

出國報告(出國類別：其他)

2017 美國聯邦航空總署與亞太區域航  
空安全雙邊協議國年會  
(2017 FAA/Asia Pacific Bilateral  
Partners Dialogue Meeting)

服務機關：交通部民用航空局

姓名職稱：何淑萍 副局長

林俊良 組長

黃忠盛 科長

派赴國家：美國

出國期間：106年3月26日至4月1日

報告日期：106年6月7日

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## 壹、目的

美國聯邦航空總署 (Federal Aviation Administration FAA) 與亞太區域航空安全雙邊協議(Bilateral Aviation Safety Agreement BASA)國年會為每年定期舉辦之亞太區域會議，本年度由美國航空聯邦總署於加州洛杉磯地區長堤市舉辦。BASA 各國將對亞太地區雙邊關係及航空器檢定作為進行多邊對話交流，同時分享飛安資訊及交換經驗，提供平臺以解決所關切的亞太區域航空安全議題，除可增進與會各國之雙邊合作外，亦為我國參與國際正式會議，拓展相關國際活動空間最佳契機。

本次 2017 年美國聯邦航空總署與亞太區域航空安全雙邊協議國年會所討論之議題包含以下項目：

- 一、大、小型航空器及航空產品檢定。
- 二、無人機 (RPAS/UAS) 美、日法規發展現況。
- 三、適航檢定國際法規整合作為。
- 四、老舊飛機進口限制討論。
- 五、航空產品生產製造 SMS 計畫執行。
- 六、日本 MRJ、印尼 N219、中國大陸 Y12F 認證及檢定現況。
- 七、以系統方式 (System Approach) 執行認證及檢定。
- 八、多國主管機關共同執行認證及檢定討論。
- 九、飛機製造商業模式演進 (以 Textron 公司之製造許可延伸 PC Extension 為例)。
- 十、航空工業如何與 APAC 會員國共同努力以促進航空安全。

## 貳、過程

106 年 3 月 26 日桃園-美國洛杉磯(國際線去程)。

106 年 3 月 27 日至 3 月 30 日---2017 年美國聯邦航空總署與亞太區域航空安全雙邊協議國年會。

106 年 3 月 31 日至 4 月 1 日美國洛杉磯-桃園(國際線返程)。

本次會議去、返程均由飛航標準組林組長俊良及初始適航科科長黃忠盛，依規定兼施長榮航空公司桃園-美國洛杉磯航線駕駛艙、客艙航路查核。去程航班 BR-0016 班次/B777-300ER 型機/國籍編號 B-16705 號機，於航機後推及雙發動機啟動完成後，出現 Pitot Probe Heater Systems- Center Pitot Heater 訊號（中央空速管加溫系統故障）。該班次機長及飛航組員依據 Minimum Equipment List（最低裝備手冊）之規定，並與地面機械員討論後，決定返回原停機位置，執行更換零組件作業，經 2 小時 30 分更換完成後，原班次任務順利執行。本局飛航安全檢查員於作業全程，均適切考核飛航組員相關任務決策及組員資源管理執行情形，機長及客艙組員依規定對全體乘客適切說明，乘客無客訴及不滿意情形。

駕駛艙、客艙航路查核作業為國際民航組織（ICAO）及歐、美先進國家民用航空標準作業程序，係以經特殊專業訓練之航空安全檢查員，於飛航過程中，適切考核飛航組員及客艙組員，以評估航空公司之飛航作業，是否符合民航主管機關之法規要求。

## 參、會議紀要

### 一、會議參與單位：

本次會議於美國加州洛杉磯地區長堤市舉行，由美國聯邦航空署適航審定司 (Director, Aircraft Certification Service) 司長 Ms. Dorenda Baker 主持。會議共有 14 個國家代表與會，包含美國、紐西蘭、澳洲、中國大陸、香港、新加坡、日本、馬來西亞、韓國、印度、印尼、澳門、菲律賓及台灣等國家派員參加。

### 二、BASA 會議議程

#### 2017 ASIA-PACIFIC BILATERAL PARTNERS DIALOGUE



**Monday**  
March 27, 2017

**Bilateral Meetings & Registration**  
Locations: Gallerie Foyer, Galleria II and Gallerie III - 1st Floor

**Monday**  
8:00 – 10:00 a.m.  
4:00 – 6:00 p.m.

**Registration Open**

**Gallerie Foyer, 1st Floor**

The FAA will be onsite to register authorities.

**Monday**  
8:30 – 5:30 p.m.

**FAA Bilateral and Sidebar Meetings**

**Gallerie III, 1st Floor**

The FAA will conduct pre-scheduled meetings with authorities.

**Monday**  
8:30 – 5:30 p.m.

**Authorities Bilateral and Sidebar Meetings**

**Gallerie II, 1st Floor**

Authorities may use this room and time to conduct bilateral and sidebar meetings. First come, first served; pre-registration coordination suggested.

**Tuesday**  
March 28, 2017

**Authorities Meeting**  
Day 1 Agenda  
Meeting Location: Gallerie I, 1st Floor

<b>Tuesday</b> 7:30 – 9:00 a.m.	<b>Registration with Coffee/ Tea Service</b>	<b>Gallerie Foyer, 1st Floor</b>	The FAA will be onsite to register authorities; coffee/tea service available.
<b>Tuesday</b> 9:00 – 9:15 a.m.	<b>Opening Address/ Welcome</b>	<b>FAA (USA)</b> <b>Ms. Dorenda Baker</b> Director, Aircraft Certification Service	The FAA welcomes authorities/ opens meeting.
<b>Tuesday</b> 9:15 – 9:30 a.m.	<b>Onsite Arrangements; Agenda Overview; Review of 2016 Action Items</b>	<b>FAA (USA)</b> <b>Mr. Sarbhpreet Sawhney</b> Manager (Acting), International Division, Aircraft Certification Service	The FAA will provide information and advisement regarding onsite arrangements, present an overview of the agenda, and review high-level 2016 FAA APAC Action Items.
<b>Tuesday</b> 9:30 – 10:00 a.m.	<b>Introduction of Participants &amp; Group Photos</b>	<b>FAA (USA)</b> <b>Mr. Sarbhpreet Sawhney</b> Manager (Acting), International Division, Aircraft Certification Service	After brief introductions, the FAA invites attendees to assemble for group photographs.

<b>Tuesday</b> 10:00 – 10:15 a.m.	<b>BREAK – Coffee/Tea Service</b>		<b>Gallerie Foyer, 1st Floor</b>
<b>Tuesday</b> 10:15 – 10:45 a.m.	<b>FAA Aircraft Certification Service – AIR Transformation</b>	<b>FAA (USA)</b> <b>Ms. Dorenda Baker</b> Director, Aircraft Certification Service	The FAA's Aircraft Certification Service is undergoing a transformation in organizational structure and business process approach to certification and validation activities. The Director of the Aircraft Certification Service, Ms. Dorenda Baker, will discuss the transformation's goals and objectives and how it will help the FAA work more efficiently and effectively with bilateral partners and other stakeholders.
<b>Tuesday</b> 10:45 – 12:00 p.m.	<b>Product Roundtables – Part 1</b> <ul style="list-style-type: none"> <li>Small/General Aviation Airplane</li> <li>Transport Airplane</li> </ul>	<b>All Authorities invited to participate in the conversations</b> <b>FAA (USA)</b> <b>Moderator Mr. Dan Elgas</b> Manager, Certification Procedures Branch, Design, Manufacturing & Airworthiness Division, Aircraft Certification Service	Partners are invited to discuss their experiences, issues, observations, achievements, etc. in each product line area (Small/General Aviation Aircraft, Transport Aircraft, Rotorcraft, and Engines/Propellers). The Roundtable offers a forum for partners to share information on policy changes, technology/innovation impacts, and continued airworthiness and engage in conversations related to the product lines. This may also include globalization challenges or issues frequently encountered among/between partner/industry. The Roundtable also offers a forum for a partner to speak to a product line without having to be so formal and prepare a full presentation. For example, if a partner wanted to talk about its experience with a particular product type and continuing airworthiness, this may be the forum in which that partner can share their experiences and perhaps other partners may share similar experiences or advice, or at least benefit from the conversation as a learning opportunity.  <i>Part 1 will focus on Small/General Aviation Aircraft and Transport Aircraft.</i>

<p><b>Tuesday</b> 12:00 – 1:00 p.m.</p>	<p><b>LUNCH - Onsite</b> <b>Gallerie II and III</b></p>	<p><b>Special Guest Speaker</b> <b>Mr. Kurt Robinson</b> President and Vice Chairman, Robinson Helicopters</p>	<p>Founded in 1973, Robinson Helicopter Company (RHC) is currently the world's leading manufacturer of civil helicopters. As the President and Vice-Chairman of the Torrance, CA-based company and as a member of the International Helicopter Safety Team, Mr. Kurt Robinson plays an integral role advancing new rotorcraft technologies domestically and internationally, and as a member of the International Helicopter Safety Team. RHC has produced more than 11,900 helicopters, employs approximately 1,100 people, and has a worldwide network of more than 400 service centers and dealers.</p>
<p><b>Tuesday</b> 1:15 – 2:30 p.m.</p>	<p><b>Product Roundtables – Part 2</b></p> <ul style="list-style-type: none"> <li>• Rotorcraft</li> <li>• Engines &amp; Propellers</li> </ul>	<p><b>All Authorities invited to participate in the conversations</b> <b>FAA (USA)</b> <b>Moderator</b> <b>Mr. Dan Elgas</b> Manager, Certification Procedures Branch, Design, Manufacturing &amp; Airworthiness Division, Aircraft Certification Service</p>	<p>Part 2 is a continuation of Roundtable discussion, Part 1. <i>Part 2 will focus on Rotorcraft and Engines and Propellers.</i></p>
<p><b>Tuesday</b> 2:30 – 3:15 p.m.</p>	<p><b>Voluntary SMS – Design and Production Programs</b></p>	<p><b>FAA (USA)</b> <b>Mr. Mike Reinert</b> Manager, Systems Performance and Development Branch, Design, Manufacturing &amp; Airworthiness Division, Aircraft Certification Service</p>	<p>The FAA will discuss its new voluntary approach to design and production SMS programs while working to define final regulatory standards.</p>
<p><b>Tuesday</b> 3:15 – 3:30 p.m.</p>	<p><b>BREAK – Coffee/Tea Service</b> <span style="float: right;"><b>Gallerie Foyer, 1st Floor</b></span></p>		
<p><b>Tuesday</b> 3:30 – 4:15 p.m.</p>	<p><b>Global Manufacturing: New Business Models, New Solutions</b></p>	<p><b>FAA (USA)</b> <b>Mr. Dan Elgas</b> Manager, Certification Procedures Branch, Design, Manufacturing &amp; Airworthiness Division, Aircraft Certification Service <b>Mr. Sarbhpreet Sawhney</b> Manager (Acting), International Division, Aircraft Certification Service</p>	<p>The FAA will discuss global manufacturing and how relying on bilateral partners is a model for efficient and effective safety oversight. The FAA will also provide commentary on recently signed Special Arrangements on split TC/PC and 3rd Country State of Design as well as the opportunity to use this as a model for future arrangements among other partner authorities.</p>
<p><b>Tuesday</b> 4:15 – 4:45 p.m.</p>	<p><b>RPAS/UAS – New Regulations in the United States and Japan</b></p>	<p><b>FAA (USA)</b> <b>Mr. Pat Mullen</b> Manager (Acting), Small Airplane Directorate, Aircraft Certification Service <b>JCAB (Japan)</b> <b>Mr. Atsuto Kajiwara</b> Special Assistant to the Director, Airworthiness Division</p>	<p>The FAA will provide an overview of the UAS regulations introduced in December 2015 and a status update on next steps.  JCAB will present the overview of UAS regulations enacted in 2015, including operating status of the new regulation and future plans.</p>

<p><b>Tuesday</b> 4:45 – 5:15 p.m.</p>	<p><b>FAA APAC RPAS/ UAS Working Group – Harmonizing Global Standards for Certification Principles</b></p>	<p><b>Panel</b> <b>FAA (USA)</b> <b>Moderator – Mr. Pat Mullen</b> Manager (Acting), Small Airplane Directorate, Aircraft Certification Service</p> <p><b>CAA (New Zealand)</b> <b>Panelist – Shaun Johnson</b> Manager, Aircraft Certification Unit</p> <p><b>CAAS (Singapore)</b> <b>Panelist – Mr. Jonathan Tan</b> Deputy Head, Airworthiness Engineering – Standards</p>	<p>The working group aims to promote a common understanding of UAS certification principles for the purpose of harmonizing certification approaches across civil aviation authorities and ensuring a seamless exchange and integration of products into national airspace systems. In order to achieve this mission the working group will cooperate in the development of new policy, exchange lessons learned on UAS certification and operational aspects, and coordinate efforts to align strategic goals. Furthermore, the working group will employ the safety continuum concept when developing airworthiness certification processes, identifying design and production requirements, and considering other aspects of UAS certification, as applicable.</p>
<p><b>Tuesday</b> 5:15 – 5:30 p.m.</p>	<p><b>Closing Remarks Day 1</b></p>	<p><b>FAA (USA)</b> <b>Ms. Dorenda Baker</b> Director, Aircraft Certification Service</p>	<p>FAA to review Day 1 and look ahead to Day 2.</p>
<p><b>Tuesday</b> 6:30 – 8:00 p.m.</p>	<p><b>FAA/CAA Senior Executive Dinner Location to be confirmed</b></p>	<p><b>FAA (USA)</b> <b>Hosted by Ms. Dorenda Baker</b> Director, Aircraft Certification Service</p>	<p>Ms. Baker cordially invites the CAA senior executives in attendance to a welcome dinner.</p>
<p><b>Wednesday March 28, 2017</b></p> <p style="text-align: center;"><b>Authorities Meeting Day 2 Agenda</b></p> <p style="text-align: center;"><b>Meeting Location: Gallerie I, 1st Floor</b></p>			
<p><b>Wednesday</b> 8:00 – 9:00 a.m.</p>	<p><b>Information Desk with Coffee/Tea Service</b>      <b>Gallerie Foyer, 1st Floor</b></p>		
<p><b>Wednesday</b> 9:00 – 9:15 a.m.</p>	<p><b>Welcome to Day 2</b></p>	<p><b>FAA (USA)</b> <b>Ms. Dorenda Baker</b> Director, Aircraft Certification Service</p>	<p>FAA to open day 2; announcements.</p>
<p><b>Wednesday</b> 9:15 – 9:45 a.m.</p>	<p><b>Japan's MRJ Certification Project</b></p>	<p><b>JCAB (Japan)</b> <b>Mr. Atsuto Kajiwara</b> Special Assistant to the Director, Airworthiness Division</p>	<p>JCAB will present the overview of MRJ certification project, including organization of certification in Japan.</p>
<p><b>Wednesday</b> 9:45 – 10:15 a.m.</p>	<p><b>Indonesia's N219</b></p>	<p><b>DGCA (Indonesia)</b></p>	<p>The DGCA of Indonesia, will present on its new N219 aircraft.</p>



10:15 – 10:30 a.m.	BREAK – Coffee/Tea Service		Gallerie Foyer, 1st Floor
<p><b>Wednesday</b> 10:30 – 11:15 a.m.</p>	<p><b>Cooperation of CAAC &amp; FAA on Y12F Airplane Certification and Validation</b></p>	<p><b>CAAC (China)</b> <b>Mr. Quan Jingze</b> Flight Performance Senior Engineer, Shenyang Aircraft Airworthiness Center</p>	<p>CAAC will present on Y12F airplane certification and validation. The presentation will review the CAAC certification and FAA concurrent validation process of the Y12F airplane designed by Harbin Hafei Aviation Industry Co., Ltd. (HAIC), with two P&amp;W PT6A-65B engines and an 8400kg Max T/O weight. Both authorities will share their cooperative experiences on the project, based on the SCHEDULE OF IMPLEMENTATION PROCEDURES signed by CAAC and FAA.</p>
<p><b>Wednesday</b> 11:15 – 12:00 p.m.</p>	<p><b>COS Data Sharing</b></p>	<p><b>FAA (USA)</b> <b>Mr. Jeff Duven</b> Manager, Transport Airplane Directorate, Aircraft Certification Service</p>	<p>As more and more products are exported internationally, certifying authorities (SoD) are finding it difficult to carry out their ICAO Annex 8 continued airworthiness role with respect to type design since they are not receiving a diverse operational safety dataset to inform them of the health of the design. Furthermore, varying continued airworthiness processes may result in different safety actions on the same design. This issue requires recognition and collaboration between authorities so safety data sharing mechanisms can be designed and implemented to promote data flow from SoRs to SoD authorities.</p>
<p><b>Wednesday</b> 12:00 – 1:00 p.m.</p>	<p><b>LUNCH – Onsite Gallerie II and III</b></p>	<p><b>Special Guest Speaker</b> <b>Mr. Michael Gorelik, FAA</b> Chief Scientist &amp; Technical Advisor, Fatigue and Damage Tolerance, Office of Aviation Safety</p>	<p>Dr. Gorelik has over 25 years of experience in the areas of fracture mechanics, fatigue, damage tolerance and probabilistic methods. He authored over 40 peer reviewed papers and conference presentations, and one patent. He supports various certification programs; development of advisory materials and rule making activities across the FAA Directorates and Certification Offices; and evaluation of new industry technologies and research. He currently leads the effort to develop the first agency's strategic roadmap for Additive Manufacturing.</p>
<p><b>Wednesday</b> 1:15 – 2:00 p.m.</p>	<p><b>Age Restrictions on Aircraft Imports</b></p>	<p><b>FAA (USA)</b> <b>Moderator – Mr. Jeff Duven</b> Manager, Transport Airplane Directorate, Aircraft Certification Service <b>Moderator – Mr. Kevin Hull</b> Manager, Los Angeles Aircraft Certification Office, Aircraft Certification Service</p>	<p>The FAA will lead a discussion on how APAC authorities can address concerns that may have led to instituting or proposing age restrictions on import aircraft and share safety knowledge to help mitigate such restrictions.</p>
<p><b>Wednesday</b> 2:00 – 2:45 p.m.</p>	<p><b>Aircraft Not Eligible for Type Acceptance</b></p>	<p><b>DGCA (India)</b> <b>Mr. Lalit Gupta</b> Joint Director General</p>	<p>DGCA, India will present its concerns regarding the consensus standard for acceptance of aircraft not eligible for issue of type acceptance by BASA-partner countries.</p>

2:45 – 3:00 p.m.	BREAK – Coffee/Tea Service		Gallerie Foyer, 1st Floor
<p><b>Wednesday</b> 3:00 – 3:45 p.m.</p>	<p><b>Systems Approach to Validation</b></p>	<p><b>Panel</b> <b>FAA (USA)</b> <b>Moderator – Mr. Pat Mullen</b> Manager (Acting), Small Airplane Directorate, Aircraft Certification Service</p> <p><b>CAA (New Zealand)</b> <b>Panelist – Shaun Johnson</b> Manager, Aircraft Certification Unit</p> <p><b>CAAS (Singapore)</b> <b>Panelist – Mr. Jonathan Tan</b> Deputy Head, Airworthiness Engineering – Standards</p>	<p>The panel will discuss opportunities to leverage existing bilateral agreements to introduce pre-validation activities such as knowledge sharing and active confidence building. Additionally, panelists will discuss post-validation oversight measures. When combined with pre-validation activities, these measures will play a role in reducing partner validation involvement through the practices of limited or no technical involvement. New Zealand and Singapore will discuss their experiences in this area.</p>
<p><b>Wednesday</b> 3:45 – 4:30 p.m.</p>	<p><b>Multi-Authority Validations</b></p>	<p><b>Panel</b> <b>FAA (USA)</b> <b>Moderator – Mr. Jeff Duven</b> Manager, Transport Airplane Directorate, Aircraft Certification Service</p> <p><b>JCAB (Japan)</b> <b>Mr. Mitsu Kawakami</b> Director, Airworthiness Division</p> <p><b>CAAS (Singapore)</b> <b>Panelist – Mr. Eugene Tan</b> Senior Manager, Airworthiness Engineering</p>	<p>Participants will discuss the multi-authority validation approach for conducting product familiarization more efficiently and effectively. This process promotes harmonized standards, better allocation of resources, and greater reliance on the certifying authority's system. Participants will discuss the focus on new and emerging certification work, reliance on partner confidence, and further acceptance of certifying authorities' approvals. JCAB will share experiences and comments for participating the 737 max multi-authority validation program.</p>
<p><b>Wednesday</b> 4:30 – 4:45 p.m.</p>	<p><b>2017 Action Items</b></p>	<p><b>FAA (USA)</b> <b>Mr. Sarbhpreet Sawhney</b> Manager (Acting), International Division, Aircraft Certification Service</p>	<p>The FAA will present the 2017 FAA APAC Action Items collected during days 1 and 2. The delegates will offer edits, as applicable. Upon concurrence, the FAA will petition delegates for final acceptance.</p>
<p><b>Wednesday</b> 4:45 – 5:00 p.m.</p>	<p><b>Adjournment of 2017 FAA APAC Dialogue</b></p>	<p><b>FAA (USA)</b> <b>Ms. Dorenda Baker</b> Director, Aircraft Certification Service</p>	<p>Ms. Baker will offer closing remarks for day 2, announce the location of the 2018 Dialogue, and formally adjourn the 2017 FAA APAC Dialogue.</p>
<p><b>Wednesday</b> 6:30 – 8:00 p.m.</p>	<p><b>Evening Reception For Authorities &amp; Industry – Location to be determined</b></p>	<p><b>Hosted by ACP, GAMA, and AIA</b></p>	<p>In preparation for Industry Day on Thursday, March 30, the event's sponsors and industry participants invite authorities to a welcome reception.</p>

# 2017 FAA Asia-Pacific (APAC) Bilateral Partners Dialogue & APAC Industry Day Meeting

March 29 – 30, 2017 | Long Beach, California, USA

## FAA APAC Industry Day - Schedule of Events

Wednesday, March 29, 2017

2:00pm - 5:00pm Industry Only Coordination Meeting  
6:30pm - 8:00pm Reception for Authorities & Industry

Thursday, March 30, 2017

8:00am - 9:00am Registration and Networking Breakfast  
9:00am - 5:00pm FAA APAC Industry Day Meeting

<b>Thursday March 30, 2017</b>				<b>APAC Partners Meeting Industry Day Location: Catalina</b>	
8:00 – 9:00 a.m.		Registration and Networking Breakfast			
<b>Thursday</b> 9:00 – 9:20 a.m.	<b>Welcome and Opening Remarks</b>	<b>Ms. Dorenda Baker</b> Director, Aircraft Certification Service	<b>Geoffrey Jackson</b> Executive Director, U.S.-China Aviation Cooperation Program (ACP)		
<b>Thursday</b> 9:20 – 9:30 a.m.	<b>Introduction of Participants</b>		<b>All – Moderated by Industry Rep.</b>		
<b>Thursday</b> 9:30 – 10:00 a.m.	<b>Authorities Report</b>	<b>FAA/CAAC /Other authorities (TBD)</b>	NOTE: Industry to identify priority topics/questions of interest from authority agenda to focus this briefing		
<b>Thursday</b> 10:00 -10:30 a.m.	<b>Evolving Business Models and Need for Flexibility</b>	<b>Speakers:</b>  <b>Mike Shih</b> Vice President, Strategy & Business Development, China, Textron Aviation – "The FAA Production Certificate Extension in China"  <b>TBD, authority</b>	The design, production and continuing operational safety of aviation products is supported throughout the life cycle by evolving business models in supplier relationships, company partnerships and joint ventures. Are we ready to support the future of aviation? Industry and authority perspectives on issues such as; <ul style="list-style-type: none"> <li>• Globalization of Design &amp; Production - Multi- national supplier compliance activities and authority approvals for type design and airworthiness certification</li> <li>• Split type design and production &amp; other licensing arrangements</li> <li>• Need for Flexibility in ICAO and State aviation safety system</li> </ul>		

10:30 – 11:00 a.m.	<b>Break</b>		
<p style="text-align: center;"><b>Thursday</b> 11:00 -12:30 a.m.</p>	<p><b>Validations Experiences and Opportunities for Authorities and Industry to Streamline Processes</b></p>	<p><b>Moderator: Rocky Zhang</b> Vice President of Government Affairs, Textron China</p> <p><b>Panelists:</b> <b>Jerry Bauer</b> Technical Expert on Type Certification and Validation, Boeing: "Multi- Authority Validations – Case study of Validation Principles and the MAX Experience"</p> <p><b>Shaun Johnson</b> Manager Aircraft Certification Unit, Civil Aviation Authority of New Zealand</p> <p><b>Chuck Wiplinger</b> President / COO, Wipaire Inc</p>	<p>International aviation cooperation among authorities enhances safety and economic trade by focusing airworthiness activities and limited government resources to facilitate timely and efficient exchange of aviation products and services in the global marketplace.</p> <ul style="list-style-type: none"> <li>• Validation experiences, best practices and opportunities for authorities and industry to streamline processes</li> <li>• Case study of validation principles and initiatives (i.e. risk based decision making, level of involvement, continuum of safety, etc.)</li> </ul>
12:30 – 1:30 p.m.	<b>Lunch Break - International I and II</b>		
<p style="text-align: center;"><b>Thursday</b> 1:30- 2:15 a.m.</p>	<p><b>Aircraft Airworthiness — A Collaborative Effort</b></p>	<p><b>Speakers:</b> <b>Zhuo Gang</b> Deputy Director of Quality and Airworthiness Safety Department, Commercial Aircraft Corporation of China (COMAC) – "Continuous Airworthiness Experiences In production"</p> <p><b>Boeing (speaker TBC)</b> "Age Restrictions in Aircraft Imports"</p> <p><b>Ryan Aggergaard</b> VP of Government and Industry Affairs, MARPA</p>	<p>The aviation system achieves significant safety through collaborative efforts of authorities and industry in establishing appropriate airworthiness and operational safety standards and robust compliance and safety management systems. Manufacturers ensure safety and airworthiness of aviation products throughout the product life cycle through initial airworthiness and continued operational safety activities.</p> <ul style="list-style-type: none"> <li>• Manufacturer continued operational safety programs and industry best practices</li> <li>• Operations airworthiness maintenance programs and industry best practices</li> <li>• Facilitating safety enhancements in the existing fleet</li> </ul>

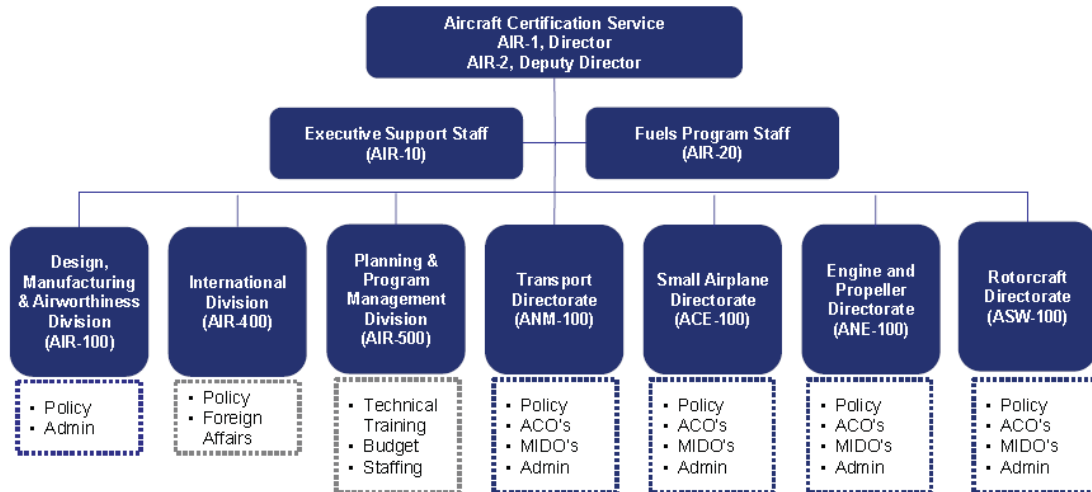
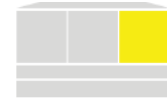
<p><b>Thursday</b> 2:15 – 3:00 p.m.</p>	<p><b>Aviation Industry Global Manufacturing – Establishing &amp; Maintaining Supply Base Relationships</b></p>	<p><b>Speaker:</b> TBD, Aircraft OEM</p>	<p>Significant interest by many APAC authorities and their respective industry in opportunities to grow manufacturing supplier engagement in aviation products</p> <ul style="list-style-type: none"> <li>• Overview of global supply base for aviation products</li> <li>• Technical and business considerations/decisions for supplier relationships</li> <li>• Key elements and processes for supplier relationships <ul style="list-style-type: none"> <li>▪ Identification, assessment &amp; selection</li> <li>▪ Business arrangements (legal, financial, risk, etc.)</li> <li>▪ Oversight, maintenance and growth</li> </ul> </li> </ul>
<p>3:00 – 3:30 p.m. <b>Break</b></p>			
<p><b>Thursday</b> 3:30 – 4:30 p.m.</p>	<p><b>How Can Industry Best work with the APAC Members? – Industry/Authority dialogue and Q&amp;A</b></p>	<p><b>Moderator: Daniel Nucuta</b> Honeywell <b>Panelists:</b> <b>Tom Dodd</b> Director, Regulatory Administration Production Programs, Boeing "Collaborative Strategies – Maximizing Risk Based Approach To Streamline Validation Programs" <b>Robert Glasscock</b> Vice President Gulfstream Lead ODA Administrator <b>John Whalen</b> HS ODA Administrator &amp; UTAS FAA Liaison (TBC) <b>TBD, manufacturer APAC</b> <b>TBD, FAA</b> <b>TBD, APAC Authority</b></p>	<p>This panel will draw from the day's sessions and facilitate discussion on key issues/challenges, opportunities and proposed initiatives for how industry and APAC members can best work together to facilitate more effective and efficient exchange of aviation products and services.</p> <ul style="list-style-type: none"> <li>• Industry &amp; Authority best practices (i.e. Performance metrics: ODA scorecard experience; FAA &amp; Industry Guide to Product Certification, Safety Management Systems, etc.)</li> <li>• Q&amp;A - This session will proactively engage audience stakeholders and request participation in the dialogue and to ask questions of the panel – participants will be invited to submit questions in advance during breaks/lunch</li> </ul>
<p><b>Thursday</b> 4:30 – 4:45 p.m.</p>	<p><b>Closing Remarks</b></p>	<p><b>Ms. Dorenda Baker</b> Director, Aircraft Certification Service</p>	<p>Ms. Baker will offer closing remarks, and formally adjourn the 2017 FAA APAC Industry Day.</p>

### 三、會議重點摘要

1. 會議開始由FAA適航審定司 (Director, Aircraft Certification Service) 司長Ms. Dorenda Baker介紹適航審定司組織現況及未來變動，依FAA規劃於2017年將進行組織重整。預計將現有的航空器審定辦公室 (ACOs) 及製造業辦公室 (MIDOs)，由地理區域劃分的方式，變更為任務及功能性導向，現行及未來組織規劃簡圖如下。

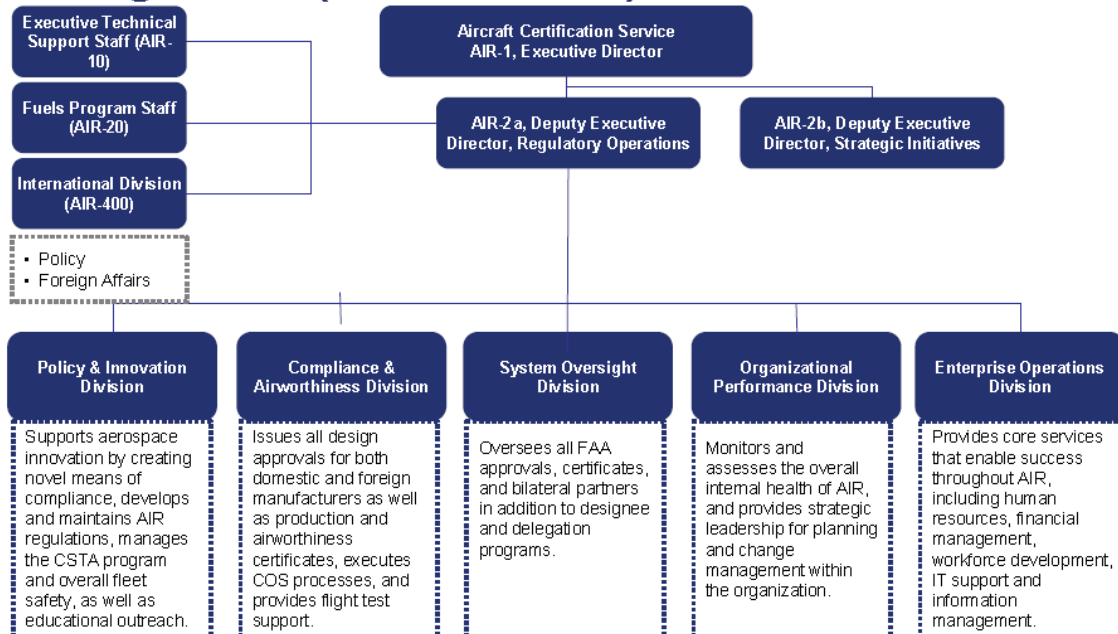
現行組織圖：

## Improve Our Organization Current State



未來組織圖：

## Improve our Organization Realignment (Interim State)

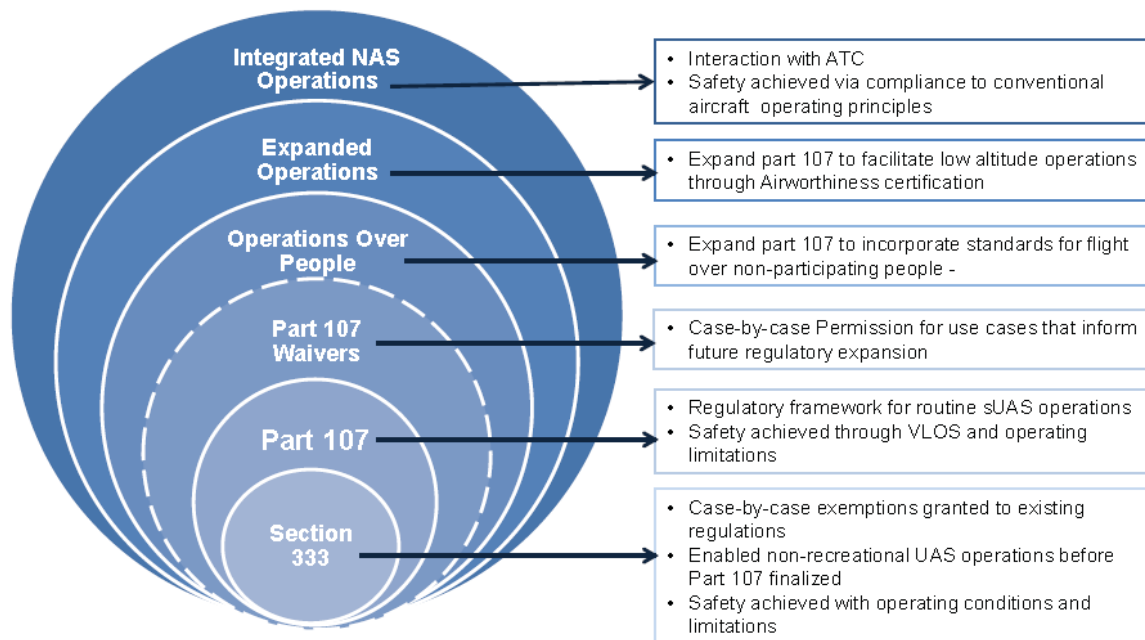


2. 對於無人載具（UAS）的管理，美國FAA的優先策略考量為：

- (1) 確保無人載具可於美國空域中安全運作。
- (2) 創造一個可納入最新科技的空域環境。
- (3) 經由國際間的合作，以建立全球無人載具標準作業。

FAA無人載具（UAS）的法規架構如下：

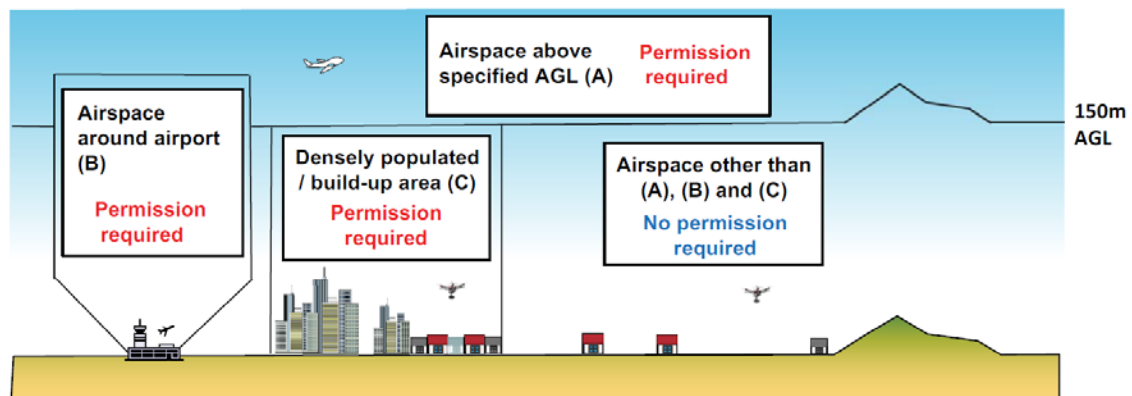
## Building the Regulatory Framework



目前FAA對無人載具（UAS）的操作性能要求標準為，操作場地必須先經評估，不會造成附近人員或財產的風險、必須在目視範圍內操作、必須能排除現場對操作人可能之作業干擾、必須提出無人載具失聯時之作業程序。FAA現有的資料顯示，依據美國聯邦航空法FAR 107提出的無人載具作業法規豁免申請，前五大需求項目，分別為：夜間操作、飛越人群、目視範圍外、高度高於400英呎、觀察者（Observers）的運用等項。FAA有關UAS的訊息可查閱以下網址

<https://www.faa.gov/uas/>

3. 日本國土交通省民用航空局代表Mr. Atsuto Kajiwara先生，亦於BASA年會中，提報日本當局對無人載具（UAS）的管理及法規現況。例如以往僅禁止在機場周遭施放無人載具，但於2015年4月22日，發生無人載具載運輻射物質，降落於安倍晉三首相官邸之事件。日本國土交通省民用航空局遂於2015年9月11日完成立法，2015年12月10日生效，以遏止前述無人載具違法飛航行為。
4. 目前日本國土交通省民用航空局，將重量少於200公克之無人載具（包含載具使用之電池），排除於無人載具法規外。但如飛行高度高於距地表150公尺高度以上、高於各機場障礙物限制面以上、飛越由日本內政及通訊部所核定之人口密集區DID（Densely Inhabited Districts）等情形時，均須提出特別申請。



5. 除非經日本國土交通省核准，無人載具應於日間、目視範圍內、任何時間保持與人員、財產至少30公尺的安全距離、禁止飛越集會人群上空、禁止載運危險物質或爆裂物、也禁止投放任何物體。






6. UAS除外條款為，如無人載具用於搜救或經政府官方核准之緊急任務，則無需提出前述申請。其他違反者，將可處以最高50萬日元（約新臺幣15萬6仟元）之罰款。無人載具的安全標準可分為以下三項：無人載具的規格及性能、操作者的操作能力及知識、飛航作業的整體系統及程序。
7. 日本國土交通省制定了有關無人載具的法規及申請程序，並不以商業運行或休閒活動來區分，例如空中攝影（Aerial Shoot）、空中導覽（Aerial Survey）、空中監控（Air Surveillance）、農業噴灑（Agrichemical-spraying）等作業。日本國土交通無人載具法規，可查閱以下網址<http://www.mlit.go.jp/en/koku/uas.html>
8. 日本國土交通省自UAS法規生效日起（2015年12月10日），截至一年期間（2016年12月9日）止，共收到12,300份申請，並核准其中的10,120份申請。
9. 日本國土交通省亦鼓勵UAS相關的安全報告，截至2016年12月31日止，共計收到如以下範例的50份飛行安全報告。

Date	Location	UA	Overview
2016.1.31	Chiba	Radio-controlled Model Airplane	[Approach to the manned-aircrafts] The UA approached within 15 - 25 meters forward left of an emergency medical helicopter.
2016.2.9	Saitama	Radio-controlled Model Airplane (estimate)	[Approach to the manned-aircrafts] The UA passed through within 5 - 10 meters below the helicopter operated by student pilot.
2016.3.25	Tokyo	Multi-copter (estimate)	[Approach to the manned-aircrafts] The UA passed through about 10 meters below a helicopter.
2016.4.21	Kagoshima	Multi-copter Span: 60 cm Weight: 3.4 kg	[Broken of Ground Facilities] The UA was crashed on the roof of private residence, due to rapid rain and winds, resulting the broken of the roof.
2016.5.12	Osaka	Multi-copter Span: 50 x 40 cm Weight: 1.5 kg	[Broken of Ground Facilities] Uncontrolled UA was crashed on a private car, resulting scratch damages.
2016.7.28	Shimane	Multi-copter Span: 70 cm Weight: 2.3 kg	[Broken of Ground Facilities] Air-shooting UA was uncontrolled and crashed on private car, resulting scratch damages.
2016.8.9	Mie	Helicopter Span: 3.6 m Weight: 90 kg	[Broken of Ground Facilities] Agrichemical-spraying helicopter contacted to electric wires, resulting damage to the wires.
2017.1.18	Niigata	Multi-copter (estimate)	[Approach to the manned-aircrafts] The UA approached within 30 – 50 meter forward left of a SAR helicopter.


10. 另外日本國土交通省亦於2016年4月7日完成立法，在未經設施所有人同意前，禁止於「目標設施」週遭，施放無人載具。「目標設施」的定義為立法機關、首相官方住所、外國使節住所等。另外警方也可以對違規行為執行如破壞、捕捉等強制作為。



11. 日本出席代表另對其三菱噴射客機 MRJ (Mitsubishi Regional Jet) 現況報告。MRJ 客機是日本近 50 年來，除了 YS-11、MU-2、MU-30、FA-200、FA-300、BK-117、MH-2000 等小型機外，唯一的中型噴射客機設計及生產計畫。該型機於 2015 年 11 月 11 日首次試飛，首期共計將生產 5 架測試機，將分別於美國 Washington 州 Moses Lake 及日本執行飛航及地面測試。


  
 FAA Asia-Pacific Bilateral Partners Dialogue 2017

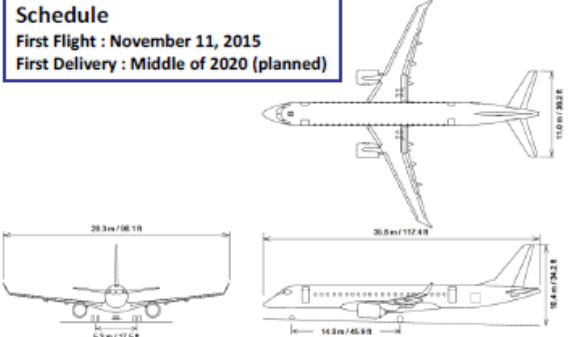
## Overview of Mitsubishi Regional Jet (MRJ90)



© MITAC

- First Large Jet Airplane for Civil Aviation in Japan (70 - 90 Seats)
- Demand of targeted Market in the next 2 decades is expected to be +5,000

**Schedule**  
 First Flight : November 11, 2015  
 First Delivery : Middle of 2020 (planned)



**PRINCIPAL CHARACTERISTICS\***

MTOM	: 42,800kg
TKOF Length	: 1,740m
Max Speed	: 0.78 Mach (about 830 km/h)
LDG Length	: 1,480m
Max Range	: 3,770km
Max CRZ ALT	: FL390
Seat Capacity	: 88 (MRJ90)

\* It's possible to change

**SALES**

All Nippon Airways		25
Trans States Holdings		100
SkyWest, Inc.		200
Air Mandalay		10
Eastern Air Lines Group, Inc.		40
Japan Airlines		32
Aerolease Aviation		20

**Contracts (Fixed + Option) : 427\***

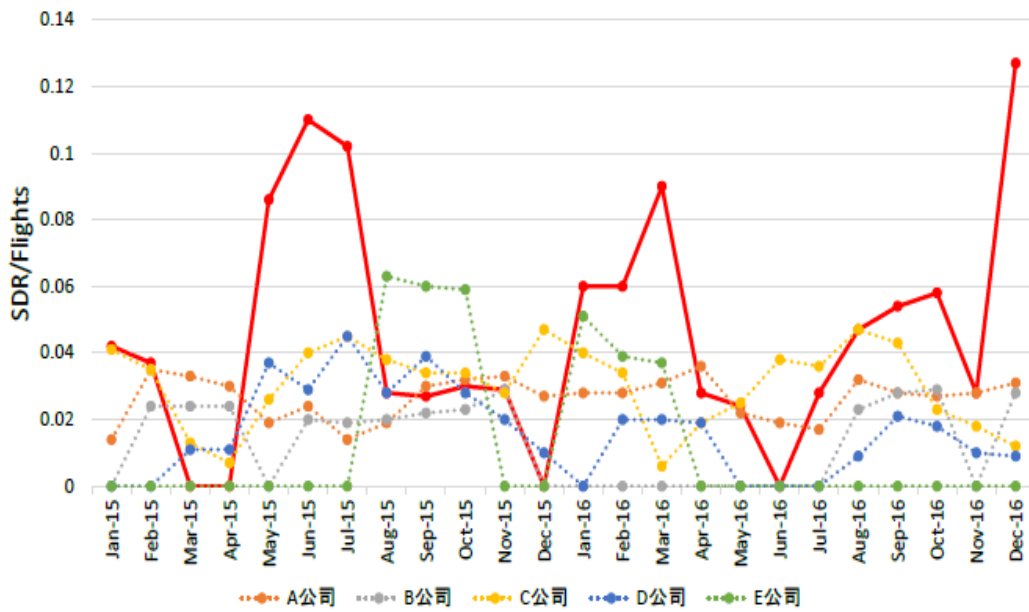
\* Rockton AB (Swe) has already concluded a definitive agreement about the contract of 20 MRJs based on a Letter of Intent. 2

12. 我國出席代表民用航空局飛航標準組林組長俊良，亦於會中代表我國，針對老舊飛機進口限制 (Import Restrictions on Aging Aircraft)，對全體 BASA 會員國，提出專案報告及說明。



### Airlines Fleets SDR Event Rate

Red – Aging Fleet



13. 印尼民航局代表亦對其設計及生產製造之 N219 型機提出報告。

## PRODUCT FEATURES

**N219 is a new generation of STOL aircraft to accommodate 19 passengers, most suitable for feeder line and/or pioneer routes. It is designed to comply with CASR 23 commuter category.**



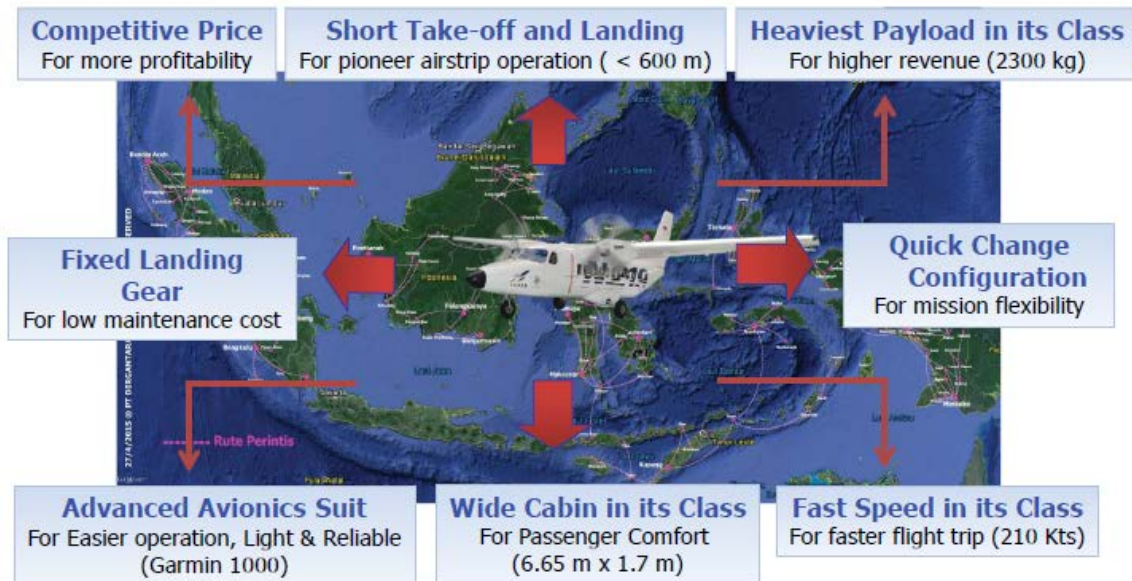
- ❖ Certification basis CASR 23, Commuter Category
- ❖ Twin Engine with 850 SHP each
- ❖ Fixed Landing Gear
- ❖ High Wing Configuration
- ❖ Un-pressurized Cabin
- ❖ Advanced and modern Avionics suite
- ❖ Short Take-off and Landing (STOL) operations
- ❖ Take-off and Landing on unpaved runway capabilities
- ❖ High and hot airfield capability
- ❖ Multi hop capability and quick change configuration

2017 FAA Asia-Pacific (APAC) Bilateral Partners Dialogue  
Long Beach, 27-30 March, 2015



REPUBLIC OF INDONESIA  
Ministry of Transportation  
Directorate General of Civil Aviation

## ADVANTAGES OF N219



2017 FAA Asia-Pacific (APAC) Bilateral Partners Dialogue  
Long Beach, 27-30 March, 2015



REPUBLIC OF INDONESIA  
Ministry of Transportation  
Directorate General of Civil Aviation

14. 中國大陸民航局亦對其設計及生產製造之 Y12F 型機提出報告。



## Y12F Airplane

### Y12F (Hafei Aviation Industry Group)

Compare with Y12 series:

- The wing is modified as the structure of cantilever beam and the original tilted strut is cancelled.
- The airframe is longer and wider;
- The landing gear is retractable;
- PT6A—65B turboprop engine is used;
- Low-noise five blades propeller is used;
- Integrated avionic equipment is used.



中国民用航空沈阳航空器适航审定中心  
Shenyang Aircraft Airworthiness Certification Center of CAAC

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## Y12F Airplane

### Y12F --Commuter Category

High wings

Single Vertical Fin

Lower horizontal stabilizer

Semi-monocoque structure

Engine: 2 PT6A-65B

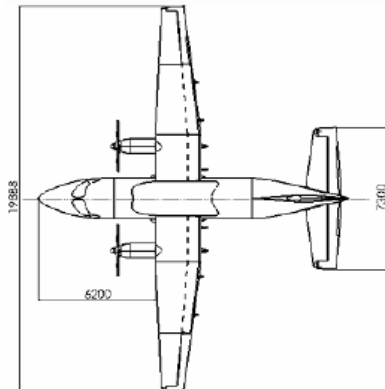
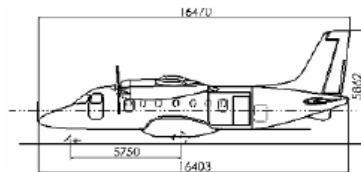
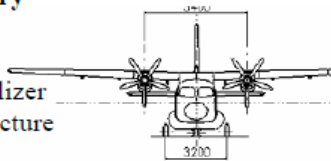
Propeller: HC-B5MP-3D/M10876ANSK-low noise

5-bladed metal propeller

Retractable Landing gear.

Passenger seat:19

MTOW:8400kg



中国民用航空沈阳航空器适航审定中心  
Shenyang Aircraft Airworthiness Certification Center of CAAC

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15. FAA 適航審定司運輸類飛機處主管 Mr. Jeff Duven 會中表示，依據美國波音公司對 2016-2035 年的 20 年航空市場預測，亞太地區是全球新飛機及產業需求最殷切地區。預計將需 15,000 架新機，航班每年成長率將高於 6%，預計將有多達 28 萬 8000 人的機務維修人力新需求。FAA 認為各國主管機關專業人力增加，都很難適切配合產業的快速增長需求。另外從數據上顯示亞太地區的航空業者，對持續運行安全 COS (Continued Operational Safety) 議題的回報率，出現低於全球其他地區之情形。

## COS Reporting Rate by Region

Region	COS Rate <sup>1</sup>	
CIS	3.33	
AFRICA	3.24	<sup>1</sup> Event reports per 10,000 departures
USA & CANADA	3.10	
OCEANIA	3.04	
LATIN AMERICA & CARIBBEAN	2.40	
EUROPE	2.13	
MIDDLE EAST	2.01	
<b>ASIA</b>	<b>1.32</b>	

Aggregate reporting rates for Asian operators are significantly lower than those in other world regions.

## 肆、心得與建議

- 一、在我國尚未能加入國際民航組織（ICAO）成為正式會員前，適切藉由美國聯邦航空總署與亞太區域航空安全雙邊協議國年會（BASA）等各種國際正式會議，維持與各國政府民航主管機關良性互動，應為現階段我國民航作業與國際接軌的最佳途徑。
- 二、無人載具之操作及管理是各國現在及未來法規制定之重點，雖然國際民航組織已發佈指引文件讓各國依循，我國亦宜參考先進國家之經驗，由目前已成立之工作小組，適切研議制定我國法規
- 三、因應亞太地區各國航空工業蓬勃發展，各國民航主關機關均出現專業人員及資源缺乏情形，各國無不努力投入更多資源，以期在龐大的民航市場上，佔有一定的地位。我國航空市場內需量不大，現階段也不具備大型客機研發能力。因此，如何透過 BASA 平台，增加我國製造業廠商與其他國航空業合作的商機，應值得我方努力。
- 五、FAA 規劃下次會議，將於 2018 年於新加坡舉行，為提昇我國民航發展之國際能見度，宜寬裕本案預算，增加與會人數，與各國建立民航專業聯絡管道，以利未來相關適航業務之溝通協調。