list registration system and added a military aircraft waiting list process and set up passenger check-in system. The electronic process can reduce required manpower by 4 units and 30 minutes of check-in process time per flight, thus effectively improving relief efficiency. Additionally, the waiting list counter real-time video broadcast was completed in June 2017 to improve information transparency at the joint waiting list service location.

(五) 105 年，推動戶籍協查，力創三贏

設籍離島居民享有飛機機票補助政策已行之多年，搭機民衆於搭機報到時，需向航空公司出示身分證或戶口名簿證明為澎湖籍，方得購買離島居民優惠票，不過偶有民衆搭機忘記攜帶上述證件，須儘速返家拿取或請家人將證件送至機場；馬公航空站主動與湖西鄉戶政事務所合作，為沒有攜帶證件的澎湖居民即時提供購買優惠票的證明；截至 106 年底，已服務 176 位鄉親，過去必須緊急聯繫家人或朋友幫忙送證件到機場，或者親自飛車跑一趟，往來花費的時間估計平均約 40 分鐘，搭計程車來回 450 元，旅客花費的金錢、精神、時間緊迫的三重壓力，如今透過中央與地方跨機關將資源整合，並納入航空公司的合作機制，為每一位接受服務的鄉親節省時間與金錢，是公私協力創新服務的最佳典範。

(六) 106 年，順暢到站旅客動線

澎湖的海洋總是吸引大批遊客夏季到訪，團體旅遊是暢遊澎湖大小島嶼最方便的方式；旅遊旺季期間，航班非常密集、到站旅客人潮

擁擠，導致接機領隊在集合團體旅客時，容易影響到站出口處旅客動線，造成到站出口擁塞問題；馬公航空站想出旅客到站分流措施，運用到站出口右側的圓弧區空間，布置大型旅遊地圖及澎湖觀光資訊，讓接機領隊及團體旅客擁有專屬集合空間，美好的旅程就從澎湖（馬公）機場開始。

此外，新設到站旅客會面點資訊系統，旅客在行李提領區即可透過設置的會面點資訊顯示看板取得接機人員會面點資訊，縮短了旅客出站集合時間。為營造迎賓端景「認識澎湖的第 1 站」，設置 2 幅大型旅遊地圖，並由在地藝術家手繪兩幅澎湖「潮間帶」及「淺海區」，運用自然陽光映照展現澎湖海洋生物多樣性，提供接機人員為旅客進行認識澎湖的簡要介紹。「認識澎湖第一站」兼具了觀光、教育、解說導覽的功能，讓旅客對未來幾天的行程，充滿期待，同時也提升航站服務的多元性。



5. In 2016, it promoted household registration assessing service in an effort to benefit all three parties involved

The special policy of granting discounted tickets for offshore household registration residents has been implemented for many years. They must present a National ID or household registration certificate to prove eligibility as a Penghu local resident to purchase or use the offshore resident discounted tickets at check-in counters. However, residents who forget to bring the aforementioned documents must immediately return home to retrieve the documents or have their family deliver the documents to the airport. Penghu (Magong) Airport actively collaborated with Huxi Township Household Registration Office to provide assistance to Penghu residents not carrying any proof of ID to purchase discounted tickets. By the end of 2017, the services has assisted 176 locals, who, in the past, would have had to contact family members or friends to help deliver IDs to the airport or make a hasty trip on their own that would have taken an additional 40 minutes round-trip and cost NT\$450 in cab fare—serious stresses to the passenger in terms of energy, time, and additional costs. Now, through resource integration and cooperation among central and local agencies as well as airlines, every local receiving the service can save time and money. This is the perfect demonstration of public and private collaboration in a creative new service.

6. In 2017, facilitated arrival passenger movement

Penghu's ocean has always attracted large number of tourists during summer. Group tourism is the most convenient means to travel through the

Penghu islands. During peak season, dense flight frequency and the arrival crowd, especially the tour group leaders gathering their teams, caused the congestion in domestic arrival hall and seriously block passenger passage to the Airport exit.

Penghu (Magong) Airport then devised a passenger arrival diversion measure by lining a specific area on the right side of the arrival hall as a gathering space exclusively for tour groups, where decorated a large touring map and information for them to start a wonderful journey.

Additionally, the newly set up arrival passenger meeting point information system allowed passengers to acquire meeting point information on the display screen at the baggage claim area, shortening passengers' exit and tour group gathering time. The airport has created a welcoming view through the slogan "the first stop to acquaint with Penghu" and set up 2 large tour maps and 2 Penghu "Intertidal Zone" and "Shallow Sea Area" paintings hand-drawn by local artists, expecting that the natural sunlight casts on these paintings could demonstrate Penghu's marine biodiversity. Such measures let tour guides have an opportunity to briefly introduce Penghu to the tourists and let them have great expectation on the coming tour. Penghu (Magong) Airport, as the first stop to acquaint with Penghu, exerts its multi-functions and provides diversified services.

未來展望

新建航站大廈於 91 年啟用後，各項硬體設備適時更新，包括空橋、島型報到櫃檯 4 座（計 32 個報到線）、自動行李轉盤、LED 到離站飛航資訊顯示看板等一應俱全；軟體方面亦秉持與時俱進、精益求精的服務精神，如免稅商店進駐、哺集乳室、兒童遊戲區、免費網際網路、充電站、自動行李寄物櫃、單車車友服務、特產商店及餐廳、旅遊諮詢、租車及住宿櫃檯等，充分展現出以服務需求導向的多元化機場服務精神。

馬公航空站歷年屢創新高的營運紀錄，正是機場全體工作夥伴同心協力一步一腳印留下的深刻足跡。展望未來，107 年「世界最美麗海灣組織」（The Most Beautiful Bays in the World）將於澎湖舉辦盛大年會。澎湖（馬公）機場，是世界最美麗海灣的起點，

也是澎湖躍上國際舞臺的第一站，馬公航空站將秉持「愈在地，愈國際」的精神，推動與世界接軌的「五心級服務」，運用「真安心」－積極守護飛航安全、「揪感心」－關注離島民衆搭機需求、「好順心」－健全聯外交通服務、「好貼心」－精進候補資訊系統、「好用心」－永續海洋環境資源，持續精進機場各項軟、硬體服務措施，用最在地的心思，提供旅客安全、舒適、便捷的服務。



Future Perspective

Since inauguration of the new terminal building in 2002, various hardware equipment have been timely updated, including a jetbridge, 4 island check-in counters (total of 32 check-in lines), automatic baggage carousel, and LED arrival and departure flight information display. In terms of software, the airport upholds the service spirit on staying up-to-date and striving for perfection, providing creative new facilities such as duty-free shop, breastfeeding room, children's play area, free Internet, charging stations, automatic baggage locker, cycling services, specialty shops and restaurants, travel advice, car rental and accommodation counters. All these demonstrate the full variety service-oriented spirit of the airport.

Penghu (Magong) Airport continues to break operating records each year, which perfectly demonstrates the individual efforts of all employees as they collaborate whole-heartedly. In view of the future, the Most Beautiful Bays in the World Club

will be holding the 2018 meeting in Penghu. Penghu (Magong) Airport is a starting point for the Most Beautiful Bays in the World and also the first stop for Penghu to appear on the international stage. Magong Airport will stick to its "more local, more global" spirit in promoting world class "5H service": "a peaceful heart"-in actively protecting aviation safety, "a sensible heart"-in paying attention to offshore island residents' air transport needs, "a satisfying heart"-in improving external transportation services, "a caring heart"-in perfecting the waiting list information system, and "a diligent heart"-in sustaining marine environmental resources. With these 5 Hearts, Magong Airport will continue to improve various software and hardware facilities, and adopt the most local ideas to provide passengers safe, comfortable, and convenient services.

8

大事紀要 Chronicles

- Jan**
- 01** 「使用國營航空站助航設備及相關設施收費標準」第 15 條附表修正實施，調降高雄國際機場、臺中機場與其他飛航國際包機（花蓮、臺東、金門、馬公、臺南及嘉義）機場國際航線降落費。
- 20** 本局成立 70 週年，交通部賀陳部長、陳前局長家儒、游前局長芳來、尹前局長承蓬、沈前局長啓及民航各業代表等蒞臨局慶大會。
- 交通部核准復興航空停航之兩岸航權分配暨相關國內航線接續營運及增班作業。
- Feb**
- 16** 立榮航空接飛臺北—花蓮航線，並於花蓮機場舉行首航典禮。
- Mar**
- 28** 行政院同意屏東縣政府試辦恆春機場為入出國機場，為期 2 年。
- 29** 立法院交通委員會及交通部賀陳部長旦考察臺中機場營運發展。
- Apr**
- 06** 臺中航空站與日本中部國際機場締結姊妹機場。
- 26** 華信航空首航原復興航空營運之臺北松山—武漢航線。

- Jan**
- 01** Implemented amendment on the appendix of Article 15 of Fee-charging Standards for the Use of State-operated Airport, Navigation Aids and Related Facilities, lowered landing fees for international routes at Kaohsiung International Airport, Taichung and other airports (Hualien, Taitung, Kinmen, Magong, Tainan, and Chiayi) providing international chartered flights.
- 20** CAA's 70th anniversary: Minister Tan HoChen of the Ministry of Transportation and Communications (MOTC) and several Former Director-Generals, Mr. Chia-Ju Chen, Mr. Fiang-Lai Yu, Mr. Chen-Pong Yin and Ms. Jean Shen, as well as representatives from various civil aviation industry participated in the anniversary celebratory meeting.
- The MOTC approved the re-allocation of cross-strait air traffic rights released from the termination of TransAsia Airways, together with relevant processes for the continuation and frequency increase on certain domestic routes.
- Feb**
- 16** UNI Airways undertook Taipei-Hualien route, and organized a maiden flight ceremony at Hualien Airport.
- Mar**
- 28** The EY agreed Pingtung County Government to conduct trial operations of Hengchun Airport as an airport serving international and cross-strait flights for a period of 2 years.
- 29** The Transportation Committee of the Legislative Yuan and Minister Tan Hochen of MOTC inspected Taichung Airport's operations development.
- Apr**
- 06** Taichung Airport and Chūbu Centrair International Airport of Japan concluded a sister airports arrangement.
- 26** Mandarin Airlines took maiden flight on Taipei Songshan-Wuhan route formerly operated by TransAsia Airways'.





May

02 本局飛航服務總臺蔡宗穎副總臺長率隊參加越南河內 CANSO 亞太區年會暨工作小組會議，並分享總臺安全文化推廣作為。

04 邀集在臺營運航空公司研商訂定「航空公司因超賣機位而須拒絕旅客登機之處理原則」。

Jun

01 啓用臺中航空站 W5 聯絡滑行道。

09 加拿大航空恢復溫哥華—臺北航線。

● 我國與友邦索羅門群島簽署航空服務協定，各方可指定多家航空公司營運，且客、貨運容量班次不限。

10 本局要求國籍民用航空運輸業者對自我國機場出發航班之飛航組員全面實施執勤前酒精濃度檢測。

13 行政院國家發展委員會舉行第九屆「政府服務品質獎」頒獎典禮，本局高雄國際航空站榮獲第一線服務得獎機關。

Jul

04 臺中航空站經交通部指定辦理「行政院動員會報 106 年對動員準備方案暨分類計畫主管機關業務訪問」獲評優等。

07 本局飛航服務總臺完成增設北竿機場跑道頭翼排燈。

17 實施第一階段飛美航班「加強對飛美航班旅客隨身所攜帶大於手機之電子產品（如平板、筆記型電腦、電子書、DVD 播放機、遊戲機及相機等）檢查」。

19-21 舉辦「第 10 屆非正式東亞飛航管制協調小組（East Asia Air Traffic Management Coordination Group 10）」會議。

27-28 辦理「國籍航空公司、維修廠業務主管飛航標準法規講習」，提升國籍航空公司與維修廠管理能力，強化業務主管對飛航標準法規之認識、理解及運用，並持續於 8 月 24~25 日、9 月 28~29 日分梯次宣導。

May

02 Mr. Tsung-Ying Tsai, Deputy Chief Director of Air Navigation and Weather Services (ANWS) led a team to participate in CANSO Asia Pacific Conference and Work Group Meeting held in Hanoi (Vietnam), and shared the ANWS' experiences in safety culture promotion.

04 Invited airlines operating in Taiwan to discuss and devise the Guidelines for Handling Rejecting Boarding Passengers Caused by Overbooking.

Jun

01 Taichung Airport's W5 connecting taxiway put into use.

09 Air Canada resumed Vancouver-Taipei air services.

● Taiwan and the Solomon Islands (a diplomatic ally) signed an air services agreement. Each party can designate multiple airlines to operate unlimited passenger and cargo services.

10 CAA demanded national civil air transport operators perform ethanol concentration test to all flight crew members before flight departing from Taiwan.

13 The National Development Council of the Executive Yuan (NDC, EY) held the 9th Government Service Quality Award ceremony. Kaohsiung International Airport Office was awarded the Service Quality Award among frontline Service Organizations.

Jul

04 Taichung Airport was assigned by MOTC to hold the Executive Yuan Mobilization Report 2017 Mobilization Preparation Program and Classification Program Competent Authority Business Visit. It was rated superior.

07 Air Navigation and Weather Services has completed threshold wing bar lights installation at Beigan Airport.

17 Implemented Stage 1 US-bound flights' Strengthened Inspections for US-Bound Flight Passengers' Carry-On Electronic Products Larger than Mobile Phones (Such as Tablets, Laptops, E-books, DVD Players, Game Consoles, and Cameras).

19-21 Organized the 10th meeting of East Asia Air Traffic Management Coordination Group.

27-28 Organized Flight Standards and Regulations Workshop for National Airlines and Repair Station Supervisors to improve the management capability of national airlines and maintenance plants by strengthening supervisors' awareness, understanding and application of flight standards and regulations; and continued to promote in tiers on Aug. 24-25 and Sept. 28-29.



Aug

- 07 完成輔導澳亞飛航訓練中心股份有限公司通過「航空人員適職訓練機構」五階段檢定給證作業。
- 09-18 美國運輸保安署（TSA）派遣保安專家小組對飛美航班的各項保安措施進行檢查與討論，續於 11 月 7 日至 9 日進行第二階段討論。
- 11-09.09 配合內政部辦理「擬定桃園國際機場園區及附近地區特定區計畫」案再公開展覽。
- 15 本局飛航服務總臺啓用臺中清泉崗機場資料鏈路終端資訊自動廣播服務（D-ATIS）。
- 17 本局飛航服務總臺啓用 Q12、Q13 及 Q14 等 3 條性能導航航路，打開傳統航路集中於恆春多向導航臺之瓶頸，提升飛航安全係數、順暢臺北飛航情報區南部航情。

Sep

- 27 本局飛航服務總臺啓用飛航服務安全管理資訊系統 -SERA（Safety Event Reporting and Analysis System）。

Oct

- 02 本局臺北國際航空站舉辦免稅商店 ROT 案增建工程開工典禮。
- 05 本局飛航服務總臺舉辦桃園國際機場新塔臺工程上樑祈福儀式。
- 16-20 日本國土交通省航空局（JCAB）派員來臺交流航空保安措施及安檢作業。
- 26 「民用航空法」部分條文修正草案獲行政院院會審查通過，送請立法院審議。
- 友邦駐聯合國常任代表訪華團拜會本局，與本局就推動參與國際民航組織（ICAO）事宜交換意見，並咸表示樂願助我。
- 實施第二階段飛美航班旅客詢問保安相關問題作業。
- 27 本局北竿航空站舉辦離島免稅商店提貨處開幕儀式並正式營運。
- 30 華信航空松山—金門國內航線通過行政院環境保護署碳標籤審核，為我國第一張航空旅客運輸服務業碳標籤。

Aug

- 07 Completed assisting Ansett Aviation Asia Co., Ltd. in passing the 5-phase certification process for Aviation Personnel Vocational Training Institution.
- 09-18 US TSA dispatched security expert team to inspect and discuss various security measures on US-bound flights and session 2 discussion was arranged from November 7 to 9.
- 11-09.09 In coordination with MOI, processed the Blueprint for Taiwan Taoyuan International Airport's (TTIA) Airport Park and Specific Nearby Areas and subsequently conduct public exhibition.
- 15 Air Navigation and Weather Services activated Taichung Ching-Chuan-Kang Airport's Data link-Automatic Terminal Information Service (D-ATIS).
- 17 Air Navigation and Weather Services put into use the 3 PBN routes of Q12, Q13 and Q14, breaking through the bottleneck of traditional navigation routes concentrated in Hengchun's VOR, thereby improved safety factors and eased the congestion in the southern Taipei FIR.

Sep

- 27 Air Navigation and Weather Services launched the Safety Event Reporting and Analysis System (SERA).

Oct

- 02 Taipei Songshan Airport organized the duty-free shop ROT expansion project groundbreaking ceremony.
- 05 Air Navigation and Weather Services held the beam-raising ceremony for the new control tower project at TTIA.
- 16-20 Japan Civil Aviation Bureau (JCAB) dispatched representatives to Taiwan in exchange of aviation security measures and security inspection processes.
- 26 Draft amendment to partial articles of the "Civil Aviation Act" is approved by the Cabinet Meeting of Executive Yuan and sent to the Legislative Yuan for further review.
- The delegation of permanent representatives of Taiwan's diplomatic allies to the United Nations visited CAA to exchange opinions on promoting Taiwan's participation in the ICAO, and expressed willingness to provide assistance.
- Implemented Stage 2 US-bound flight passenger security related inquiry process.
- 27 Beigan Airport held opening ceremony for the offshore island duty-free shop delivery office and officially started its operation.
- 30 Mandarin Airlines' Songshan-Kinmen route passed EPA's (EY) carbon label review, becoming Taiwan's first carbon label in the passenger air transport services industry.



Nov

- 14 本局臺中航空站辦理「106 年度國家關鍵基礎設施防護演練暨空難災害搶救演習」。
- 完成遠東航空公司 ATR 72-600 新機型引進五階段檢定給證作業。
- 13-22 加拿大運輸部航空保安局 (Transport Canada Aviation Security Operations) 派遣評估小組至我國對直接飛往加拿大之航空公司進行保安評估作業。
- 25 本局飛航服務總臺完成增設南竿機場簡式著陸區燈。

Dec

- 01 中華航空開航桃園—倫敦航線。
- 06 本局與財團法人中華民國台灣飛行安全基金會合辦「2017 年亞太暨國籍航空飛安年會」，邀請波音公司資深飛安專家專題演講。
- 10 本局飛航服務總臺完成增設臺東機場 22 跑道進場燈。
- 14 本局臺北國際航空站啓用國內線登機證查驗系統，提升登機管制門保安判讀能力及航空保安效能。
- 20 本局高雄國際航空站跑道道面整建工程開工。
- 本局飛航服務總臺啓用馬祖南竿機場簡式著陸區燈。
- 26 本局飛航服務總臺完成金門終端雷達、太武山及金沙 ADS-B 接收設備建置。
- 28 完成「松山機場 10 跑道端北側跑道地帶、安全區及燈光用地取得」案，取得計畫範圍內所有私有土地面積約 2.2 公頃。

Nov

- 14 Taichung Airport held the 2017 National Key Infrastructure Protection Drill and Air Disaster Rescue Drill.
- Completed the 5-phase certification process for Far Eastern Air Transport's newly delivered ATR 72-600 fleet.
- 13-22 Transport Canada Aviation Security Operations dispatched evaluation team to Taiwan to perform security assessments on airlines operating direct flights to Canada.
- 25 Air Navigation and Weather Services completed installing simple touch down zone lights (TDZL) at Nangan Airport.

Dec

- 01 China Airlines launched Taoyuan-London services.
- 06 CAA and Flight Safety Foundation-Taiwan co-organized the 2017 Asia-Pacific and National Airline Flight Safety Annual Meeting and invited a Boeing's senior aviation safety expert to deliver keynote speech.
- 10 Air Navigation and Weather Services completed installing approach lights for Runway 22 at Taitung Airport.
- 14 Taipei Songshan Airport activated the domestic route boarding pass reader verification system to improve security discriminating ability of boarding gate door access and aviation security performance.
- 20 Kaohsiung International Airport runway renovation project started construction work.
- Air Navigation and Weather Services activated simple touch down zone lights (TDZL) at Nangan Airport (Matsu).
- 26 Air Navigation and Weather Services completed installing terminal radars in Kinmen and ADS-B receivers in Taiwushan and Jinsha.
- 28 Completed "Project for Land Acquisition of Taipei Songshan Airport's Runway 10's Northern Runway Area, Safety Zone and Lighting Area", and acquired approximately 2.2 Ha of all private land within the project area.



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