Singapore Hosts Third EASA International Cooperation Forum

Initiative fosters international collaborative efforts on aviation safety

Following two successful runs in 2008 and 2010, the Third European Aviation Safety Agency (EASA) International Cooperation Initiative fosters international collaborative efforts on aviation safety.

Forum was held on 15–17 November 2011 at the Singapore Aviation Academy (SAA), making it the first in the Asia-Pacific region.

Hosted by the Civil Aviation Authority of Singapore (CAAS), the Forum is part of the Singapore Aviation Centennial Celebrations (SACC) 2011.
Mr Patrick Goudou (left), Executive Director of EASA, presented a commemorative plaque to Mr Yap Ong Heng (right), Director-General, CAAS, to mark the meaningful partnership between the Agency and CAAS.

and served to rally States and aviation organisations which apply the European aviation safety standards in their national or regional jurisdictions. The successful Forum brought together some 100 delegates representing over 50 civil aviation regulatory authorities worldwide.

In his welcome remarks, Mr Yap Ong Heng, Director-General, CAAS, referred to EASA as “a key player in advancing international safety standards”, and commended the Forum as “a notable example of the excellent work that EASA does in engaging various regions to promote aviation safety”.

The ensuing speech by Mr Patrick Goudou, Executive Director of EASA, clearly attested to Mr Yap’s sentiments. Said Mr Goudou, “This Forum has been set up in order to streamline our cooperation and support for the increasing number of countries making use of EASA regulation. It is not just about how EASA can cooperate with each of the organisations, it is about how we can work together as a community.”

The three-day Forum provided updates on key developments in aviation safety in Europe as well as safety initiatives in different regions of the world. The eventful programme also included presentations by experts from various civil aviation authorities. Some topics covered were ‘Implementation of Design Organisation Approvals (DOA) Concept in Indonesia’ by Mr Alphada Satrinsa, DOA Specialist, Directorate General of Civil Aviation, Indonesia; ‘Regional Initiative in Central America’ by Mr Mario Chacón, Deputy Director of the American Aviation Safety Agency; and ‘Training in the Dynamic Aviation Landscape’ by Mr Kang Huei Wang, Head (School of Aviation Safety & Security), SAA.

Also featured was a series of thematic workshops aimed at providing opportunities for constructive dialogue on four specific areas: Regional Safety Oversight Organisations (RSOO), technical cooperation in the form of organisational support, meeting the International Civil Aviation Organization’s (ICAO) requirements for the implementation of State Safety Programmes, and the surveillance of foreign operators.

Adding yet another interesting aspect to the Forum was the presentation and guided site visit to the Singapore Aero Engine Services Limited (SAESL) – a maintenance, repair and overhaul organisation, for a glimpse into Singapore’s aerospace industry.

“The Forum is an excellent opportunity to meet professionals from all over the world. We had fruitful discussions on issues that are of mutual concern and shared ways to solve common problems,” enthused Ms Tamara Archuadze from the Georgian Civil Aviation Agency.

Ms Maria N Rueda of the UK Civil Aviation Authority shared the same sentiments, saying, “It is a very good event to promote safety and share knowledge between national aviation authorities.”

Work aside, friendships beyond business were forged when the delegates were treated to a Welcome Reception at the breathtaking Marina at Keppel Bay – the crown jewel in Singapore’s southern shores with 68 berths which can accommodate superyachts of up to 260 feet.
Global Safety Trends and Initiatives

In an industry where safety is of paramount concern, constant improvements and innovative measures are keys to preventing undesirable events. Mr William Voss, President and Chief Executive Officer of the Flight Safety Foundation (FSF), shares the Foundation’s way forward for a safe and efficient aviation environment.

IT IS EASY to look at the accident data over the past year and be satisfied with the safety accomplishments of the aviation industry. A review of the number of accidents and fatalities would show positive trends in the data. Worldwide, there were 14 hull loss accidents in commercial aviation (including all scheduled and non-scheduled operations), eight of which were of western-built aircraft. Eight of these accidents were during the approach and landing phase, two were major runway excursions and four were controlled flight into terrain. However, aviation safety professionals should not be satisfied with a low number of hull loss accidents. Even one hull loss or one life lost is one too many.

By categorising major accidents, we can use several years of data to identify trends, both good and bad. These trends help determine the areas of priority for safety professionals. Over the past few years, the FSF has focused on several areas and is working to develop initiatives to address these challenges.

Safe Landing Guidelines/Approach and Landing Accident Reduction

The approach and landing phase of flight is the most challenging. More than 15 years ago, FSF led a team of experts to develop the Approach and Landing Accident Reduction (ALAR) toolkit. FSF has revised this toolkit and added a section on runway safety several years ago. The toolkit now includes safe landing guidelines that FSF recommends to be used just as described—a guideline, rather than a checklist.

Go-arounds

FSF recently started work on go-arounds, a project initially conceived by its European Advisory Committee. Go-arounds should be considered a normal part of operations. Studies have demonstrated, and statistics have confirmed, that a lack of go-arounds is the leading risk factor in approach and landing accidents and the primary cause of landing runway excursions.

More disturbing is the magnitude of the go-around decision-making statistics—studies show that only 1.4 to 3 percent of unstable approaches lead to a go-around.

Go-arounds are not without risk. Furthermore, when a go-around occurs, it is often poorly performed. In fact, although runway excursion accident numbers are much higher than go-around accidents, it is the go-around accidents that are, percentage-wise, more fatal.

Go-around incidents can be of various categories, including excessive pitch attitude that could lead to loss of control, prolonged nose-down input resulting in controlled flight towards terrain or failure to positively engage automation that could end with controlled flight into terrain. Through a multi-step process, FSF plans to address these issues in go-arounds to mitigate the risk.

Monitoring versus Watching

At a recent seminar in Dubai, discussions were held on the future of training in the aviation industry. The meeting was dominated by discussions of “the Air France 447 problem”. Of course, the challenge of automation dependency and its impact on training have been widely talked about for years, but the Airbus A330 crash over the South Atlantic two years ago had moved people to act.

The renewed emphasis on manual flying skills is to be applauded. Studies have shown that some crew lack confidence in their ability to fly the aircraft. When the airplane starts to head the wrong way, the crew often go “heads-down” to troubleshoot the automation instead of “punching it off” and pointing the aircraft in the right direction.

Only good things can come from a good dose of manual flying, but it seems that a lot more has to be done to bring our training in line with the new realities of the job. Pilots are still trained as if flying the airplane is the primary job. However when recent accidents were examined, it seems that today’s vital skill is the ability to recognise early when something is not right. When a crew figures out what had gone wrong, it does not usually take much in the way of refined skills to fix it. The life-or-death moment seems to be in the detection of the problem, not the recovery.

This brings us to the subject of monitoring versus watching. To monitor something, a person has to have expectations of what should be happening, and compare what he or she is seeing against these expectations. “Expectation” may be an insufficiently developed part of the puzzle; years of relying on automated systems have seemed to dull our sense of expectation.

This has to be the central point to keep in mind when training programmes are reviewed over the next few years. It is crucial to continuously reinforce among pilots a sense of what is normal by establishing the correct

A go-around is an aborted landing of an aircraft that is on final approach.
expectation, so they would be able to notice quickly when things are not right. Current procedures erode that capability, and it is time to reverse that.

Coaching

Where professionalism in the aviation industry is concerned, the discussion is often centred on at-risk behaviour rather than recklessness or negligence. There is a lack of intent in at-risk behaviour that is present in the others. It is about taking shortcuts and it is human nature. This is not something to be taken lightly in an industry that is dependent on standard operating procedures, where pushing limits could get people killed. People need to be held accountable, but numerous isolated disciplinary actions would not solve the underlying issue.

The suggested solution is coaching. For someone just starting out in the industry, a tap on the shoulder from a respected co-worker with a pointed comment about how things should be done is a powerful tool. However, there seems to be a breakdown in this system. These “coaches” have become disenfranchised because of cutbacks and labour disputes. Some airlines have been built on a base of wet leases and expat pilots on short-term contracts; others have lost their best captains to better offers from richer airlines. In all of those cases, the “coaches” disappear or lose interest.

There is a need to focus on the next generation of “coaches” and encourage their involvement. EVA Air for example, has the novel practice of using their best young first officers as line operations safety audit observers, trained to critically observe cockpit operations. Imagine how sharp these first officers would be in five years’ time. Now imagine novel ideas such as this expanding to other areas in aviation.

Conclusion

It has been a fantastic year for western-built commercial jets in terms of safety. However, it has been a horrifically bad year for those using eastern-built aircraft, i.e. those operating in the Russian Federation and surrounding areas. Turbo props and business jets are still doing their jobs, but it is frustrating to note that, even in this day and age, turbo prop jets are still being flown into the ground due to a lack of Terrain Awareness and Warning System (TAWS). There are some other real issues and challenges out there that need to be addressed, such as whether pilots ever get to manually fly the aircraft and how the industry can restructure the job. The industry also has to start looking at developing coaches and mentoring professionals. Without these in place, we would not have a system.

This article was adapted from the keynote address delivered by Mr William Voss at the Aviation Safety Forum organised by CAAS on 12 January 2012.

About the Author

Mr William Voss
President and Chief Executive Officer
Flight Safety Foundation

Mr William Voss became President and Chief Executive Officer of the Flight Safety Foundation on 1 October 2006. Before that, he was Director of the Air Navigation Bureau at the ICAO from January 2004. During his time with ICAO, he oversaw the development of major international safety initiatives and gained a reputation for working collaboratively in the international arena.

Prior to joining ICAO, Mr Voss spent 23 years at the Federal Aviation Administration (FAA), US, where he focused on air traffic management and control. He rose through the ranks to become Director of Air Traffic Systems Development, a position he held from 1999 to 2001. Before leaving the FAA, Mr Voss oversaw the development and implementation of the FAA’s major systems components that deliver integrated terminal air traffic control capabilities, as well as facility design, modernisation and surveillance.

At ICAO and the FAA, Mr Voss was responsible for the coordination of multiple programmes that required managing staffs numbering in the hundreds and multi-million-dollar budgets. He has developed global safety plans and led reform plans to expedite the process in which critical needs are identified and addressed.
Aviation Enforcement Trends Across the Globe

Having acted for various airports, regulators and airlines, Mr Gerard Forlin, Barrister and Queen’s Counsel, shared his knowledge in the legal field through a talk on ‘Aviation: International Enforcement Trends – Where Are We Now?’ on 9 December 2011.

Well-received by some 60 attendees, the talk focused on how jurisdictions are increasingly using the criminal courts against airlines, airports and individual aviation personnel in the aftermath of aviation incidents. Particularly, several countries and examples such as Concorde, Linate and the mid-air collision over Germany in 2002 were cited.

To cater to a wide audience base, the talk also addressed the global situation, corporate governance, individual enforcement and specific legal issues involving airports.

Commending the talk, Mr Keith Ng, Senior Manager (Compliance), Singapore Airlines, enthused, “The perspectives shared by the speaker were relevant and useful in helping me gain a better understanding of the developments out there.”

Learning from a Potential Tragedy

On 4 November 2010, a Qantas flight bound for Sydney, encountered extensive damages when one of its engines exploded minutes after take-off from Singapore Changi Airport. Owing to the quick thinking of the experienced Captain and the calm and efficient crew, the aircraft was safely manoeuvred back for landing at Changi Airport, along with the 469 passengers onboard.

To learn from this incident, over 200 aviation professionals ranging from air traffic controllers to engineers and pilots, attended the ‘Special Presentation by Capt Richard de Crespigny on the QF32 Incident’ on 15 February 2012.

Echoing the same positive sentiments, Mr Imran Bin Jamaludin, Academic Staff, School of Engineering, Republic Polytechnic, commented that it “has brought new perspectives on legislation in the aviation industry and linked up possible trends occurring in other industries that might also happen in the aviation industry”.

Through Capt de Crespigny’s engaging presentation, the audience got a first-hand account of how the incident unfolded. The Captain also shared useful skills, such as passenger debriefing and the importance of open disclosure, in handling such an unprecedented event.

Reinforcing the importance of knowledge, training, experience and teamwork, Capt de Crespigny highlighted the vital role that the air traffic controllers and airport emergency services unit at Changi Airport had played in averting a potential disaster.

Mr Chung Sai Man, ATC trainee, CAAS, found the presentation very useful. He said, “It was informative and helped us to understand how ground units can work together with pilots and their crew to restore safety when an emergency strikes.”

The presentation was also highly appraised by fellow pilots, including Mr Alex Assimakopoulos, First Officer, Singapore Airlines Cargo, who quipped that the two-hour session passed so quickly as he was “completely drawn into the interesting presentation”. He said, “It enhanced my safety awareness by making me think about possible scenarios that I might encounter.”
Annual Seminar to Tackle Global Aviation Safety Challenges

HOSTED BY CAAS in collaboration with the Flight Safety Foundation (FSF), the 64th International Air Safety Seminar (IASS) was held on 1–3 November 2011 at the Mandarin Orchard Singapore. Opened by Mr Lui Tuck Yew, Singapore’s Minister for Transport and Second Minister for Foreign Affairs, and Executive Members of FSF, the Seminar saw an attendance of over 300 aviation experts and professionals.

“The Flight Safety Foundation has an admirable history of championing aviation safety, and I am happy to see such a convergence of aviation safety leaders and professionals from around the world… Together with the industry, Singapore is committed to enhancing flight safety, and we stand shoulder to shoulder with those around the world working to advance it,” affirmed Minister Lui in his opening address.

The three-day Seminar featured papers and discussions that examined critical aviation safety challenges such as fatigue risk management and pilot training. As part of the programme highlights, Captain Richard de Crespigny from Qantas Airways delivered a keynote address that underscored the invaluable lessons learnt from the Qantas flight QF32 incident in November 2010.

The Leaders Forum hosted by Mr William Voss, President and Chief Executive Officer of FSF, facilitated the exchange of ideas on safety issues among senior management of aviation authorities and airlines. The opportunity for fruitful sharing was extended to the exhibition where organisations, including SAA, offered insights into their area of work and the roles they play in contributing to aviation safety.

Preceding the annual Seminar was the FSF Board of Governors Meeting, held at SAA on 31 October 2011. Joining the Board members for the working lunch were Mr Yap Ong Heng, Director-General of CAAS, and Mr Tay Tiang Guan, Deputy Director-General of CAAS. Mr Tay presented an informative talk on ‘Air Transport Development and Aviation Safety in ASEAN’. Earlier that week, Mr Tay was also elected to join the FSF Board of Governors for a three-year term.

Making the most of their time in Singapore, the FSF members and other delegates were brought on a city tour to popular tourist destinations in Singapore such as ‘Arab Street’ and ‘Singapore Flyer’, ending the programme on a memorable note.

On-site Training a Success in Myanmar

IN RESPONSE TO a request by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), SAA conducted an on-site training workshop in Yangon, Myanmar, on 11–12 October 2011. Supported by the Myanmar Ministry of Transport, Myanmar International Freight Forwarders Association and Myanmar Maritime University, the Workshop on Transport of Dangerous Cargo by Air engaged over 40 participants from the freight forwarding and transport industry, and hosted 10 observers from the Myanmar Ministry of Transport.

Tailored to meet the needs of participants from Myanmar, the two-day Workshop focused on various topics, including classification and identification of dangerous goods, handling and storage requirements, as well as emergency response procedures.

Sharing from his experiences and using presentations, videos and pictorial examples, the Workshop conducted by Mr Vincent Koh, Aviation Safety Inspector (Dangerous Goods), Airworthiness/Flight Operations Division, CAAS, was well received by the participants. Representatives of UNESCAP, Mr Li Yuwei and Dr Wang Tengfei, expressed their satisfaction over the objectives, content and relevance of the Workshop.

Other participants such as Ms Thit Thit Htwe Su, Deputy General Manager (Marketing), Gold Shipping Agency Services Limited also commended the Workshop. “Before this training, we did not realise the importance of proper declaration of dangerous goods. We had always filed it as ‘shipper’s data’, but now we have the adequate knowledge to handle such cargo,” she said.

Reinforcing the importance of the Workshop, Dr Khin Lin, Tutor at Myanmar Maritime University affirmed, “The course is not only important and useful to us participants, but also to the advancement of our country. The knowledge that I have gained can be passed on to my counterparts from the university and similar organisations.”

(From left to right) Mr Lui Tuck Yew, Singapore’s Minister for Transport and Second Minister for Foreign Affairs; Mr William Voss, President and Chief Executive Officer of FSF; and Mr Kevin Hiatt, Chief Operating Officer of FSF, at the opening of the 64th IASS.
Strengthening Aerodrome Safety through Improved Oversight

SAFETY OVERSIGHT PLAYS a significant role in the effective running and development of sound contingency plans for an aerodrome. Recognising this, civil aviation organisations and aerodrome operators across the world are investing in preparing personnel to undertake such responsibilities. To meet this global demand, SAA organised a Safety Oversight Inspectors (Aerodromes) course on 12–16 September 2011, which was attended by 18 participants from 11 countries.

The five-day course focused on the administration and implementation of aerodrome inspections programmes conducted through a balanced combination of theoretical and practical training. Relevant ICAO Standards and Recommended Practices were also covered to provide a better understanding of the safety oversight responsibilities within a State’s obligations.

The overall objective of helping States meet international requirements and keeping their respective safety oversight systems up-to-date was met, as evident from the feedback received from the participants.

Leadership and Management Seminar Addresses Security Challenges

The inaugural Seminar, held on 28–30 November 2011, saw an attendance that comprised Director-Generals and Chief Executive Officers from eight countries. “The launch of the Seminar is timely in light of the evolving security threats and developments in aviation security around the world. We all have a common goal in enhancing aviation security preparedness and capabilities through the sharing on AVSEC knowledge and expertise regionally and globally,” said Mr Yap Ong Heng, Director-General, CAAS, in his welcome address.

The Seminar was led by two key speakers, Mr Jim Marriott, Chief, Aviation Security Branch, ICAO; and Mr Bernard Lim, Director (International Relations and Security), Singapore’s Ministry of Transport, and Chairman of the ICAO AVSEC Panel, and supported by other industry experts and practising professionals. Round table discussions were included for participants to air their views and learn from each other’s experiences.

Site visits to Changi Airport and Certis CISCO Academy also lent a different dimension to the Seminar, providing participants with first-hand insights into Singapore’s aviation security practices. “The Seminar was indeed enriching. It met our organisation’s needs in terms of the aviation security strategy to be put in place,” commended Mr Richard Nyanguile Kasanza, Director General, Civil Aviation Authority of the Democratic Republic of Congo.

Mr Joseph Niel, Director, Civil Aviation Authority of Vanuatu, was equally pleased with the Seminar, saying, “The programme was well executed and very informative. There were a lot of ‘wow’ factors and the techniques learnt are applicable back home.”

Mr Max Evans, Aeronautical Services Officer, Civil Aviation Authority of New Zealand, expressed, “I received very good training on the ICAO oversight requirements. Now, I am more aware of what ICAO is attempting to achieve in terms of oversight responsibilities of each State.”

A site visit to Changi Airport and references made to the national civil aviation regulations practised by other countries facilitated understanding of the subject matter and further engaged the participants. Said Ms Yvonne Lim Yin Choo, Associate Engineer, Changi Airport Group, “The programme has given us a chance to learn how other countries work. This sharing of thoughts as well as activities such as case studies and group work have made the course much more interesting.”

Personnel involved in safety oversight management and inspection of aerodromes can look forward to the next run of the course on 10–14 September 2012.
Joining Forces to Enhance Safety Cooperation and Training

CAAS CONCLUDED COLLABORATIVE agreements with four partners in February this year, building on the common interest of enhancing safety cooperation and training the next generation of aviation professionals through SAA. A Memorandum of Understanding (MOU) was signed with an international organisation to enhance bilateral relations in the transport sector, while another three were signed with renowned institutes of higher learning for the joint development and delivery of specialised aviation-focused programmes.

Understanding Aeronautical Charts

RECOGNISING THAT THE safety of air navigation is highly dependent on the quality of aeronautical data, SAA introduced its inaugural Aeronautical Charts – Paper and Electronic course on 24 October–4 November 2011.

Hailing from nine different countries, 15 participants from the civil aviation authorities and service provider organisations were equipped with the knowledge and understanding of ICAO Standards and Recommended Practices related to quality assured aeronautical charts, both on paper and electronically. The two-week course also provided insights on pertinent areas including Aeronautical Information Services (AIS), Instrument Approach Chart, Electronic Aeronautical Chart Display and Geographic Information Systems.

Developed in line with competency-based training and assessment methodology, the course addressed relevant ICAO requirements for the design and provision of aeronautical charts, as specified in ICAO Annex 4 (Aeronautical Charts). User requirements for quality assured aeronautical, obstacle and terrain data in Annex 15 (AIS) were also covered. In addition, the curriculum was designed to align with the Academy’s ICAO PANS-OPS courses and the required coordination between cartographers and procedure design specialists.

Commending on the relevance of the training, Mr Sakurdeep Khusal Kuma, Aeronautical Information Officer, Department of Civil Aviation, Mauritius, said, “Working in the AIS, charting is an integral part of my work. I have definitely benefitted from this course.”

“The programme was very comprehensive, and has enhanced my knowledge on charting tremendously,” affirmed Mr Daniel Cheung, Air Traffic Flight Services Officer, Civil Aviation Department of Hong Kong.

A site visit to the CAAS AIS Office also allowed participants to exchange insights while touring the facilities.

The Aeronautical Charts – Paper and Electronic course continues its second run on 5–16 November 2012.
With Embry-Riddle Aeronautical University (ERAU), US

Following the successful launch of the Master of Business Administration in Aviation (MBAA) in Singapore, which has seen three intakes since 2011, ERAU sealed a second agreement with CAAS on 17 February 2012 to jointly conduct a Master of Aeronautical Science (MAS) programme at SAA.

Scheduled to commence in August 2012, the MAS programme specifically targets aviation and aerospace industry personnel seeking to broaden their knowledge in areas such as aeronautics and safety regimes.

With Lee Kuan Yew School of Public Policy (LKYSSP), National University of Singapore

Responding to the rising need for training in the field of aviation public policy, SAA and LKYSSP inked an MOU on 17 February 2012 for the launch of the Aviation Leaders Programme in Public Policy (ALPPP).

As LKYSSP’s first aviation-focused public policy programme, the ALPPP not only leverages on the School’s extensive expertise in public policy, but also taps SAA’s experience in conducting courses related to aviation management. It is designed to equip participants with skills and knowledge that are critical for today’s aviation leaders.

Biennial Summit Paves the Way Forward

MORE THAN 300 top-level officials from transport ministries, regulators, airports and airlines gathered for the third Singapore Airshow Aviation Leadership Summit (ALS) held on 12–13 February 2012. A joint initiative between CAAS, International Air Transport Association (IATA), Singapore’s Ministry of Transport and Experia Events, the Summit is a key platform for aviation leaders to deliberate on core challenges and opportunities to advance international civil aviation.

The Summit was aptly themed ‘Driving Change, Overcoming Challenges Together’. Mr Yap Ong Heng, Director-General, CAAS, shared, “This year’s theme is particularly pertinent, coming at a time when global aviation is facing a period of significant change and uncertainty which must be addressed through global collaboration. By bringing key global aviation leaders together for collective dialogue, we hope to shape new perspectives that can take the industry forward.”

Gracing the opening ceremony with their insightful and inspiring addresses were Mr Lui Tuck Yew, Singapore’s Minister for Transport and Second Minister for Foreign Affairs, Mr Roberto Kobeh González, President of the Council, ICAO, and Mr Tony Tyler, Director General and Chief Executive Officer, IATA. Dr Assad Kotaite, President Emeritus of the Council, ICAO, also gave a keynote dinner address.

The Summit featured three panel discussions, each led by distinguished aviation experts. Issues examined included sustainability of airlines, intergovernmental coordination on security, as well as how the industry can work together to realise the committed targets for mitigating climate change.

The partnership was sealed by Dr John R Wattret (left), Executive Vice President and Chairman of the ERAU Board of Directors, and Mr Yap Ong Heng (right).

The agreement marks the strengthening of a long-term strategic partnership between CAAS and ERAU to offer quality aviation and aerospace education with the aim to support the fast growing aviation industry in Singapore.

Please refer to page 13 for more information on the MAS programme.

The partnership was sealed by Dr John R Wattret (left), Executive Vice President and Chairman of the ERAU Board of Directors, and Mr Yap Ong Heng (right).

The inaugural two-week ALPPP will be delivered in Mandarin in the second quarter of 2012 to address the training needs of China’s burgeoning aviation sector. Subsequent runs in English can, upon request, be made available to those with a keen interest in understanding how public policy choices are made.
First CANSO IFSET Asia-Pacific Workshop Takes Off

A COLLABORATION BETWEEN ICAO and the Civil Air Navigation Services Organisation (CANSO), the ICAO Fuel Savings Estimation Tool (IFSET) was introduced to encourage States and air navigation service providers (ANSPs) to measure and report fuel savings from improvements in air traffic management (ATM) operations. In support of this initiative, CANSO organised the inaugural IFSET Workshop for the Asia-Pacific region on 1–2 December 2011 at SAA.

With some 30 representatives from 18 ANSPs and civil aviation organisations from across the region, the Workshop provided practical training on the use of the IFSET software and the opportunity for the sharing of valuable experiences as well as background information on the IFSET. Through open discussions and hands-on learning, participants also gained insights into ICAO’s requirements for using the tool and the importance of reporting environment benefits arising from operational improvements.

While CANSO estimates that the global ATM system is already about 92 to 94 percent fuel efficient, much more has to be done to achieve its target of 95 to 98 percent by 2050 because of air traffic growth and increasing congestion. Using non-airline specific data that is readily available, the IFSET is a simple software tool that will help States and ANSPs measure the benefits from operational improvements such as shortening or eliminating level segments on departure and arrival, shorter routes, cruising at optimum attitudes, and reduced taxi times.

Commented Mr Chiang Hai Eng, Director, Asia-Pacific Affairs, CANSO, “All of us in this business know that a lot of good work has been done to improve ATM efficiency. Unfortunately, we do not always communicate our successes and contributions to the environment. Hopefully, the IFSET will correct this as it enables us to measure and collectively showcase our ATM improvements in a consistent and globally endorsed way.”

Continuing its efforts, CANSO will be holding a second CANSO IFSET Workshop for the Asia-Pacific region in the Maldives on 1–3 May 2012.

Joint Seminar to Promote Border Security

JOINTLY ORGANISED BY ICAO and CAAS, the first Asia-Pacific ICAO Regional Seminar on Machine Readable Travel Documents (MRTDs), Biometrics and Border Security was held on 30 November–2 December 2011 at SAA. The Seminar addressed current and emerging ICAO MRTD specifications, identity management best practices and related border security issues with a focus on the Asia-Pacific region.

Over 130 participants – mainly professionals from civil aviation authorities, immigration authorities, homefront security agencies and MRTD suppliers – participated in the three-day Seminar.

Featuring a panel of international speakers, participants had the opportunity to learn from a myriad of different experiences, while sharing their own ideas and challenges. A select group of industry partners also brought with them an interesting showcase of products and services related to MRTDs, biometric identification, travel document security applications and border inspection systems. The Seminar also provided a platform for Singapore to showcase its leadership in the area of facilitation and MRTD development.

Complementing the programme was a site visit to Changi Airport Terminal 2, where participants witnessed first-hand Singapore’s enhanced-Immigration Automated Clearance System and Passenger Reconciliation System.

Mrs Liosi Isaac, Assistant Director (Enforcement), Papua New Guinea Immigration and Citizenship Service, pointed out, “Seminars such as this allow for the sharing of information, which is critical in helping industry players embrace technological change. More importantly, it helps to improve the efficiency of our work environment by enhancing the facilitation and control of human movement across borders.”
Legal Insights on Aviation Security

OVER 30 PARTICIPANTS from 10 countries responsible for the approval, implementation and enforcement of the National Civil Aviation Security Programme gathered at SAA on 16–20 January 2012 for the Legal Aspects of Aviation Security Seminar co-organised by ICAO Cooperative Aviation Security Programme Asia-Pacific (CASP-AP) and SAA. Participants included national aviation security inspectors and auditors who are involved in regulatory oversight as well as legal practitioners dealing with aviation security legislation.

The Seminar is an initiative under the ICAO CASP-AP – a cooperative regional programme set up under the auspices of ICAO aimed at enhancing the aviation capabilities of Member States.

“Legal aspects are an important part of the CASP-AP programme. An integral part of CASP-AP’s activities is the legal review of national legislation regarding aviation security and whether such legislation is adequate to support the adoption, implementation and enforcement of a National Civil Aviation Security Programme,” reiterated Dr Ludwig Weber, Air Law Expert, CASP-AP, who led the Seminar.

The five-day Seminar covered pertinent topics such as fundamental issues in aviation security (AVSEC), national implementation of international AVSEC conventions and national AVSEC regulations. Ms Tan Siew Huay, Director (Legal), CAAS, also gave a presentation on the ‘Beijing Convention and Protocol of 2010’ at the Seminar.

Complimenting on the coverage of the Seminar and the quality of the speakers, Ms Bealer Chow, Operations Officer, Civil Aviation Department, Hong Kong, put it aptly, “The excellent training provided me with a lot of background information about the significance of each area related to AVSEC conventions.”

Fostering International Collaboration on Air Traffic Management

AS PART OF wider efforts to foster knowledge and cooperation in the area of air traffic management (ATM), CAAS hosted the inaugural Joint Technical Workshop on the Future of ATM in conjunction with the European Commission (EC) and the Single European Sky ATM Research Joint Undertaking (SESAR JU).

Held on 6–7 October 2011 at SAA, the two-day Workshop was attended by some 40 civil aviation specialists and industry players from CAAS, the EC, the SESAR JU, Eurocontrol, Thales, Selex and Frequentis. Gracing the event were Mr Marc Ungeheuer, Ambassador of the European Union to Singapore, and Mr Soh Poh Theen, Assistant Director-General (Air Navigation Services), CAAS.

In tandem with Singapore’s efforts to be a frontrunner in adopting well-established ATM systems for the advancement of its civil aviation industry, the Workshop served as a platform to facilitate in-depth exchange of views on ATM developments, as well as a forum for discussion on potential synergistic collaboration between Europe and Singapore.

It also provided an opportunity for representatives of SESAR JU and CAAS to share experiences and expertise on ATM challenges and solutions, covering a wide range of relevant topics including ATM Collaboration in Europe, Terminal and Airport Operations, as well as Non-Avionics Communications, Navigation and Surveillance System. The Workshop concluded with a tour of the Singapore Air Traffic Control Centre to enhance participants’ understanding of the systems and initiatives adopted by Singapore to maintain safe and efficient air traffic movement.
**INTRODUCTION**

With its rapid growth, the Asia-Pacific region is now the world’s biggest aviation market and is expected to dominate one-third of the global aviation market. With this tremendous growth, SAA and INSEAD have jointly developed a unique executive development programme, poised to enable civil aviation leaders to become exceptional business leaders to operate in the challenging aviation environment.

**OBJECTIVES**

This programme provides civil aviation professionals with a broad cross-functional perspective to management in civil aviation. It also facilitates professionals who have been leaders in their areas of expertise to step up to a general management role in civil aviation. The effective three-week executive education programme will equip participants with the skills and knowledge they need for their role as a General Manager. Key leadership skills and general management competencies will be imparted in an aviation context, equipping trainees for leadership at the various general management levels.

**PROGRAMME DELIVERY**

Talks and sharing sessions comprising leading-edge academic content will be delivered by government and industry leaders. Besides examining case studies drawn on Singapore’s aviation experience, industry site visits to key aviation organisations and facilities will provide insights on topical challenges and developments.

**WHO SHOULD ATTEND**

Upper and senior management personnel prepared for senior general management level positions from the aviation sector such as civil aviation authorities, airport authorities/operators and other aviation related organisations.

**ABOUT INSEAD**

As one of the world’s leading international business school, INSEAD is well-placed to make an impact on your business. INSEAD is unique in having a three-campus structure — in Europe, Asia and Abu Dhabi. The campuses are equally diverse and have world-class faculty in residence. The Asia Campus in Singapore is situated in the greenery of the Buona Vista area, occupying a 2.8 hectare site with seven amphitheatres with a total capacity of 500, and an 85-room residence.

For more information on this programme, please visit [www.saa.com.sg/ALPAM](http://www.saa.com.sg/ALPAM).

**KEY BENEFITS**

- Effective decision-making at a general management level and enhanced leadership skills, for increased confidence and managerial impact;
- Developing a keen understanding of how to “manage for value” in the civil aviation context;
- Integrating disciplines and concepts needed to master as a General Manager; and
- Networking and benchmarking with an international class of participants from the civil aviation industry.

**PROGRAMME CONTENT**

- **Leading the Business**
  Whether running an organisation for profit or for the collective needs of society, it must essentially perform three things well. The organisation must have a value proposition, means to deliver this value proposition to its customers and/or stakeholders, and capture enough value to be sustainable.
  - Value Proposition
  - Value Delivery
  - Value Capture
  - Value Innovation and Strategy

- **Leading Others**
  The toughest part of managing the progression from functional to general management is letting go of the idea that one has all the answers. Delegation, leadership, motivation, prioritisation and visioning are much more important skills needed by the General Manager. This programme is designed specifically to address these skills, in leading others more effectively to achieve a broader set of organisational goals.
  - The Building Blocks of Leadership
  - Negotiation and Decision-making
  - Leadership Communication

- **Leading Yourself**
  Leading others is only possible if an individual truly understands his/her own management style, strengths and weaknesses. Within a unique group of participants from other cultures, industries and backgrounds, a different and clearer view of oneself will be examined and learnt.
  - Personal Leadership Development Plans
  - Integrating Knowledge, Skills and Action
  - Team Business Competition

**Talks and sharing sessions will be conducted by government and industry leaders to provide insights on Singapore’s thought leadership in aviation and topical management issues.**
INTRODUCTION
In the rapidly changing world of aviation and aerospace, industry professionals must do more than simply keep up – they need to rise above the competition to reach the upper levels of aviation management. The Master of Aeronautical Science (MAS) programme is designed to help students broaden knowledge, diversify talents, and provide an edge on the competitive playing field of aviation.

OBJECTIVES
The MAS programme combines a solid core of classes with a unique specialisation chosen to meet the needs of the Asian aviation and aerospace industry. The curriculum will help students master the tools needed in the development, manufacture, and operation of aircraft and spacecraft, as well as gain a comprehensive understanding of the infrastructure that supports the industry.

PROGRAMME STRUCTURE
- Aeronautics Core Modules:
  - Advanced Aerodynamics
  - Advanced Aircraft Performance
  - The Air Transportation System
  - Aircraft and Spacecraft Development
  - Human Factors in the Aviation/Aerospace Industry
  - Aircraft Maintenance Management
- Systems Safety Core Modules:
  - Aviation/Aerospace Systems Safety
  - Aviation/Aerospace Industrial Safety Management
  - Aviation/Aerospace Accident Investigation and Analysis
- Research Core Modules:
  - Statistical Analysis for Aviation/Aerospace
  - Research Methods for Aviation/Aerospace
  - Graduate Capstone Course

PROGRAMME DELIVERY
The programme is delivered in a blended learning format that combines traditional classroom, online learning and web video conferencing elements. Each term begins with two 5-day classroom sessions at the SAA and continues with online interaction between students and the instructor. Classroom sessions are taught at night and on weekends to accommodate working professionals. The programme is designed to be completed in six terms spanning 24 months.

ADMISSION REQUIREMENTS
- All applicants must have earned a baccalaureate degree from an accredited degree-granting institution with a cumulative grade point average (CGPA) of 2.5 or higher on a 4.0 scale. Applicants who already possess a master’s degree or have completed graduate coursework from an accredited degree-granting institution must also have a 3.0 CGPA or higher at the graduate level.
- Applicants must submit official transcripts from all accredited institutions showing degree completion or courses attempted. Official or unofficial transcripts may be requested to verify prerequisite knowledge.
- Applicants for whom English is not the primary language must either:
  - Attain a minimum score on the Test of English as a Foreign Language (TOEFL) of 550 (paper-based) or 79-80 (Internet-based).
  - Attain a minimum score on the International English Language Testing System (IELTS) of 6.0.
  - Earn transferable credit for a course that is the equivalent of ENGL 123 (English Composition) at an accredited post-secondary institution.
  - Show evidence of attendance and graduation from a secondary school in which the language of instruction was English.

ADMISSION PROCEDURE
Step 1: To be considered for admission, applicants must apply online, pay the SGD$50 application fee, and submit all required documentation before the deadline.

Step 2: The University will process the application and supporting documentation and inform the applicant if the basic requirements have been met in order to proceed to the admissions interview stage.

ABOUT ERAU
Embry-Riddle Asia was established to prepare local aviation professionals for the challenges and opportunities that accompany the rapid expansion from the Southeast Asia aviation market. The campuses in Asia will continue the University’s long-standing history of providing focused educational programmes and a dynamic, hands-on learning experience.

For more information on this programme, please visit www.saa.com.sg/MAS.
IN SINGAPORE FOR the second time to attend the ICAO-Singapore Aviation Security Leadership and Management Seminar, Mr Peter Polloi’s friendly manner and casual attire belied the fact that he was specially handpicked by the President of Palau to be the Administrator of PNAA – a position that had been vacant for five years before he came on board in February 2011.

Mr Polloi, however, is not one to flaunt his success. “I am grateful for the opportunity that was given to me. I never imagined that I would work for the government in the aviation sector because my training was in business, but I am excited about the challenge and will do my best to serve my country,” he enthused.

A firm believer of the adage “Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime”, Mr Polloi is focused on learning the ropes of aviation in the hope of leading his team to greater heights. He professed, “I adopted this philosophy from the family-owned corporation that I was working at for over 10 years. I want to become the ‘fisherman’ who is able to guide my colleagues competently and develop their respective strengths.”

Working towards his goal, Mr Polloi signed up for the Academy’s Civil Aviation Management Programme in July 2011 soon after his appointment. “The excellent training provided by SAA has helped me to hone my skills as Administrator of PNAA,” he commended.

Mr Polloi’s seven-year-old daughter Julia, whom he calls every day while he is away from home, is just as excited about his new career as it takes him to interesting countries like Singapore. “I did not travel a lot in my previous job, but now I am going places and I really enjoy the different learning experiences,” he shared.

Back home, the 39-year-old is actively engaged in outrigger canoeing – a traditional Oceania sport. He has even inspired three fellow colleagues to join him for a good workout three times a week. Looks like the aviation industry has won itself an all-rounder who works hard and plays hard too.

MR PETER POLLOI
Administrator
Palau National Aviation Administration (PNAA)

IN FOCUS

AS A YOUNG man, joining the civil aviation industry was a remote career option for Mr Karma Wangchuk. After graduation, the sports enthusiast was so caught up in a tournament that he gave job interviews at the Police Force and airline a miss. Little did this Commerce Degree holder anticipate a 21-year long love affair with civil aviation when the opportunity came knocking right at his door.

Today, Mr Wangchuk is Joint Director of Bhutan’s DCA, a position achieved through hard work and determination. Soon after joining the DCA, the Royal Bhutan Army was recruiting personnel to curb an acute illegal immigration problem facing the Kingdom. His full-blooded nature prompted him to do his bit for the country. He began serving as a commissioned officer after six months of training.

With his steadfast commitment to serve the nation, Mr Wangchuk quickly became a highly sought-after talent. During his five-year military tenure, he was requested by the DCA to simultaneously manage airport security.

A firm believer of the adage “Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime”, Mr Polloi is focused on learning the ropes of aviation in the hope of leading his team to greater heights. He professed, “I adopted this philosophy from the family-owned corporation that I was working at for over 10 years. I want to become the ‘fisherman’ who is able to guide my colleagues competently and develop their respective strengths.”

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MR KARMA WANGCHUK
Joint Director
Department of Civil Aviation (DCA), Bhutan

When his military obligation ended, he decided to stay on with the DCA as he cherished the invaluable relationships he had developed over the years.

These days, he is dedicated to enhancing the efficiency of Paro Airport, and is always keen to tap the wisdom behind the success of others. Here to attend the 19th Civil Aviation Chief Executives Programme, Mr Wangchuk praised Singapore for its achievements in aviation, saying, “Every time I’m here, I learn new things that I can bring back and apply relevant ones to Bhutan.”

Clearly, the love for sports still runs deep in him. Setting up a sports association in the airport, he has brought together the various airport agencies through friendly games and fostered a tighter bond within the airport community.

You would be amused to know where Mr Wangchuk enjoyed his leisure time when in Singapore. “I go shopping at Mustafa Centre,” he said, referring to the 24-hour shopping mall in the heart of “Little India”. A true-blue family man, he would shop for interesting items for his wife, 19-year-old daughter and 16-year-old son.

MR KARMA WANGCHUK
Joint Director
Department of Civil Aviation (DCA), Bhutan

With his steadfast commitment to serve the nation, Mr Wangchuk quickly became a highly sought-after talent. During his five-year military tenure, he was requested by the DCA to simultaneously manage airport security.
WELCOME

International visitors, be they aviation experts or senior government officials, frequently fly over to visit. Here’s to name a few:

FROM SRI LANKA
29 SEPTEMBER 2011
Mr Ranjith De Silva (left), Secretary, Ministry of Civil Aviation

FROM UK
4 NOVEMBER 2011
Mr David Miller (left), Deputy Chief Inspector, Air Accidents Investigation Branch, Department of Transport

FROM UKRAINE
10 NOVEMBER 2011
Mr Anatoliy Kolisnyk (extreme right), Chairman, Ukraine State Aviation Administration

FROM US
13 FEBRUARY 2012
Ms Margaret Gilligan (left), Associate Administrator for Aviation Safety, Federal Aviation Administration

YOUR THOUGHTS

Great Corporate Collaterals
Congratulations on producing such comprehensive but attractive corporate materials – most professional!
George Bellew
Chief Executive Officer, Oman Airports Management Company

Well-engaged
I would like to thank you for sending me a copy of the Journal of Aviation Management. It is of tremendous importance for our aviation authority to be kept up-to-date with the latest issues concerning air travel especially in the areas of safety and security.
Nebojsa Starcevic
Director, Civil Aviation Directorate, Republic of Serbia

Useful Knowledge Gained
I attended the Seminar on Communications, Navigation and Surveillance/Air Traffic Management (CNS/ATM) workshop last year at SAA, and it was a great learning experience. Thank you for providing such a platform for participants.
Mohammad Khurshid
Corporate Manager (Radar), Pakistan Civil Aviation Authority

Highest Standard of Training
I would like to reiterate the quality of training imparted at SAA. A good number of our organisation’s air traffic controllers have been trained at your esteemed institution. The quality and standard of your training have been highly appreciated by participants of all courses. We have indeed benefitted immensely from this friendly gesture.
M Saeedul Jasan Khan
Group Captain, Member (Operation and Planning), Civil Aviation Authority of Bangladesh

Excellent Journal
We would like to take this opportunity to express our gratitude for the Journal of Aviation Management, which is without a doubt, a valuable resource for all countries that consider innovation and progress of civil aviation a major issue.
Ing Luis P Rodriguez Ariza
President of the Civil Aviation Board, and Ambassador, Representative before the ICAO and its Counsel, Dominican Republic

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We would like to hear your comments on our newsletter and also welcome your recommendations of any topics you would like to see addressed.

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**PROGRAMMES**

**AVIATION MANAGEMENT**

- Diploma in Civil Aviation Management
- Airport Certification
- Airport Ramp Operations and Management
- Airport Terminal Operations and Management
- Airport Operational Safety Assurance
- Aviation Crisis Communications Workshop
- Civil Aviation Management Programme
- ICAO Annex 14 Requirements and Application
- Introduction to Air Law
- Watchroom Operations and Incident Reporting Workshop

**AVIATION SAFETY AND SECURITY**

- Aircraft Accident and Incident Investigation: ICAO Annex 13 Report Writing
- Fundamentals of Safety Management Systems
- ICAO Endorsed Government Safety Inspector Training – Airworthiness
- ICAO Safety Management Systems
- Integrated Safety Management Systems
- Safety Oversight Inspectors (Airports)
- Safety Oversight Inspectors (Air Navigation Services)
- Safety Oversight Airworthiness Inspectors
- Safety Oversight Flight Operations Inspectors
- Safety Oversight Managers
- Aviation Medicine for Medical Examiners
- EASA Maintenance Requirements – Part M/Part 145/Part 66

**AIR TRAFFIC SERVICES**

- Aeronautical English – Meeting New ICAO Requirements
- Aeronautical English – Train the Testers Workshop
- Aeronautical Search and Rescue Operations
- Air Traffic Services Resource Management and Training Workshop
- Air Traffic Services Safety Management and Investigation
- ICARO PANS-OPS Instrument Procedures Design On-the-Job Training Instructors
- Safety Audits of Air Traffic Services
- Seminar on CNS/ATM (including latest developments in GNSS/ADS-B and PBN)
- Approach Control (Procedural)
- Approach Control (Surveillance)
- Seminar on CNS/ATM (including latest developments in GNSS/ADS-B and PBN)
- Area Control (Procedural)
- Area Control (Surveillance)
- Primary Air Traffic Control

**AIRPORT EMERGENCY SERVICES**

- Bulk Fuel Installations Fire Management Workshop
- Emergency Management Workshop
- Fire Safety Inspection Workshop
- Fire Safety Management Workshop
- Hazardous Materials Operations
- Military Aircraft Rescue and Fire-fighting
- Senior Fire Officer
- Strategies and Tactics in Internal Fire-fighting
- Advanced Airport Fire-fighter
- Airport Fire Officer
- Aviation Fire-fighting Foam Evaluation
- Basic Airport Fire-fighter
- Breathing Apparatus Maintenance
- Breathing Apparatus Operations
- Watchroom Operations and Incident Reporting Workshop

Please note that dates are subject to change. For the latest programme details and online registration, please visit our website at www.saa.com.sg