



Awan

AVIATION WITHIN A NATION

CIVIL AVIATION AUTHORITY OF MALAYSIA
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**ABOUT AWAN**

AWAN was conceptualized by a team of industry experts with great experience and authority to deliver concise, comprehensive and timely articles with a wide scope of coverage on all sectors of Malaysia's aviation industry. Published quarterly, AWAN provides insider knowledge, industry insights, latest news, current trends, updates on regulations and interpretation on the key issues impacting aviation in Malaysia.

CIVIL AVIATION AUTHORITY OF MALAYSIA

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THE BRIEF

Local



MAHB, ASBAA TO PROMOTE SUBANG AIRPORT AS ASIA PACIFIC'S AVIATION HUB

Malaysia Airports Holdings Bhd (MAHB) has renewed its partnership with Asian Business Aviation Association (AsBAA) to promote Malaysia as Asia Pacific's preferred hub for business aviation and maintenance, repair, and overhaul (MRO). The effort is in line with MAHB's Subang Airport Regeneration initiative to regenerate the airport into "more than just a city airport" with the aim of attracting about RM1.3 billion investments from industry players. AsBAA will provide advisory and expertise from various fields and assist in airport planning, while MAHB will invest in developing the infrastructure and capacity to benefit the aviation players in the ecosystem. Subang Airport was poised to be the one stop centre in providing end-to-end services with complete state-of-the-art infrastructures by leveraging on Malaysia's position as the fourth largest base for business jet fleet in Asia Pacific.

Source: *New Straits Times*

MAG TO REDUCE UP TO 2.0% EMISSION OR 25 MIL KG OF CO2 THIS YEAR

Malaysia Aviation Group (MAG) aims to reduce up to 2.0 per cent in emission or 25 million kilograms of carbon dioxide this year in line with the group's sustainability blueprint in promoting socio-economic development. The parent company of Malaysia Airlines Bhd (MAB) has launched 'MAG Sustainability Blueprint' to achieve net zero carbon emissions by 2050. MAG's other subsidiaries include Firefly, MASwings, Amal, MABkargo, AeroDarat

Services and MAB Academy. The group also aims to reach 50 per cent usage of biodegradable materials for in-flight operations coupled with 50 per cent of ground and in-flight waste recycled and up-cycled by 2025 onwards. Championing sustainability is a key focus for MAG as part of its goal to become Asia's leading travel and aviation services group.

Source: *New Straits Times*



PROSPECTS REMAIN BRIGHT FOR BUSINESS AVIATION IN MALAYSIA

Malaysia has made big strides over the past few years to become a thriving business aviation destination, and today, it finds itself in an enviable position, handling the most number of business jets in Southeast Asia. In Asia-Pacific, Malaysia has the fifth largest business aircraft fleet, behind China, Australia, India and Hong Kong. Prospects remain bright as according to market research, the global business jet market is projected to grow from US\$18.8 billion (RM77.3 billion) in 2020 to US\$38 billion by 2030 at a compound annual growth rate of 7.3% during the forecast period,

with Asia-Pacific remaining one of the world's largest markets. Today, Malaysia is a centre for business aviation in the region and it is partly a result of having Subang airport (Sultan Abdul Aziz Shah Airport), which is conveniently located. The Malaysian authorities can see that the business aviation sector creates high-value jobs such as jobs for licensed aircraft engineers and pilots. Some commercial airlines have had to downsize their workforce in recent years, but some engineers and pilots from that sector have been able to find new jobs in business aviation. When the government supports business aviation, it attracts business aircraft operators and the local investment they can bring.

Source: *The Edge*



AVIATION STAFF GET INOCULATED



The industry vaccination centre (PPV) that opened at the KL International Airport (KLIA) will vaccinate over 20,000 workers from the aviation industry, says Datuk Seri Dr Wee Ka Siong. The Transport Minister said the move was part of the government's ongoing effort to protect those in the transport sector. This programme is aimed at expediting the vaccination of an estimated 22,243 aviation and other related industry workers at KLIA. The centre was set up at Anjung Tinjau, Terminal One KLIA, and will operate from 8am to 6pm on weekdays. Dr Wee said Malaysia Airports Holdings Bhd was liaising with several airlines and related sectors to get workers immunised. This includes employees of Malaysia Airlines Bhd, Malindo Air, ground handling provider AeroDarat, foreign airlines represented by the Airline Operators Committee, and cargo workers represented by the Airfreight Forwarders Association of Malaysia. *Source: The Star*

MALAYSIA AVIATION GROUP LAUNCHES TRAVEL, LIFESTYLE DIGITAL PLATFORM

The Malaysia Aviation Group (MAG) has launched Journify, an integrated one-stop travel and lifestyle digital platform which provides end-to-end travel solutions, complementing its strength and expertise in the airline and aviation service business. Journify is set to transform consumers' experience via a digital platform; offering consumers a highly personalised travel experience solution that gives them access to information and knowledge about places of interest that suit their preferences and needs, among others. Journify is proud to introduce the first-of-its-kind flagship experience through the Journify2U service, allowing customers departing from the Kuala Lumpur International Airport to get the products which they purchased on the Journify app to be delivered to them at the boarding lounge. The platform offers more than 10 categories of interests, from cafes and restaurants to entertainment outlets, tourist attractions, shopping malls, and more. *Source: The Edge*



DEADLIER VIRUS VARIANT KILLS AIRLINES' HOPE FOR RECOVERY

The surge of a deadlier Covid-19 variant and poor pandemic management have dashed local airlines' hope of a start of recovery, especially on the domestic front while international borders remain closed. The industry requires at least three to four years to regain the 2019 air travel levels. The outlook for Malaysia Airlines Bhd (MAB), AirAsia Group Bhd and Malindo Airways Sdn Bhd is uncertain while the air travel demand structure might change due to the pandemic. The recovery of the aviation industry will depend on both global and local conditions. Airlines and airports have depended



more on domestic passengers even before the pandemic. The International Air Transport Association (IATA) estimated that airlines' losses crossed US\$126 billion (RM529 billion) last year. However, there are improvements this year with some international markets opened. Based on current developments, domestic travel within Asean would remain suppressed until end-2021 and only gradually recover by mid-2022 with international borders opening at the same time and to enjoy meaningful recovery only potentially towards end-2022 or mid-2023. HLIB Research has maintained an 'Underweight' rating on the aviation sector. *Source: The Malaysian Reserve*

AVIATION INDUSTRY LIKELY TO TAKE OFF IN 2022, SAYS TONY FERNANDES



The aviation industry is likely to return to normal in 2022, with the gradual resumption of interstate travel and the reopening of international borders, said AirAsia group CEO Tony Fernandes. He also called for the implementation of better policies to avoid any disruption to travelling, adding that the government should decide on what would be required to open-up the borders, including the documents needed for travel purposes. *Source: FMT News*

THE BRIEF

International



NEW LEGISLATION COULD GIVE TAX BENEFITS TO US AIRLINES FOR USING SUSTAINABLE AVIATION FUEL

Lawmakers introduced new legislation that would establish a blender's tax credit for using sustainable aviation fuels (SAF) that reduce greenhouse gas emissions by at least 50 percent. The Sustainable Skies Act was introduced that would establish a \$1.50 per gallon tax credit for SAF that reduces emissions by 50 percent. If the reduction is over 50 percent, \$0.01 is added for every percentage point maxing out at \$2. Airlines have made sustainability commitments to reduce the carbon emissions, and the SAF industry has demonstrated its preparing to meet that demand. But there is a clear need for federal investment to help SAF producers scale up and ensure aviation can meet their goals. This tax legislation represents a well-calibrated well-timed effort to kickstart SAF's long-term viability. Legislation enjoys the support of the aviation industry, the environmental community, fuel producers, and organized labor. The Sustainable Skies Act represents a pragmatic focused approach to reducing aviation's carbon emissions.

Source: Aviation Today

NEW CHIEF FOR SINGAPORE CIVIL AVIATION AUTHORITY

A new Director-General will helm the Civil Aviation Authority of Singapore (CAAS) from 2nd August 2021. Mr Han Kok Juan will replace Mr Kevin Shum, 50, who has headed CAAS since 2015. Mr Shum will be posted to Mr Han's former role as a deputy secretary of transport. The 47-year-old has been deputy secretary at the Ministry of Transport (MOT) since September 2019. He was the deputy secretary for aviation, maritime and international relations at the ministry. He was also credited with playing a key role in coordinating the transport sector's response to the coronavirus pandemic. Before his appointment at MOT, Mr Han was the deputy secretary in the Law Ministry from November 2015 until September 2019. Source: The Straits Times

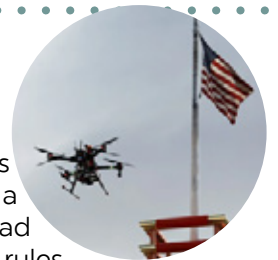


EUROPEAN UNION NATIONS AGREE AIR TRAFFIC REFORM TO CUT AVIATION EMISSIONS

European Union nations agreed on a reform of the bloc's air traffic management aimed at cutting emissions, reducing costs for hard-hit airlines, and improving safety. The reform, known as Single European Sky, includes a variety of initiatives, such as beefing up the role of regulator Eurocontrol in coordinating and optimising air traffic flows. The European Commission had suggested such a move, saying carbon dioxide emissions from aviation could be cut by up to 10% by making flight paths more direct and reducing delays due to congested airspace. A more efficient system could also increase flight capacity and help an aviation industry that has been hammered by the plunge in travel due to the COVID-19 pandemic. Source: Reuters

NEW RULES ALLOWING SMALL DRONES TO FLY OVER PEOPLE IN U.S. TAKE EFFECT

The Federal Aviation Administration (FAA) now allows for small drones to fly over people and at night, a significant step toward their eventual use for widespread commercial deliveries. The FAA said its long-awaited rules for the drones, also known as unmanned aerial vehicles, will address security concerns by requiring remote identification technology in most cases to enable their identification from the ground. U.S. Transportation Secretary Pete Buttigieg said the rules "are an important first step in safely and securely managing the growing use of drones in our airspace, though more work remains on the journey to full integration" of drones. For at-night operations, the FAA said drones must be equipped with anti-collision lights. The final rules allow operations over moving vehicles in some circumstances. Source: Reuters



International

2020 WORST YEAR ON RECORD FOR GLOBAL AIRLINE INDUSTRY – IATA

Airline industry statistics have confirmed that 2020 was the worst year on record for the industry, according to the International Air Transport Association (IATA). In its World Air Transport Statistics (WATS) published, the association said performance figures for 2020 demonstrated the devastating effects on global air transport during that year of the Covid-19 crisis. The report said some 1.8 billion passengers flew in 2020, a decrease of 60.2% compared with the 4.5 billion who flew in 2019. It said industry-wide air travel demand dropped by 65.9% year-on-year. Meanwhile, international passenger demand decreased by 75.6% compared to the year prior. Domestic air passenger demand, on the other hand, dropped by 48.8% compared to 2019. Air connectivity declined by more than half in 2020, with the number of routes connecting airports falling dramatically at the outset of the crisis and was down more than 60% in April 2020. Total industry passenger revenue fell by 69% to US\$189 billion (about RM798.9 billion) in 2020, while net losses were US\$126.4 billion in total. *Source: Reuters*



HOW ROLLS-ROYCE ELECTRICAL IS LEADING THE CHARGE TO LOW-CARBON FLIGHT

Should all proceed to plan, a small electric-powered aircraft in a distinctive red, white, and blue livery will lift off from Boscombe Down airfield in Wiltshire. Its pilot Phil O'Dell will take the modified Sharp Nemesis NXT up to around 1,000ft before performing four consecutive passes along a pre-designated 3km course, in the process smashing the current speed record for an electric aircraft of 210mph (337km/h). Such are the power demands of the effort that during the record attempt of just 10min the charge in the aircraft's 6,000-cell battery pack will have been virtually depleted. The current focus is on two key segments: urban air mobility (UAM) – air vehicles operating at ranges of in the region of 100nm (185km) – and commuter aircraft capable of carrying nine to 19 passengers over distances of around 500nm. *Source: Flight Global*



DHL EXPRESS ORDERS 12 FULLY ELECTRIC CARGO AIRCRAFT

International courier, package delivery and express mail service provider DHL Express announced it ordered 12 all-electric cargo aircraft from the Seattle-based manufacturer Eviation. DHL said it was the first company to order 12 fully electric Alice eCargo planes from Eviation. Alice eCargo aircraft has a capability to carry 1,200 kilograms and a range of up to 815 kilometers. eCargo aircraft will require around 30 minutes to charge per flight hour. Adding to that, the electric



cargo aircraft has the ability to be charged during loading and unloading operations, "ensuring quick turnaround times that maintain DHL Express' tight schedules".

"We firmly believe in a future with zero-emission logistics," said John Pearson, CEO of DHL Express. "On our way to clean logistics operations, the electrification of every transport mode plays a crucial role and will significantly contribute to our overall sustainability goal of zero emissions." *Source: Aerotime News*

QATAR AIRWAYS, THE WORLD'S BEST AIRLINE IN 2021

Qatar Airways is the world's best airline in 2021. Commitment to keep the world's air routes open during COVID-19, innovation, new products, and world-renowned inflight service have combined to give Qatar Airways the prestigious AirlineRatings.com 2021 Airline of the Year award in its Airline Excellence Awards. The airline has a host of industry firsts. First to complete IATA's important IOSA safety audit, first to be fully COVID audited and compliant by both AirlineRatings and Skytrax, and amongst the first to trial IATA's COVID Safe Travel Pass. The airline is at the forefront of developing and introducing new aircraft types such as the 787, A350, and 777X and it has one of the world's youngest fleets. *Source: Airline Ratings*



CAAM Highlights



CAAM is responsible for developing and promulgating appropriate, clear and concise aviation safety standards in line with the Malaysian Civil Aviation Regulations 2016 (MCAIR 2016). Safety regulations are an important tool used by CAAM to control safety risks. CAAM has published the second batch of Civil Aviation Directives (CAD), as a provision of adequate regulations to address the national requirements emanating from the primary aviation legislation and providing for standardised operational procedures, equipment and infrastructures including safety management and training systems, in conformance with the Standards and Recommended Practices (SARPs) contained in the ICAO Annexes to the Convention on International Civil Aviation.

Listed below are the published CADs:

CAD 8101	General Provisions (CAAM Part 21 Subpart A)
CAD 8102	Type Certificates and Restricted Type Certificates (CAAM Part 21 Subpart B)
CAD 8104	Design of Modifications (CAAM Part 21 Subpart D)
CAD 8105	Supplemental Type Certificate (CAAM Part 21 Subpart E)
CAD 8106	Design of Repairs (CAAM Part 21 Subpart M)
CAD 8107	Validation to a Type Certificate (CAAM Part 21 Subpart B-1)
CAD 8108	Validation to a Supplemental Type Certificate (CAAM Part 21 Subpart E-1)
CAD 8109	Installation of Modification (CAAM Part 21 Subpart D-1)
CAD 8110	Installation of Repairs (CAAM Part 21 Subpart M-1)
CAD 8201	Production Organisation Approval (CAAM Part 21 Subpart G)
CAD 8206	Identification of Products, Parts and Appliances (CAAM Part 21 Subpart Q)
CAD 8401	Design Organisation Approval (CAAM Part 21 Subpart J)
CAD 8601	Maintenance Organisation Approval (CAAM Part 145)
CAD 8602	Limited Maintenance Organisation Approval (CAAM Part M Subpart F)
CAD 8708	CAAM Authorised Release Certificate (CAAM Form 1)
CAD 1802	Validation of Foreign Aircraft Maintenance Licence
CAD 8301	Certificate of Airworthiness
CAD 8305	Permit to Fly (CAAM Part 21 Subpart P)
CAD 1601	Noise Certificate
CAD 1801	Aircraft Maintenance Licence (CAAM Part 66)
CAD 1821	Maintenance Training Organisation
CAD 680	Continuing Airworthiness of Aircraft (CAAM Part M)
CAD 6802	Continuing Airworthiness Management Organisation Approval (CAAM Part M Subpart G)
CAD 2	Rules of The Air
CAD 3	Meteorological Service for International Air Navigation

CAD 4	Aeronautical Charts
CAD 5	Units of Measurements
CAD 11	Air Traffic Services (ATS)
CAD 12	Search and Rescue (SAR)
CAD 15	Aeronautical Information Service (AIS)
CAD 18	National Transport of Dangerous Goods Programme (NTDGP)
CAD 1201	ATC Licensing
CAD 1211	Air Traffic Controller Approved Training Organisation
CAD 1501	Aeronautical Information Management (AIM)
CAD 6401	Flight Procedure Design (FPD)
CAD 1101	Air Traffic Management
CAD 6007	Operator Alcohol and Drug Testing Programme (ADTP)
CAD 10 Vol II	Aeronautical Telecommunications (Communication Procedures including those with PANS Status)
CAD 10 Vol IV	Aeronautical Telecommunications (Surveillance and Collision Avoidance Systems)
CAD 10 Vol V	Aeronautical Telecommunications (Aeronautical Radio Frequency Spectrum Utilisation)
CAD 14 Vol I	Standards for Aerodromes
CAD 14 Vol II	Standards for Heliports
CAD 16 Vol I	Environmental Protection – Aircraft Noise
CAD 16 Vol II	Environmental Protection – Aircraft Engine Emissions
CAD 16 Vol III	Environmental Protection – Aeroplane CO2 Emissions
CAD 6805	Aircraft Mass and Balance Programme
CAD 8304	Certificate of Airworthiness for Export
CAD 8306	Temporary Loss of Airworthiness – Permit to Ferry

NEW CIVIL AVIATION GUIDANCE MATERIAL

The Civil Aviation Authority of Malaysia (CAAM) has published Civil Aviation Guidance Material (CAGM) which includes guidance material on how to meet the requirements of the Civil Aviation Safety Regulations when applying for a certificate, licence, approval, or other authorisation. Organisations may use these guidelines to demonstrate compliance with the provisions of the relevant Civil Aviation Directives issued. Listed below are the latest published CAGMs:

CAGM 1008 Upset Prevention and Recovery Training

CAGM 1009 Guidelines on Flight Instructor Training

CAGM 1100 ATC Incident Investigation

ONE STOP CENTRE E-TEMUJANJI FOR AIR CREW LICENSE RENEWAL



As part of providing a positive experience and high-quality service to all valued stakeholders, the Civil Aviation Authority of Malaysia (CAAM) has introduced its official online appointment booking system, e-Temujanji for all license renewal at Flight Operations' One Stop Centre (OSC) located at CAAM's headquarters in Putrajaya. As part of CAAM's effort to ease the license renewal process, all air crew are advised to book an appointment on CAAM's online appointment booking system, e-Temujanji prior to visiting CAAM OSC. The link is available at www.caam.gov.my or alternatively, license holders may scan the QR code provided.

By **Nazirul Izzat**

INTRODUCING MALAYSIA'S ALL NEW AIRSPACE STRUCTURE

17th of June 2021 marked a historical moment for Malaysia's civil aviation industry as the Civil Aviation Authority of Malaysia (CAAM) successfully launched the operations of Malaysia's new airspace structure, from 6 sectors of the old airspace to the new 14 sectors airspace equipped with new airways, new departure and arrival standards and new backend system. This new airspace structure will provide lucrative returns to the country through the expansion of the aviation industry.

Historically, the functions of airspace management have been widely dispersed. The responsibility for

airspace management has resided with CAAM, while operational considerations are carried out at air traffic control facilities. More than often, the focus of airspace management has been local in scope and centred on single areas of concern bounded geographically and regionally.

Part of CAAM's mission is the implementation of upgrading and modernizing Malaysia's air traffic services which is carried out through the new Kuala Lumpur Air Traffic Control Centre (KLATCC) project and the new airspace structure. This national pride includes the construction of a three-story KLATCC complex, as well as the installation of new





“Aviation is widely known as a dynamic and ever-evolving industry and this requires CAAM to consistently improve and upgrade its capabilities”

communications, navigation, surveillance, and air traffic management (CNS/ATM) systems. Located near Kuala Lumpur International Airport (KLIA), Sepang, the new KLATCC is set to replace the current 25-year-old KLATCC located in Subang, Selangor. This ultramodern facility houses the air traffic control operations for the Kuala Lumpur Flight Information Region (KL FIR), becoming the backbone of the country’s air traffic control as well as the En-Route and Approach Units together with the Aeronautical Search and Rescue (SAR) Coordination Centre. The commissioning of the COSPAS-SARSAT would further enhance the Search and Rescue capabilities of CAAM within the Kuala Lumpur and Kota Kinabalu FIRs.

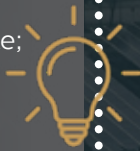
The KLATCC project and migration of the new airspace structure have been part of CAAM’s ongoing efforts to standardize, simplify, and incorporate the International Civil Aviation Organization (ICAO) standards in the airspace design of KL FIR. By implementing the new KL FIR airspace, it would allow more aircrafts to land during peak hours or premium slots, increasing the landing capacity at KLIA from 78 to 108 aircrafts per hour, which is among the highest in the world. Furthermore, the redesign of the airspace will subsequently allow more aircraft movements per hour by fully utilizing the three runways available at KLIA simultaneously.

Why The Need of a New Airspace?

Aviation is widely known as a dynamic and ever-evolving industry and this requires CAAM to consistently improve and upgrade its capabilities, thus, the need arises to understand the linkage to overarching supporting activities including safety and environmental element, energy efficiency, and infrastructure relevance.

The redesigning of the new airspace comprises of:

1. Upgrades of the new airspace with introduction of newly established Area Navigation (RNAV) routes;
2. Revision to existing Air Traffic Service (ATS) or RNAV routes;
3. Withdrawal of ATS routes and changes on Air Navigation Route; and
4. Realignment of Danger Area WMD421 for military use.



The new airspace structure includes enhancement of Performance Based Navigation (PBN) concept with the optimization of the new airspace structure by implementing new RNAV routes and reorganizing its network connectivity. 16 significant points have been introduced to enhance the established implementation of RNAV 2 routes in KL FIR.

Migration of The New Airspace

17th June 2021 at 1800 UTC marked a historical moment for Malaysia's aviation industry as the countdown to the operational launch of the country's new airspace structure began at KLATCC,

"5, 4, 3, 2, 1" The Operation Rooms becomes dead silent.

MAS089 coming in from Narita reports position TAXUL. Frequency 132.6MHz rings "MAS089, identified, Welcome to the new Lumpur Airspace."

In April 2021, the decision on the implementation of the new "LUMPUR" Airspace was made. Since 2014, CAAM's Airspace Unit has been leading this big task by developing a new airspace structure and making sure it is operational. Part of the migration process is to anticipate any possibilities that could happen and prevent it. In doing so, the "Safety Management Unit" develops a Safety Risk Assessment (SRA). SRA is a common but all-rounded tool used to identify all the risks involved; might be as minor as a dead pixel on a radar

screen to as critical as total radar failure procedures. The team goes through every possible scenario and categorize them accordingly to the severity of the outcome. They work with experts and professionals to ensure each possibility comes to a desirable result.

With the safety net well-drafted, comprehensive trainings were carried out for the team to utilize it. The Training Unit which was entrusted to come up with the most effective training programme had included numerous crucial activities such as "Compulsory New Airspace Appreciation Lectures", Business Continuity, Test and Simulator (BCTS), and publishing various reading materials for the air traffic controllers to be well-versed with the features of the new airspace. It is essential to have good tools, but it is even more critical for the tools to be used correctly.

Days before the launch date, all preparations were checked numerous times to ensure the safety and security of the migration. A dry run was conducted to test the system and procedures and to ensure any possible hiccups were mitigated. The exercise was a success although the team did run into a few unforeseen complications, but these were minor issues and were resolved by the Communication, Navigation and Surveillance (CNS) Unit before the migration.

Leading up to the big day, training videos were produced to further familiarize the air traffic controllers with the new airspace structure. This initiative was done to minimize and eliminate possible errors caused by human factors that may be overlooked during the training sessions. Meanwhile, the Documentation Department continuously



"The all-new airspace structure will provide more efficient and seamless Air Traffic Management, "

disseminates the Unit Operation Instruction (UOI), Supplementary Operations Instruction (SOI) and Aeronautical Information Publication (AIP) to air traffic controllers and airline operators as a critical step in preventing miscommunications.

The all-new airspace structure will provide more efficient and seamless Air Traffic Management, enhancement of KL FIR Surveillance Systems, improvement of KL FIR Communications and Navigation Systems to enable Performance Based Navigation (PBN) implementation. In addition to that, it will also enhance Malaysia's competitiveness in the aviation industry by raising the availability and connectivity of the country's air transport industry.



FLIGHT TRACK SHORTENING & SAVINGS

Operations of the new airspace structure took effect on 17th of June 2021 at 1800UTC and in the duration of 12 hours of the new airspace migration, 82 aircraft movements were recorded, and aircrafts were given track shortening by air traffic controllers which led to a total time saved of 508 minutes. This time saved equates to approximately 22,150KG of fuel saved that provides a saving of 12,404 USD. This report is compared with aircraft movements during pre-covid period taken on the 17th of June 2019.

17TH JUNE 2019
*PRE COVID MOVEMENT

TOTAL FLIGHTS
863 TIME SAVED (MINS)
4,010

FUEL SAVED (KG)
174,839

TOTAL USD SAVED
97,910

* FIGURES WERE REDUCED BY
25% TO REFLECT 75%
POSSIBLE TRACK SHORTENING
WITH NEW AIRSPACE

17TH JUNE 2021

TOTAL FLIGHTS
82 TIME SAVED (MINS)
508

FUEL SAVED (KG)
22,150

TOTAL USD SAVED
12,404

BASED ON
ACTUAL FLIGHT DATA OF
12 HOURS - RANGE



By **Captain Chester Voo**

IMPROVING SAFETY AWARENESS THROUGH TRAINING

In the world of aviation, it is always about safety, safety and safety. The Civil Aviation Authority of Malaysia (CAAM) plays a vital role in safeguarding the civil aviation industry by ensuring the universal safety and security standards and requirements in civil aviation are implemented, complied with and well-maintained. In carrying this out, I would like to elaborate further on the safety approach through high value training.

I've always believed a great pilot or machine operator will need to have one of two things; great theoretical knowledge and/or experience. Great knowledge brings about an educated approach that might be a little rigid at times but safe and correct. Great experience is unbeatable at most

times, but this is attained over time through learning and flying the right way. Having attain both great theoretical knowledge and experience will of course be the ultimate goal but we do need to be aware that sometimes experience does bring about some level of complacency and this will then be addressed through a disciplined approach to Standard Operating Procedures (SOPs). SOPs are tedious, I know, but please note that not every aviator can perform the same way, hence, the need for SOPs to ensure that a benchmark for safe operations is met. The key here, my dearest respected aviators, is the ultimate approach to aviation safety through humility and adherence to SOPs and respect to our machines and the people that we share the skies with.



TRAINING TRAINING TRAINING

Through active engagement and a collaborative approach with all industry experts, CAAM would like to highlight and emphasize on this matter. Training is not just about a method to make the cut or have completed the required man or flying hours. It is about the value from this training that the pilot has attained and the confidence achieved. In ground school, classes must strive to achieve a good understanding of the type of systems that is studied. Good understanding of the systems and most importantly redundancies in these systems can save lives during an abnormal and emergency situation. By attaining high theoretical knowledge on systems will further build confidence in the pilots to believe in the systems and machines that is being operated. Experience is one thing but theoretical knowledge is also a clear winner in any abnormal or emergency situation. It helps the pilot make great decisions during an adhoc or rushed situation and a well-educated one will always make a difference. Competency training should not just focus on the ability to fly a normal flight safely but it should also cover extensively on malfunctions, abnormal and emergency procedures and equip the pilot with the confidence and skills to manage this. This is where the leadership from the authority and the industry must stand together to promote and mandate this as a team. Our industry including the training part is highly regulated, but to achieve true value, we must all want to learn and want to be safe through attaining extensive knowledge and skills. This must start at the leadership level to achieve a high state of competency. So my dear respected aviators, learn and train to know and understand, not simply to pass. When good understanding is achieved, passing is a given.

**BE DISCIPLINED,
RESPECTFUL & NEVER BE
OVERCONFIDENT**

Three words that does not necessarily connect with each other but highly important habits to have in safe aviation. I've said before, it doesn't matter whether you fly an A380 or a small helicopter, the lives on board are priceless including yours. In aviation, you have very little time to recover from a sudden abnormal situation be it a sudden wind change, a malfunction or inadvertent accidental error on board. A discipline approach to SOPs will always have an advantage as a quick decision is made whilst in the recovery. Imagine having to shuffle through our minds with more than 4 types of malfunction, why is this happening; when do I start certain actions; what is the correct response and to figure out the situation whilst managing the controls. Then there is current location, weather, people around, safe location, air traffic controllers..... now that's a lot of work to be correctly done in a short time. This is where discipline to SOPs, having the right knowledge and understanding, confident skills and of course a little luck will hopefully get us out to tell the story to our family and friends over coffee. Respect and not being overconfident is about being able to give way to others without endangering anyone. Take note that not everyone has the same capability in reaction time or experience. What might seem a simple manoeuvre to us might seem like a mighty task to another pilot. Give the other pilot space and time to react. The more knowledgeable and experienced we are, the more we should be the bigger ones to give in. Another point to note is that



no matter how many times we have flown an aircraft or route, every flight is different with risk and challenges of her own.

Lastly, as we progress into the second half of 2021 and strive to achieve a high state of safety awareness, CAAM will begin to look deeper into infusing high value training items with Safety Management System. It doesn't matter whether its private, commercial or recreational training, we all share the same skies and we all should strive to be competent, confident and safe with a lot of consideration and responsibility to each other.



By **Qistin Farahiyah Fadzlin**

THE GUARDIAN OF NINER MIKE

Niner Mike, the tail number prefix 9M, signify the nationality mark assigned by the International Civil Aviation Organization (ICAO) for all civil aircraft registered in Malaysia. As a contracting state to the ICAO, the entire fabric of civil aircraft safety is subjected to conformance with the Standards and Recommended Practices (SARPs) contained in the ICAO Annexes to the Convention on International Civil Aviation which are mandated through the national requirements emanating from the primary aviation legislation, the Civil Aviation Act, with accompanying regulations and requirements.

Continuous regulatory oversights for compliance of the entire framework for safety of these aircraft rest with the Airworthiness Division in Civil Aviation Authority of Malaysia (CAAM), as a mean to discharge the responsibilities of Malaysia as a sovereign state in ICAO. The primary role of the division is to promote and enhance aircraft safety standard through effective and up-to-date airworthiness regulations and by encouraging industry to deliver high standards of airworthiness, towards achieving internationally recognized standard of aviation safety and recommended practices for the safety of air travel in Malaysia.





“Continuous regulatory oversights for compliance of the entire framework for safety of these aircraft rest with the Airworthiness Division in Civil Aviation Authority of Malaysia (CAAM), as a mean to discharge the responsibilities of Malaysia as a sovereign state in ICAO.”

The trellis of airworthiness requirements are wide and deep to a tiny little single rivet on the fuselage, or the missing of it. Airworthiness activities are regulated through a value chain of various processes and arrays, involving all aspects of the airworthiness that may impact the aviation safety. The multitude of obligations to facilitate the industry include, but not limited to;

- 1 The development of airworthiness standards and safety requirements**
- 2 Certification of aircraft design and built standards including aeronautical product approvals**
- 3 Registration of civil aircraft and associated mortgages**
- 4 Licensing of aircraft maintenance engineers**
- 5 Approval of relevant organisations (for design, production, training, maintenance & continuing airworthiness management)**
- 6 Regulatory and safety oversight, surveillance and inspection programmes**
- 7 Investigation and facilitation on airworthiness related matter**

Prior to qualifying as the bearer of Niner Mike, a particular aircraft type is subjected to extensive certification activity, generally termed as the ‘initial airworthiness’. For locally designed aircraft, a comprehensive design investigation activities are required in order to qualify an aircraft for its ‘Type Certificate’. For other aeronautical products approval, the same principle applies at a scale appropriate to the complexity of the product. The organizations involved in the design or production shall carry appropriate approval enabling the roll out of the aircraft/product design and manufacture.

For foreign Type Certificate issued by other competent aviation authorities, validation to a Type Certificate which comprises wide-ranging technical investigation are conducted to verify that local airworthiness and operational requirements are met or able to be



fulfilled. These encompasses web of rules linking to the continuing airworthiness of the aircraft and its safety for intended operations.

Aircraft without Type Certificate are treated similarly at a different degree of investigation due to the vast nature of type and application.

Upon meeting all the requirement for aircraft registration, 9M marking may officially be carried amongst the clouds in the sky, subjected to the compliance of 'continuing airworthiness' requirements. The vital documents known for aircraft to be flown are the valid Certificate of Registration and Certificate of Airworthiness (or Permit to Fly, for aircraft without Type Certificate).

A Certificate of Airworthiness is issued or renewed yearly on the basis of satisfactory evidence that

the aircraft complies with the design aspects of the appropriate airworthiness requirements and safe for operations. This is accomplished upon satisfactory review of the Airworthiness Review Report submitted to CAAM by Airworthiness Review Staff of CAAM Approved Continuing Airworthiness Management Organisation (CAMO). The aircraft must be maintained by CAAM Approved Maintenance Organisation (AMO) with the release by appropriately trained, qualified and experienced CAAM Aircraft Maintenance License holders. The issuance of such license and the oversight of CAAM Approved Training Organisation (ATO) are also under the purview of Airworthiness Division.

Airworthiness inspectors are required to perform review, audit and surveillance onto aircraft and associated organisations approved by CAAM, including the assessment and acceptance of Nominated Post Holders associated to the organisation approval. These may occasionally involve working arrangements with other authorities. Aircraft modifications and repair are also subjected to evaluation for approval or validation.

Aircraft may be deregistered upon retiring the service from a Malaysian owner or operator, where a Certificate of Airworthiness for Export is issued followed by removal of the aircraft from the national register.

Notwithstanding the collective efforts of all valued stakeholders who contributed to the entire framework of aviation safety in Malaysia, Airworthiness Division is honored as the guardian in upholding the obligations to enhance aircraft safety standard and to ensure the adherence to ICAO Standards and Recommended Practices, in enabling safe operation of every single aircraft bearing the tail number prefix 9M, aka Niner Mike.



MANAGING LOW VISIBILITY OPERATIONS AT AERODROMES

By **Dr. Zainul Fuad Bin Md Wahi**

Low Visibility Operations, or LVOs, is when airside operations at an aerodrome is continued in reduced visibility or low cloud conditions.

In such limited visibility, air traffic controllers may not be able to see the entire movement and not able to exercise control over traffic but pilots may still be able to taxi and to avoid collision with other traffic or obstacles. As visibility deteriorates further, neither the air traffic controller nor the pilot will be able to see other proximate traffic. The ability of pilots to maintain separation from other aircraft, vehicles and obstacles based on visual reference is limited. Hazard identification capability will be much reduced, and time available for decision making to avoid hazards is limited.

LVOs at aerodromes should be managed by Low Visibility Safeguarding and Low Visibility Procedures. Low Visibility Safeguarding are tasks performed to prepare the aerodrome for Low Visibility Procedures. Low Visibility Procedures are measures executed by aerodrome operator and air traffic control to safely manage and regulate aircraft and vehicle movements, during limited visibility situations.

The safeguarding must be completed before Low Visibility Procedures are effected. Actions to protect aircraft operations, and authorised essential vehicles and personnel, should be concluded. Access to the manoeuvring area should be restricted to essential vehicles and personnel. Work in progress should stop and work areas should be vacated. Maintenance works on visual and non-visual aids should be suspended. Protection of the runway and radio navigational aids should be assured, including clearing of obstructions in the localiser and glide path critical and sensitive areas. Low Visibility Procedures should not be declared until the appropriate safeguards are fully in place to protect the landing aids and runway.

Low Visibility Procedures are required when aerodromes allow operations below condition visibility and/or take-offs below 550 m RVR. Low Visibility Procedures must be fully implemented when the RVR deteriorates to lower than 550 m or the cloud ceiling reduces below 200 feet. All

activities on the manoeuvring area should be under the direct control of air traffic control. The spacing between aircraft on approach to the runway should be increased to allow additional time for the preceding arriving aircraft to vacate the localiser sensitive area. Similar increased spacing should be provided between an arriving aircraft and a departing aircraft, to avoid possible interference with the localiser and glide path signal by the later.

The Surface Movement Guidance and Control System, or SGMCS, adopted at the aerodrome should be designed to meet the operational requirements for guidance and control of all authorised movements - aircrafts, vehicles and personnel - during low visibility conditions. The SMGCS should be an appropriate combinations of visual aids, non-visual aids, radiotelephony communications, procedures, control and information facilities for guidance and control of aerodrome surface traffic. Control, surveillance and safety should be enhanced by the use of supplementary facilities, such as surface movement radar, controllable taxiway lights and stop bars. Surface movement control procedures should ensure that runway incursions are prevented when the runway is required for take-off and landing operations.

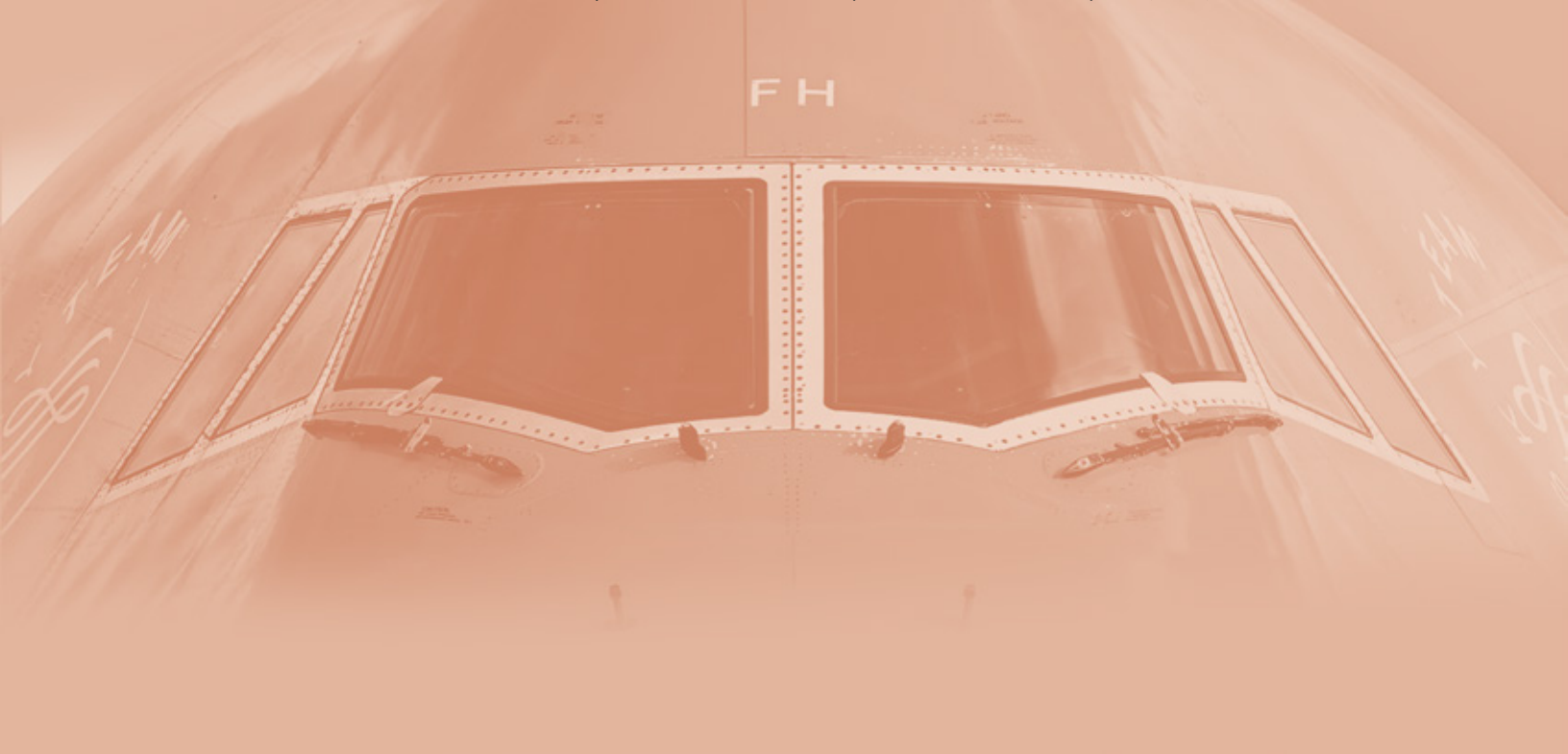
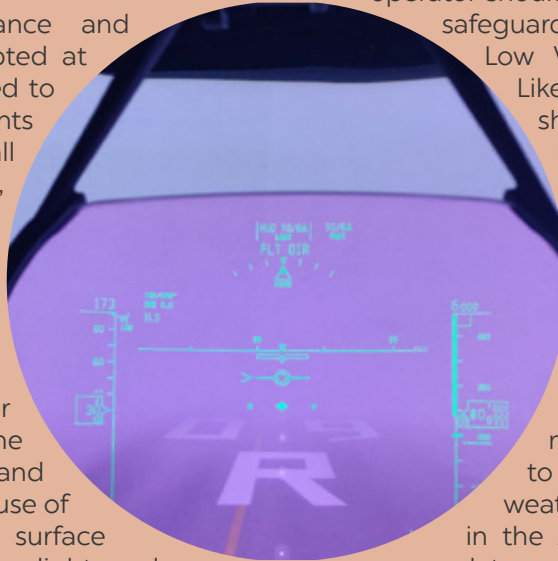
Essential vehicles, including Rescue and Fire Fighting Services vehicles, should be able to manoeuvre in limited visibility conditions. These vehicles should be strategically located during Low Visibility Operations so that these essential services are available in a timely manner. The

vehicles should be driven by authorised drivers and equipped with radiotelephony communications. Vehicle drivers should maintain contact with air traffic control at all times.

Particular attention should be given on the notification of Low Visibility Procedures status, particularly when the procedures are introduced or withdrawn. Aerodrome operator should inform to air traffic control that all safeguarding measures are in place before Low Visibility Procedures are declared. Likewise, Low Visibility Procedures should not be declared as cancelled before the aerodrome operator withdraws any safeguarding measures.

Low Visibility Procedures for aerodromes that operate in limited visibility conditions shall be developed by the aerodrome operator, including safeguarding measures and procedures required to protect aircraft operations in poor weather conditions, and documented in the Aerodrome Manual. Procedures to regulate movement of aircraft and vehicles by air traffic control, including notification to pilots on the Low Visibility Procedures status, should be documented in the Manual of Air Traffic Services.

The Civil Aviation Authority Malaysia and Malaysia Airports are reviewing the Low Visibility Procedures and status of essential SMGCS, for the safe and efficient management of Low Visibility Operations at the Kuala Lumpur International Airport (KLIA).



SURPRISE! STARTLE EFFECT ON THE FLIGHT DECK.

By Captain Johan Md Rosnan



Definition

The **startle response**, which in professional circles is also referred to as amygdala (or limbic) hijack, is the physical and mental response to a sudden intense and unexpected stimulus. This physiological reaction, which is most commonly known as the “fight or flight” reflex, will occur in response to what may be perceived as a harmful event: an attack, a threat to survival, or more simply, to fear itself. The fight or flight response enables us to react with appropriate action: to run away, to fight, or sometimes, to freeze to be a less visible target. In some circumstances, it can also lead to actions inappropriate for the situation.

In aviation, startle effect can be defined as an uncontrollable, automatic reflex that is elicited by exposure to a sudden, intense event that violates a pilot’s expectations.

Description

The startle effect includes both the physical and mental responses to a sudden unexpected stimulus. While the physical responses are automatic and virtually instantaneous, the mental responses - the conscious processing and evaluation of the sensory information - can be much slower. In fact, the ability to process the sensory information - to evaluate the situation and take appropriate action - can be seriously impaired or even overwhelmed by the intense physiological responses.

These changes in physiological activity include:

- **Cardiovascular System:** Heart rate increases, blood pressure rises and coronary arteries dilate to increase the blood supply to brain, limbs and muscles
- **Respiratory System:** Depth and rate of breathing increases providing more oxygen to the body
- **Endocrine System:** Liver releases additional sugar for energy. Adrenal glands release adrenalin
- **Muscular System:** Muscles tense in readiness for immediate action
- **Excretory System:** Sweat production increases
- **Nervous System:** Brain activity changes, reactions become less reasoned and more instinctive

Effects

In addition to the previously listed temporary physiological changes which follow a high intensity stimulus, studies have determined that, following a startling stimulus such as a loud noise, basic motor response performance can be disrupted for as much as 3 seconds and performance of more complex motor tasks may be impacted for up to 10 seconds.



The time that it takes to recover in a cognitive sense, after a startle event, must also be considered. Startle has been found to impair information processing performance on mundane tasks, such as the continuous solving of basic arithmetic problems, for 30 to 60 seconds after the event occurrence. The duration of the performance degradation increases as the task becomes more complex. Thus, the startle effect disrupts cognitive processing and can negatively influence an individual's decision making and problem solving abilities.

Consequences

As concluded by Martin, Murray and Bates in their paper *The Effects of Startle on Pilots During Critical Events*, the reliability of modern aircraft is part of the context in which inappropriate actions are sometimes taken after an unexpected event:

"... one of the common themes as aircraft become more reliable is that pilots are surprised or startled by some event and as a result have either taken no action or alternatively taken the wrong action, which has created an undesired aircraft state, or in some cases, an accident. This surprise or startle is largely due to the enduring reliability of the aircraft and the aviation system, which has unwittingly created a conditioned expectation of normalcy among today's pilots...The problem then is the level of expectation of novel or critical events is so low that the level of surprise or startle which pilots encounter during such events is higher than they would perhaps have had some decades ago when things went routinely wrong."

On the flight deck, pilots may be exposed to a variety of stimuli that have the potential to elicit the startle reflex and response. Bird strike, aircraft upset, simultaneous failure of multiple engines and visual stimuli, such as sudden illumination by lasers, have all resulted in incidents where pilots have been startled or even disoriented. In aviation, the immediate impact of the startle reflex may induce a brief period of disorientation as well as short term psychomotor impairment which may well lead to task interruptions and/or a brief period of confusion. Should this happen, a period of time will be required for reorientation and task resumption. While performance after a startle event can be affected to the detriment of safety of flight, the greater concern stems from what the crew did, or did not do, during the conditioned startle response itself. It is here that decision making can be most significantly impaired, especially higher-order functions necessary for making judgments about complex flight tasks.

Strategies for Improving Startle Performance

Researchers have identified a number of strategies that can reduce the negative effects of startle and help improve pilot performance during and immediately following a startle event. These include:

KNOW YOUR AIRCRAFT:

Develop a sound technical knowledge of your aircraft type and maintain it with regular revision.

MAINTAIN HANDLING SKILLS:

Be competent and comfortable flying the aircraft "without the automation".

TRAIN APPROPRIATELY:

Simulator exercises should be conducted in a constructive manner with a focus on evidence based (most likely) events. However, there should also be constructive use of unexpected critical events.

BE COGNISANT OF YOUR SURROUNDINGS:

Develop and maintain effective situational awareness skill-sets. The Pilot Monitoring (PM) should actively monitor the Pilot Flying (PF) and both should actively monitor the aircraft automation.

AVOID COMPLACENCY:

Have a healthy expectation and suspicion for things going wrong

ANTICIPATE THREATS:

Utilise effective threat and error management (TEM) strategies.

HAVE A PLAN:

Mentally rehearse or foster crew discussion of a "plan of action" for both common non-normal events, and for the rare, "out of the ordinary" events such as ditching, upset or uncontrollable fire. Adopt a "what would I do if.." mindset.



Accidents in Which Startle Effect Was Considered a Factor

- A332, en-route, Atlantic Ocean, 2009 (On 1 June 2009, an Airbus A330-200 being operated by Air France on a scheduled passenger flight from Rio de Janeiro to Paris CDG as AF447 exited controlled flight and crashed into the sea with the loss of the aircraft and all 228 occupants. It was found that the loss of control followed an inappropriate response by the flight crew to a transient loss of airspeed indications in the cruise which resulted from the vulnerability of the pitot heads to ice crystal icing)

- DH8D, vicinity Buffalo NY USA, 2009 (On 12 February 2009, a Bombardier DHC-8-400 also known as a 'Q400' which was being operated by Colgan Air on a scheduled public transport flight in the USA from Newark to Buffalo-Niagara under a Continental Airlines flight number as part of a codeshare agreement in place between the two operators was on an ILS approach to the destination runway in night VMC when control was lost and the aircraft crashed and burned in a residential area approximately 5 nm from the runway killing all occupants and one additional person on the ground)

- A320, en-route Karimata Strait Indonesia, 2014 (On 28 December 2014, an A320 crew took unapproved action in response to a repeating system caution shortly after levelling at FL320. The unexpected consequences degraded the flight control system and obliged manual control. Gross

mishandling followed which led to a stall, descent

at a high rate and sea surface impact with a 20° pitch attitude and a 50° angle of attack four minutes later. The Investigation noted the accident origin as a repetitive minor system fault but demonstrated that the subsequent loss of control followed a combination of explicitly inappropriate pilot action and the absence of appropriate pilot action.)

References

1. ^ FAA Advisory Circular 120-111 dated 4/14/15 - Upset Prevention and Recovery Training
2. ^ Martin, W., Murray, P. and Bates, P. (2012). The Effects of Startle on Pilots During Critical Events: A Case Study Analysis. www98.griffith.edu.au

INTRODUCING CAAM COMPLIANCE QUESTIONNAIRES

By **Captain Johan Md Rosnan**

What exactly is Compliance Questionnaires (CQ)? Here's a brief introduction to this new initiative from CAAM Flight Operations Division.

The Civil Aviation Authority Malaysia (CAAM) has the obligation to conduct safety oversight (audits) to the aviation related operators in Malaysia from the large commercial air transport operators, flying clubs, training organizations, general aviation operators, ground handling operators and many more. This is to ensure that the operators meet all the requirements and functions to an acceptable level of competency and safety as required.

With the CQ, audits will be based on a single and structured checklist in digital format (online platform). Aiming to achieve standardization and with more lead time resulting to a more comprehensive and complete audit process. This new process will create better collaboration between both the auditees and auditors to achieve the same ultimate goal, 'SAFETY IN AVIATION'.

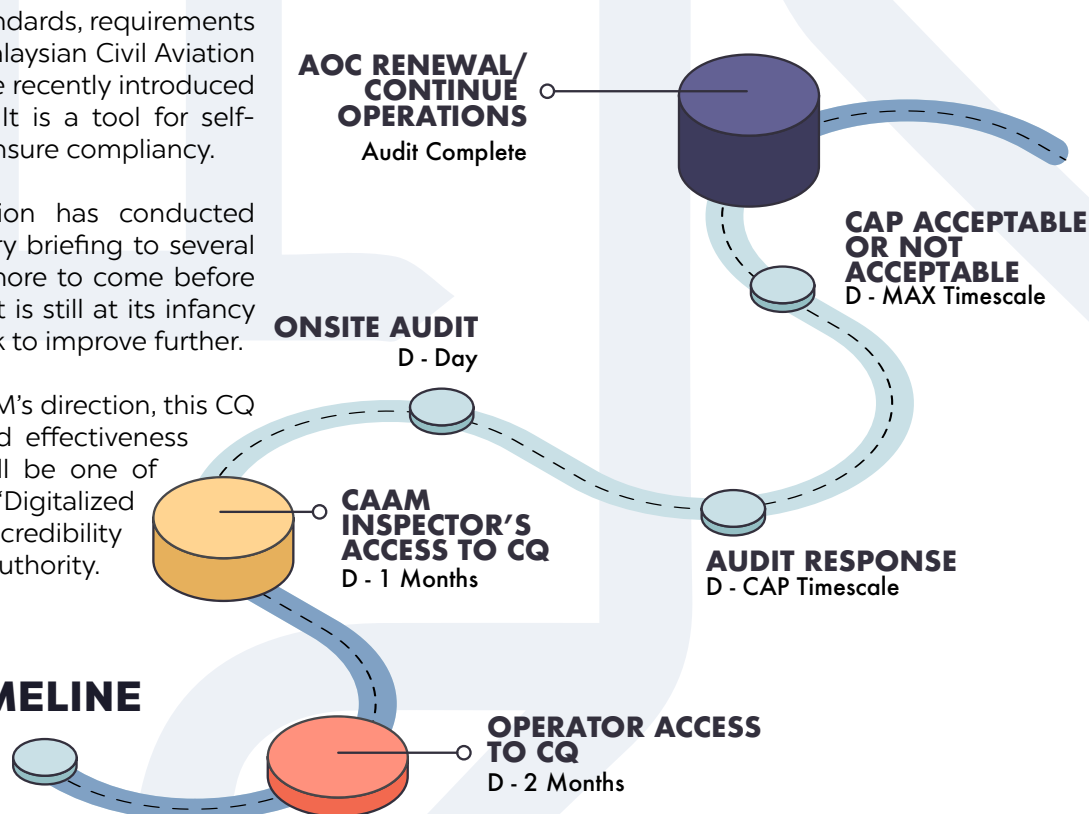
CQs are a set of questions on standards, requirements and procedures derived from Malaysian Civil Aviation Regulations (MCAIR) 2016 and the recently introduced Civil Aviation Directives (CADs). It is a tool for self-assessment for the operator to ensure compliancy.

CAAM Flight Operations Division has conducted several trial runs and introductory briefing to several aviation related operators and more to come before it will be fully implemented. As it is still at its infancy stage, we are collecting feedback to improve further.

In summary, in line with the CAAM's direction, this CQ will improve standardization and effectiveness of the safety oversight. This will be one of the many steps towards a fully "Digitalized CAAM" while strengthening our credibility and reputation as a competent authority.



AUDIT TIMELINE





By **Khairana Rahman**

A DAY IN THE LIFE OF A PILOT

WITH CAPTAIN HAMDAN CHE ISMAIL

In our previous edition, we had explored on what happens behind the scenes of an Air Traffic Controller; guardians of the airspace. In this issue of AWAN, I had the privilege to talk to a flying superhero! Meet Captain Hamdan Che Ismail, Director of Flight Operations, Malaysia Airlines Berhad (MAB). His name may sound familiar as he was recently all over the news, famously known as the pilot who successfully flew in the first batch of COVID-19 vaccines to the country back in February 2021. With his humble beginnings from Tumpat, Kelantan, Captain Hamdan carries with him decades of experience under his belt. I was lucky to have sat with him (virtually) for a fun-filled and truly enlightening interview where he shared his inspiring journey from being a cadet pilot, captain then moving on to management roles and climbing up the corporate ladder to where he is today.

First of all, can you tell us about your earlier journey as a pilot, Captain?

I came from a small town near the city of Kota Bharu, by the name of Tumpat. I studied at MARA Junior Science College (Maktab Rendah Sains MARA) and graduated in 1989 - that would reflect how 'old' I am. It was then, that the aviation industry in Malaysia was going through rapid expansion. I joined Malaysia

Airlines System (MAS) in 1991 as a cadet, completed my training in 1992 and commenced my career with the airline till to-date. My loyalty has always been with this company and I guess it is in my generation's DNA to remain loyal to one company. Happy to say, I have now been in the aviation industry for almost three decades.

I started my career as a co-pilot on a B737-400 for three years before being promoted as a co-pilot on a B747. In the year 2000, after achieving the required hours, there was an opening for a command position and I applied for the Captain's post and was successful. I was also given the opportunity to 'put on' many hats. Apart from being the Captain on a B737, I was also an instructor and an examiner. I then made a career move to assume a managerial position as a Technical Manager. Needing more challenges in my career, circa 2010, I joined the wide body aircraft team and manage to fly the Airbus 330 as well as the latest Airbus 350. Along the way, I was appointed as the Fleet Manager; responsible for the A330 pilots in the company.

Fast-forward to 6 years ago in 2015, during the MAB restructuring process, I was promoted as the Director

I persevered because I always believe, in life, we have to go for it and challenge ourselves to become better. I came in with the perception that being a pilot and a trainer was enough, but through the years, I have been fortunate to be given the trust to do even more



Your journey was also in tandem with historic milestones in the Malaysian aviation industry. I am curious, in the early 90s, what types of aircraft was used back then?

While I was at the Malaysian Flying Academy (MFA), there were three types of aircraft, if I'm not mistaken. I flew the Piper Seneca for my Commercial Pilot License/Instrument Rating (CPL/IR). At that time, the Airline Transport Pilot's License (ATPL) was not mandatory for commercial transport.

Fascinating! Moving on to the big WHY. Why did you choose to be in this industry?

Back in school, it was not my ambition; it never came across my mind to be a pilot. My goal was more inclined towards the medical or engineering field. After my finishing Sijil Pelajaran Malaysia (SPM) examination back in high school, I was offered to take an engineering course, but I figured it will take a long time to complete the degree. I then saw an advertisement for cadet pilots training programme, and thought that, after one and a half years of training, I'll be able to start earning my own money. That became my motivation, I wanted to help my family financially and provide them with a more comfortable life. My parents were not too happy about it, but they eventually relented, as long as I could take care of myself. I ended up falling in love with aviation and thought to myself, its almost similar to engineering anyways.

Throughout your career, what were the most memorable and challenging experiences for you, flying across the globe?

In 2004, Egypt was going through a political crisis and it had affected the safety and security of the country. I was assigned to fly a relief flight into Cairo to bring back as many Malaysian students as possible. We knew that the risks involved were high, but my curiosity got the better of me and I still insisted on going to see the pyramids. Fortunately, there were no crisis on ground and



of Flight Operations, a position I hold to this day. To be honest, I was not completely ready at that time to assume such big responsibilities that came with the position. However, I took up that challenge and I struggled with a very steep learning curve especially on managing people and various organisations' directions. Alhamdulillah, I persevered because I always believe, in life, we have to go for it and challenge ourselves to become better. I came in with the perception that being a pilot and a trainer was enough, but through the years, I have been fortunate to be given the trust to do even more.



As a pilot, one of our biggest enemy, or even fear, during a flight is always the weather. One of the most challenging times I experienced was flying through a typhoon and it was the most difficult turbulence I ever had to handle.

we managed to fly back safely. Another memorable experience was when we brought the two adopted pandas, Xing Xing and Liang Liang from China to our country back in 2014 to symbolise the 40th anniversary of diplomatic relations between Malaysia and China. Having been part of the team fostering better diplomatic ties between the two countries was indeed an honour.

As a pilot, one of our biggest enemy, or even fear, during a flight is always the weather. One of the most challenging times I experienced was flying through a typhoon and it was the most difficult turbulence I ever had to handle. The atmosphere during the flight was intense and passengers were in distress but luckily we survived. Upon touchdown at Manila International Airport, I heard the applause from the passengers and felt so relieved.

Another memory that I can never forget was when I was flying a Hajj flight and flying over the Bay of Bengal, I received a message from the flight attendants that one of the passenger needed critical medical attention. I was faced with making a decision of either to continue to our destination or divert to the nearest aerodrome. After receiving information that the passenger's chances of survival were slim, I had to make the tough decision of continuing the journey. As pilots, there's always the pressure to keep passengers and cabin crew safe on all flights and we must always be prepared to make critical decisions with limited time on our hands but these things are what challenges us and makes us better at what we do.





With the current pandemic, do you still have the opportunity to fly?

My last flight was in February this year. Even before the pandemic, due to my schedule and having to assume more management responsibilities, I have limited my schedule to one flight a month, but as a pilot, I do miss flying.

Congratulations on being the first pilot to fly in the first batch of the COVID-19 vaccines to Malaysia. I heard it was the most nerve-wrecking moment for you. Could you tell us more about it?

Thank you. I have read about media portraying it as a nerve-wrecking journey but from a pilot's perspective, it was a pretty standard flight. Everything had been handled by logistics before loading the vaccines into the aircraft. While there are complicated procedures and conditions to keep the vaccine at a certain temperature, the containers themselves have been regulated to meet the requirements. Kudos to the ground staff and everyone involved for making it all happen. What we needed to do was to ensure that we arrived in Malaysia on time as we had many people waiting for the precious cargo to arrive. I am indeed proud to be part of this historic moment for the country.

With such an inspiring career, would you like to give any words of advice to aspiring young pilots out there?

I would say, always go for it. Though, you must always prepare yourself with the right soft skills that are out of the aviation's purview such as financial literacy. These are skills that can be transferred and that are handy not just in aviation, but in other parts of your lives too. Trust that the aviation industry will be back on her feet and it's one of the best industry to be in.



CAAM CARES

The COVID-19 pandemic has brought huge impact to the world of aviation and being one the most badly hit industry. Due to this, thousands of those working in the aviation industry were told to take unpaid leave and some even retrenched due to the sharp reduction in number of flights. Despite the struggle during these trying times, our fellow aviators have remained resilient and positive with some taking up new ventures and initiatives to keep afloat by starting up new businesses. The Civil Aviation Authority of Malaysia (CAAM) took the initiative to launch the #CAAMCares campaign aimed to help promote businesses or services run by former aviation personnel on CAAM's official social media platforms on a weekly basis. #CAAMCares is one of our commitments to help aviation personnel affected by the COVID-19 pandemic. CAAM hopes, through this effort, we can together help those affected and bring hope to their lives during these trying times.