



ASIAN Aviation

VOL 24, NO. 03 MAY-JUN 2026

ASIA'S ONLY COMPREHENSIVE INDEPENDENT INDUSTRY PUBLICATION

A New Priority

INDIA, OEMS BEEF UP
MRO INVESTMENTS

SUPPLY CHAIN

Can a new financial model
improve the sector?

BUSINESS AVIATION

FBOs put on the show
in Asia

ATM-ATC

Being a controller is not
for the faint of heart

Jamco Interiors



We design for what
people remember

jamcointeriors.com



10



16



18



21



On the cover: (PHOTO: Shutterstock)

- 4 VIEWPOINT**
War – what is it good for? Part II

✈ NEWS

- 5 PEOPLE ON THE MOVE**
6 BUSINESS AVIATION NEWS
7 ROTOR/AAM NEWS
8 MRO NEWS
9 INTERIORS NEWS

✈ FEATURES

- 10 ASIA'S AVIATION BOOM HITS TURBULENT SUPPLY CHAIN**
With aircraft deliveries slipping and backlogs surging, could airlines and manufacturers explore new financing models to keep growth on track? Tom King reports.
- 13 INDIA MOVES TO MAKE MRO A KEY SECTOR**
India has big ambitions when it comes to maintenance, repair and overhaul (MRO) and moves are happening to help it exploit its ambitions. Shelley Vishwajett reports.
- 16 FBOS PRODUCE THE SHOW IN APAC**
The overall demand for private aviation services is increasing across Asia-Pacific but within the region markets are travelling at different speeds. While the sleek aircraft are the stars of the show it is the Fixed Base Operators (FBOs) on the ground that keep the show on the road reports Michael Doran.
- 18 SAFETY IN A FRAGMENTED SKY**
From airspace closures to intelligence-led risk assessments, global aviation is adapting to a more volatile operating environment. Roetta Wang reports.

- 21 CONTROLLER PIPELINE**
Air navigation service providers in the Asia-Pacific are stepping up efforts to secure the next generation of air traffic controllers. Emma Kelly reports.

✈ NEXT ISSUE

SUSTAINABILITY
Industry committed to net zero, but SAF still lags.

TRAINING
What rules are in place for eVTOL pilots and who trains them?

PAX EXPERIENCE
Biometric scanners are stepping up their game at Asian airports.

✈ @AsianAviation

in Asian Aviation Magazine

f Asian Aviation (AAV)

Read AAV any time, any where
at asianaviation.com

MICA (P) 198/02/2007

Editor: Matt Driskill
matt.driskill@asianaviation.com

Managing Director/Publisher:
Marilyn Tangye Butler
marilyn.tangye@asianpressgroup.com.sg

Contributors
Australia: Michael Doran, Emma Kelly
Singapore: Tom King
India: Shelley Vishwajett
Hong Kong: Roetta Wang

Graphic Design: Elinor McDonald
email@elinor.net.au

Head Office — Singapore
Asian Press Group Pte Ltd

Subscriptions: Rose Jeffree
subscriptions@asianaviation.com

Advertising Offices
& Representation

Worldwide: Sally Passy
Phone/Mobile: +44 7968 714 280
sally@bspmedia.com

Printer: Times Printers Pte Ltd
ISSN 0129-9972

April 2024 Readership 8761

© ASIAN PRESS GROUP Pte Ltd

Contributor's opinions do not necessarily reflect those of the publisher or editor and while every precaution has been taken to ensure that the information contained in this publication is accurate and timely, no liability is accepted by the publisher or editor for errors and omissions, however caused. Articles and information contained in this publication are the copyright of Asian Press Group Pte Ltd (unless otherwise stated) and cannot be reproduced in any form without the written permission of the publisher. The publisher cannot accept responsibility for loss or damage to uncommissioned photographs, manuscripts or other media.



War — what is it good for? Part II

Still absolutely nothin' is what war is worth. The world is in the grip of the madness of 'King' Trump, and aviation finds itself smack in the middle as airlines race to secure fuel supplies, ground aeroplanes, and cut capacity. The more-than-ill-conceived US-Israel war on Iran continues, with new uncertainties delivered daily.

Cirium is reporting that global capacity for May has already been reduced, with airlines cutting flights and frequencies. In a recent report, the company said: "Turning to the 100 largest carriers, those with the biggest reductions in planned capacity unsurprisingly have several from the Middle East at the top of the list. However, there are airlines from a wide variety of countries represented in the data. Southeast Asian carriers appear to have been greatly impacted, consistent with media reports of fuel supply shortages in Vietnam and Philippines. Airlines from Malaysia and Indonesia have also cut planned schedules by around 10-15 percent. Some smaller Chinese airlines are also included, such as Sichuan Airlines and Xiamen Airlines."

Cirium also said, "The more severe scenarios will require airlines to take additional action. Older, less fuel-efficient aircraft are the most likely to see utilisation cuts or parking. Airlines will seek to preserve cash in such circumstances, implying maintenance deferrals and fewer lease extensions. New aircraft deliveries appear less vulnerable, given the obvious fuel savings they deliver, but airframers themselves may face additional supply chain issues."

Bloomberg reported that Qantas Airways is reducing its flights to the US and will also cut domestic flight capacity by about 5 percent as it estimates an extra A\$800 million (US\$575 million) on its fuel bill in the second half of its fiscal year.

Hong Kong's Cathay Pacific is cutting 2 percent of flight frequencies across the Asia-Pacific region from mid-May to the end of June. Its money-losing budget unit, HK Express, is implementing a steeper 6 percent pullback. The cuts come after fuel levies of as much as US\$400 were imposed on long-haul, round-trip services, Bloomberg reported.

"We have pursued every suitable means to keep our flights operating as normal," Cathay Chief Customer and Commercial Officer Lavinia Lau said. "However, these measures have not been enough to mitigate the significantly increased fuel costs."

Mainland China-based airlines, which also lack fuel-hedging protection, are stepping up daily flight cancellations, according to a Bloomberg News analysis of data from Chinese provider DAST. The uptick in cuts comes as Chinese carriers schedule fewer daily domestic flights, according to data compiled by BloombergNEF.

What this means is the aviation industry will be saddled with

*...the aviation industry
will be saddled with
higher jet fuel prices for
the foreseeable future
because even if the
war stopped today ... oil
prices will not suddenly
drop to pre-war levels.*

higher jet fuel prices for the foreseeable future because even if the war stopped today and a permanent end to hostilities was agreed to, oil prices will not suddenly drop to pre-war levels. Trump is still in office and there is literally no telling what he will do. Iran could release another one of its Lego-based AI short videos mocking him that have proven very effective on social media and Trump could restart hostilities with a social media post. Israel too might restart its bombing campaign and might go it alone should the US decide to bow out as the November elections edge closer and closer.

The uncertainty will also spill over into non-airline travel sectors. Hotels, rental cars, airports, taxis, you name it, if it has to do with travel, it will suffer.

Ironically, despite the worries of Asian airlines over fuel supply and cost, they are benefiting somewhat from the absence of flights in the Middle East, where Gulf carriers like Qatar and Emirates had carved out a very lucrative business carrying passengers from Asia to Europe with a stop in the Gulf.

Major Asia-Pacific carriers like Singapore Airlines, Qantas and Cathay have been reporting better traffic from Europe to Asia as travellers skip Gulf carriers. Cathay officials said they have added additional flights and capacity to Europe in March and April. Singapore Airlines said the percentage of seats filled on its European flights jumped to 93.5 percent in March, up from 79.7 percent a year earlier, due in part to spillover Europe-bound traffic as capacity through Middle East hubs fell, according to media reports.

Whatever one's politics are, I think we can all agree that this is not a "just" war like World

War II. It is a war of choice by Israel and the US. Yes, the Iranian government has threatened Israel, chanted "Death to America", and was enriching uranium. But remember how the Iranian theocracy came to power — it was after the US overthrew a democratically elected prime minister in 1953 and installed the Shah, who then, with US support, terrorised his own people with his secret police. And were we not assured by Trump that Iran's nuclear programme had been "obliterated" when the US dropped bunker-busting bombs on Iran's nuclear sites? Wasn't the Strait of Hormuz open before the US and Israel attacked? And how much longer must the world — and aviation — suffer before this madness ends?

War — what is it good for? Absolutely nothin'.

Matt Driskill EDITOR
matt.driskill@asianaviation.com



AEROPRIME GROUP, a global aviation services company, has named Bhavana Khera as assistant vice president for marketing and customer success for cargo.



AIR FRANCE INDUSTRIES KLM ENGINEERING & MAINTENANCE (AFI KLM E&M)



announced several new appointments. It has named Vincent d'Andrea as executive vice president of Air France Industries; Gilles Mercier has been named SVP Airframe



Maintenance; Tommaso Auriemma has been appointed as Barfield's CEO, which is a unit of the company. The company also named Magali Jobert as vice president sales Asia Pacific. The



company also named Benoît Rollier as vice president KLM Engine Services.



APOC AVIATION has made new appointments to its global sales team. Bill Chen has been named regional sales director —



Landing Gear (Asia-Pacific). Also joining the Landing Gear team, based in Lithuania, is Dovydas Vaitkevičius. Joining the



components team based in the UK, is Anna Coval as sales manager. Also based in the UK,



Jarhyd Rees has been named sales manager — Engines.



CAPITAL A has appointed Effendy Shahul Hamid as deputy chief executive officer. After the disposal of its aviation businesses to AirAsia X, Capital A now sharpens its focus to growing and scaling its other core businesses.



CHAPMAN FREEBORN has appointed Latha Narayan as president for APAC. In this role, Narayan will lead the company's strategic and commercial development across the Asia



Pacific region. Chapman Freeborn has also appointed Adnan Rahal as senior vice president of business aviation.



DEUTSCHE AIRCRAFT has appointed Nils Heuer as director of global sales driving the company's commercial expansion as the D328eco advances toward key milestones. Deutsche Aircraft also named Wolfgang Kuhl as vice president Programs & Innovation.



GERMAN AIRWAYS has appointed Axel Scheffe as managing director of technology.



Since 2007, Axel Scheffe has held various leadership positions in the aviation sector, overseeing fleet management and strategic technical procurement.



INK INNOVATION has recently made three senior appointments to drive its strategy across technology, growth, and delivery. José Santamaría, with over 20 years of experience, is leading the technology and engineering organisation as CTO. Oana Savu, with a background in strategy



and technology, is focusing on accelerating ecosystem adoption and expanding into new markets as chief growth officer. Amanda Grafton, with over 30 years in the travel industry, is driving strategic innovation programmes within customer technical stacks.



JOB AIR TECHNIC, a subsidiary of the FL Technics Group, has appointed Jakub Dvořák as chief executive officer with effect from 1 May. He will succeed the current CEO, Imrich Czére.



LOGANAIR confirmed that Scott Cunningham will be joining the airline as chief financial officer, bringing over 25 years of finance and leadership experience to the team.



MAGMA AVIATION has named Paul Hoatson director of Commercial & Network Planning. Having previously served as Head of Network Planning & Alliances, Hoatson has played an instrumental role in shaping Magma Aviation's network strategy, route development initiatives, and partnership framework.



SABRE announced the appointment of Niklas Andréen as chief commercial officer for airline tech. Andréen will lead global airline sales, account management, commercial strategy, business development and customer support.



Aircraft investment specialist **STRATOS** announced the addition of three senior industry professionals to its team: Kushal Patel joins as head of Asia based in Singapore; Muna Mohammad joins as vice president Risk & Restructuring based in London and Tuulia Rajamaki has been named senior advisor for legal.





GULFSTREAM TAPS MJETS AS SALES REP FOR THAILAND

Gulfstream Aerospace has appointed MJets as the authorised international sales representative (ISR) for Gulfstream business aircraft in Thailand. Under the agreement, MJets will be responsible for promoting and supporting Gulfstream with customers and prospects throughout the country. Gulfstream continues to see significant growth in Asia, particularly with its newest aircraft models, the Gulfstream G700 and G800, as operators look for a quality aircraft with the performance, comfort, speed and range required to travel to farther destinations faster. Several G700 aircraft have already been delivered to the region, with the first G800 aircraft coming in 2026. "As we continue to see business aviation grow throughout Asia, we are looking forward to leveraging MJets' local expertise to provide customers and prospects the opportunity to experience the high quality and craftsmanship of Gulfstream aircraft firsthand," said Michael Swift, group vice president of international sales, Gulfstream.

SIMPLY JET ANNOUNCES THE SUCCESSFUL SALE OF TWO JETS

Simply Jet announced the successful sale of two business jets during the first quarter of 2026. Simply Jet facilitated the sale of a 2017 Cessna Citation M2, which had remained inactive for two years prior to being brought to market. The company's technical teams helped prepare the aircraft for sale and for its ferry flight to the United States. The second transaction involved a 1999 Learjet 60. After spending more than 25 years flying around South Africa, Simply Jet's sales and acquisition team coordinated its export and ferry flight to Europe in the spring of 2025. The aircraft was then chartered to third parties for several months prior to its sale, allowing the owner to offset operating costs.

BOND upgrades commitment to Bombardier

Fractional ownership company BOND announced that it has expanded its Bombardier commitment up to \$5 billion following its October 2025 launch. BOND is accelerating deliveries for 2027 within its existing aircraft order to meet demand, adding four new firm orders for Global aircraft, and upgrading 24 of its existing aircraft options to Global 8000 aircraft with the flexibility to convert them to Global 6500s. The increased commitment reflects BOND's total relationship with Bombardier, including all firm orders, options, and a first-of-its-kind service agreement. The expansion comes as demand at the top of the private aviation market continues to outpace supply, particularly among owners seeking newer aircraft, a more customer-friendly ownership model, and highly personalised service. While fractional aviation has scaled by increasing mass demand access to light and midsize aircraft types, BOND prioritises exclusivity over scale in the super-mid to ultra-long-range types. "What's driving BOND isn't just demand — it's conviction," said BOND founder Bill Papariella. "Our founding members aren't passive buyers. They co-invested in the company because they believe this model should exist. When some of today's most prolific entrepreneurs, investors, and entertainers put capital behind the operator, not just the aircraft, that tells you something about how underserved the premium end of this market has been." BOND was built to address the appetite for a more premium ownership experience at the top of the market. As the first exclusively super-midsize and large-cabin fractional fleet in private aviation, it operates with fewer owners per aircraft, a members-only fleet, flight attendants on every flight, and the most premium interiors in the market. Further, all aircraft are backed by a first-of-its-kind, fully integrated OEM-operator partnership with Bombardier, ensuring safety, maximum uptime, and exceptional operational reliability. The Global 8000 is Bombardier's flagship aircraft, the world's fastest civilian aircraft since Concorde, combining long-range capability with a spacious cabin designed for extended travel. BOND's interest in the Global 8000 reflects where demand has been strongest since launch: among customers seeking the highest level of capability and service. The expanded commitment follows overwhelming demand from BOND's founding member investment round, which attracted a concentrated group of ultra-high-net-worth individuals and large-scale institutional CEOs. Leveraging an investment model new to the fractional aviation industry, all of BOND's founding members have not only purchased fractional interests in specific aircraft, but have also co-invested in the company itself, aligning BOND's first full year of aircraft owners with the company that operates the fleet. In support of the accelerated delivery schedule for 2027 member commitments, KKR has increased BOND's credit facility to \$290 million.

VIETNAM'S VNH ORDERS AIRBUS H225 HELICOPTERS

The Vietnam Helicopter Corporation's (VNH) subsidiaries, Southern Vietnam Helicopter Company (VNH South) and Northern Vietnam Helicopter Company (VNH North), have placed an order for three Airbus H225 helicopters to support the continued expansion of its offshore energy operations and progressively replace ageing aircraft in its fleet. "The H225 has proven itself time and again across our offshore missions, delivering the reliability, performance, and safety we expect. As we look ahead, we see the H225 forming the backbone of our future fleet, allowing us to modernise our operations while expanding capacity and mission flexibility," said Kieu Dang Hung, CEO of VNH. "We are honoured to continue supporting VNH and its subsidiaries as they strengthen and revitalise their fleet. Their decision to centre future operations around the H225 underscores the aircraft's exceptional reliability and performance in demanding offshore environments," said Matthieu Louvot, CEO of Airbus Helicopters. "Our enduring partnership with VNH is built on trust and shared commitment to mission success, and we look forward to supporting their growth for many decades to come," he added. The new H225s will join VNH's existing Airbus fleet, consisting of Super Puma and H155 helicopters, for deployment across offshore energy transport, utility missions, search and rescue, and broader transport operations.



AmBank backs Malaysia's Weststar Aviation Services

AmBank Group, through AmBank Islamic, has granted RM2 billion (US\$420 million) financing to Weststar Aviation Services to strengthen Malaysia's aviation transportation infrastructure. The financing is part of a syndicated financing facility to support Weststar's helicopter fleet expansion, strengthen working capital, and facilitate the management of foreign exchange requirements, enhancing Weststar's leadership in shaping the future of the nation's aviation landscape. The expanded fleet will also support oil and gas operations, providing essential offshore transportation services to Malaysia's energy sector, while further accelerating Weststar's growth in the defence and emergency response sectors in support of national priorities. Jamie Ling, Group Chief Executive Officer, AmBank Group said, "We are pleased to support Weststar in scaling its operations and reinforcing its global footprint. As the company continues to lead the way in aviation innovation and reliability, its expanded capabilities will contribute to supporting commercial oil & gas operations vital to the nation's energy security and also further enhance Malaysia's defence and emergency response readiness which is another service track offered by Weststar to the Malaysian government." Dr. Syed Azman Syed Ibrahim, Group Managing Director of The Weststar Group, said: "Weststar's strength lies in our ability to innovate, diversify, and remain agile in an increasingly complex global landscape. This strategic collaboration with the AmBank will accelerate our fleet expansion while further strengthening our operational capabilities both domestically and internationally. It enhances our resilience, supports critical sectors such as oil and gas, defence, and emergency services, and reinforces our commitment to advancing Malaysia's economic strength and regional competitiveness. Together with AmBank, we are confident in delivering sustainable growth, supporting national priorities, and positioning Weststar as a key driver of future growth industries."

EVE AIR MOBILITY HITS 50TH FLIGHT MILESTONE

Eve Air Mobility said it has reached its 50th successful test flight with its full-scale engineering prototype, accumulating over two hours of flight time. Since the aircraft's first flight on 19 December 2025, these flights have generated high-fidelity data and knowledge gains that are strengthening Eve's understanding of performance and systems behaviour as the company

advances toward the future certification pathway of its eVTOL. The fast pace of testing continues to validate the performance and operational capability of Eve's eVTOL. This achievement spotlights the company's product development process, based on the proven Embraer methodology. This consists of an integrated approach that combines aircraft development with

solutions to help operators, cities, vertiports and air navigation providers prepare for the introduction of urban aviation. With 50 test flights completed, Eve is now expanding flight envelope evaluations, gradually increasing forward speed, evaluating energy management, controllability and stability, noise and vibration, among others, leading to full transition flights later this year.



Pratt & Whitney Canada launches PT6C-67C and PW127XT MRO services in Singapore

Pratt & Whitney Canada has launched new maintenance, repair, and overhaul (MRO) services for helicopter and regional turboprop engines at its Singapore facility. These expanded capabilities are designed to strengthen support for the more than 300 PT6C-67C-powered Leonardo AW139 helicopters operating in the region, while increasing global MRO capacity for the PW127XT engine, which powers current-generation ATR 42/72 aircraft, with future application on the Deutsche Aircraft D328eco. Pratt & Whitney is an RTX (NYSE: RTX) business. "Pratt & Whitney Canada's Singapore facility has been a cornerstone of our Asia Pacific operations for over four decades, delivering heavy maintenance support to regional turboprop and APU operators," said Anthony Rossi, vice president, Customer Service, Pratt & Whitney Canada. "With the addition of these new heavy MRO services, we are better positioned to meet rising demand from our in-region customers by offering advanced, localised maintenance solutions and reducing turnaround times." Since its opening in 1983, Pratt & Whitney Canada's Singapore facility has evolved into a vital hub for customer support across the Asia Pacific region, specialising in the overhaul, repair and front-line services for turboprop engines. The new PT6C-67C capabilities mark the introduction of turboshaft maintenance at the site, including full overhauls supported by a new modular test cell. Additionally, the facility has expanded its existing PW100 MRO capabilities to include full overhaul support for the PW127XT. The PT6C-67C and PW100 engine families are among the most widely used in the world. Pratt & Whitney Canada has delivered over 3,000 PT6C-67C engines, which have collectively accumulated more than 10 million flight hours. Meanwhile, the PW100 family boasts over 220 million flight hours globally, with 300,000 hours attributed to the PW127XT alone.

LIEBHERR SIGNS LANDING GEAR OVERHAUL AGREEMENT WITH ENVOY AIR

Liebherr Aerospace Saline and Envoy Air have reached a definitive agreement for landing gear overhaul and systems maintenance on Envoy Air's Embraer 175-E1 fleet. Programme overhauls will undergo complete restoration in accordance with Embraer's requirements for continuing intervals of 30,000 flight cycles or 12 calendar

years. From the entry into service in 2004, the Embraer 170/175-E1 family aircraft have proven highly successful with 1,000 orders and current production backlog of 208 aircraft. Will Dew, Managing Director Commercial at Liebherr Aerospace Saline, Inc. commented: "We are very pleased to welcome Envoy Air into our Liebherr net-



VIETNAM APPROVES EXECUJET MRO SERVICES MALAYSIA FOR GULFSTREAM G650ER MRO

The Civil Aviation Authority of Vietnam (CAAV) has certified ExecuJet MRO Services Malaysia, a wholly owned subsidiary of Dassault Aviation, to perform line and base maintenance on Vietnam-registered Gulfstream G650ER aircraft. The certification enables ExecuJet to perform line and heavy maintenance checks, up to and including 4C or 48-month inspections, on Gulfstream G650ERs. This approval is significant as it supports the maintenance requirements of Gulfstream G650ER operators in Vietnam, ensuring access to high-quality, in-region MRO services. The CAAV has also certified the company to perform maintenance of the engines on the aircraft, including scheduled inspections, repairs and non-routine maintenance, removal and replacement of engines accessories, in accordance with the manufacturer's current engine maintenance manual or CAAV approval data. Rolls Royce BR725 engines power the Gulfstream G650ER. "This certification enhances our capability to support Gulfstream G650ER operators in Vietnam with high-quality, reliable maintenance services," says Ivan Lim, regional vice president for Asia at ExecuJet MRO Services. "Vietnam is an important and fast-growing market for business aviation in Southeast Asia, supported by the country's strong economic growth as Vietnamese company's work to expand their business across the country and internationally," he adds.

work landing gear overhaul full support portfolio. We look forward to supporting Envoy Air's operations and contributing to the continued success of their E175 fleet." Liebherr-Aerospace has invested significant resources over the past three years to structurally transform its landing gear MRO activities.

JAMCO NAMES PROPONENT AS EXCLUSIVE AFTERMARKET SPARE PARTS DISTRIBUTOR

Jamco Interiors announced the appointment of Proponent as its exclusive global distributor for aftermarket spare parts. This strategic collaboration strengthens customer service levels by improving product availability, operational responsiveness, and overall aftermarket support. Jamco Interiors will transition its aftermarket spare parts distribution to Proponent through a phased implementation during 2026, with full operational capability anticipated in early 2027.



AIR CANADA UNVEILS NEXT-GEN 'GLOWING-HEARTED' CABINS

Air Canada detailed its most significant cabin investment, unveiling new long-haul cabin designs at the Aircraft Interiors Expo in Hamburg. The first major expression of its new Glowing Hearted standard, the design delivers a distinctly Canadian experience, emphasising comfort, care, and connection for all customers on every flight, while signalling the airline's bold growth ambitions. The completely reimagined cabins will appear first this summer on the A321XLR, which offers a true lie-flat Air Canada Signature Class experience for the first time on a single-aisle aircraft. The new cabin design featuring the exclusive Air Canada Signature Plus Suite will launch when the Boeing 787-10 enters service.

HAINAN AIRLINES IS THE FIRST LAUNCH CUSTOMER FOR 4K RAVE ULTRA IFE SYSTEM

Hainan Airlines will equip its aircraft on the new A321 neo series platform with the 4K RAVE Ultra IFE system from RAVE Aerospace. With this decision, both companies grow their collaboration following the successful operation of the technology on Hainan Airlines' new A330 neo aircraft since November 2025. This marks an im-

portant milestone, as it brings premium, ultra-high-definition in-flight entertainment to long-range narrowbody operations and to the Chinese Mainland. "It is our strategy to build a civil aviation powerhouse. High quality is a cornerstone in this development. We are consistently recognised for our high service standards and premium onboard

experience. The RAVE Ultra platform delivers the reliability and flexibility we need to offer the in-flight entertainment quality our passengers expect. After the success onboard our A330 neo it is the right step to use the RAVE Ultra IFE system on the A321 neo series platform as well," said Zhu Tao, Chairman, at Hainan Airlines.

Air New Zealand's Economy Skynest on sale from May 2026

Air New Zealand's Economy Skynest will be available to book from 18 May 2026. It will operate onboard the airline's new Boeing 787-9 Dreamliner aircraft from November. The game-changing concept gives travellers more choice, providing the opportunity for lie-flat rest in the sky regardless of the cabin they choose to fly. Initial services will operate between New York (JFK) and Auckland (AKL), redefining comfort on one of the world's longest routes. Air New Zealand Chief Executive Nikhil Ravishankar says Skynest is another example of the airline backing innovation that improves the travel experience. "New Zealand's unique location means we understand long-haul travel better than anyone. On some of the world's longest commercial flights to and from New Zealand, Skynest is designed to make a real difference to the journey. Featuring six lie-flat pods in a bunk-style layout between the Economy and Premium Economy cabins, it gives customers the opportunity to stretch out, lie flat and get a few hours' proper rest in the air."

SES, JAL EXPAND CONNECTIVITY TO LONG-HAUL FLEET

SES announced that Japan Airlines (JAL) has selected it to deliver new multi-orbit inflight connectivity (IFC) for its Airbus and Boeing long-haul fleet, supporting the airline's ongoing commitment to an onboard experience that enables passengers to stay connected with fast, dependable internet access. Under the agreement, JAL

will install SES's multi-orbit electronically steered antenna (ESA) system on 20 Airbus A350-900 aircraft (linefit), 10 Boeing 787-9 aircraft (linefit) and 11 Boeing 787-9 aircraft (retrofit). Linefit deliveries are expected to begin in 2028. JAL is enhancing the customer experience on its international long-haul fleet.



Asia's aviation boom hits turbulent supply chain



SHUTTERSTOCK

With aircraft deliveries slipping and backlogs surging, could airlines and manufacturers explore new financing models to keep growth on track?

Tom King reports.

By any measure, the aviation supply chain crisis that emerged during the pandemic has become one of the defining structural challenges of the modern aerospace industry. Across Asia, airlines are facing delayed aircraft deliveries, shortages of engines and spare parts, and maintenance bottlenecks that are disrupting fleet plans and impacting bottom lines.

Asian-based carriers are being forced to defer capacity expansion plans or extend the life of older aircraft, leading to both cost and operational inefficiencies. Yet demand for air travel across Asia is robust, leaving airlines unable to fully capture that demand and effectively stranding valuable revenue on the ground.

But as airlines scramble for lift and manufacturers work to rebuild production capacity, a recurring question is whether the industry could ease supply chain stress by restructuring how aircraft orders are financed.

Some analysts and industry participants believe that shared order-payment structures, where airlines, manufacturers, suppliers, and even financiers collaborate earlier in the production cycle, could stabilise aerospace manufacturing.

However, whether original equipment manufacturers (OEMs), are willing to adopt a more altruistic model remains an open question.

For Ismael Fadili, vice president of sales for Europe and Asia at

◀ *Asia remains one of the fastest-growing aviation markets globally, with airlines across the region placing significant orders.*

Ametek MRO his opinion is clear: "The obvious answer is "No" as their business models are not based on sharing cash or profit with anyone in the aviation ecosystem. However, we could envisage a scenario whereby OEMs do invest m

THE WEAKEST LINK

At the heart of the issue lies the complexity of the aerospace production ecosystem. A single commercial aircraft is the product of a vast, globally distributed network of suppliers spanning dozens of countries, from avionics manufacturers to metal fabricators and composite specialists.

During the pandemic, many smaller suppliers either downsized significantly or exited the market altogether as demand and their working financial margins collapsed. When air travel rebounded faster than expected, this fragile supply network struggled to recover at the same pace, creating a cascading bottleneck across the entire system.

The effects are visible at every stage of production and maintenance. Shortages of engine components delay aircraft assembly, while missing cabin equipment can leave otherwise completed

aircraft sitting idle on the ground. At the same time, maintenance backlogs are tying up operational aircraft as airlines wait for spare parts needed to return them to service.

While the industry has responded by emphasizing greater collaboration and transparency, through improved production forecasting and closer coordination between manufacturers and suppliers, analysts argue that these measures alone may still be insufficient to resolve the deeper structural issues.

PRAGMATIC SUPPORT SYSTEM

One of the more innovative ideas gaining traction among aviation financiers and supply chain specialists is the concept of shared order-payment models.

Under the traditional framework, airlines place aircraft orders with manufacturers and make staged payments as production progresses. OEMs, typically Airbus or Boeing, then pay their suppliers separately as components are delivered.

This structure places considerable financial pressure on suppliers, particularly smaller firms that must invest heavily in tooling, workforce expansion, and raw materials well before receiving full payment.

A more collaborative payment structure could fundamentally alter this dynamic. Airlines, for example, could commit portions of their order payments earlier in the production cycle, providing an upfront

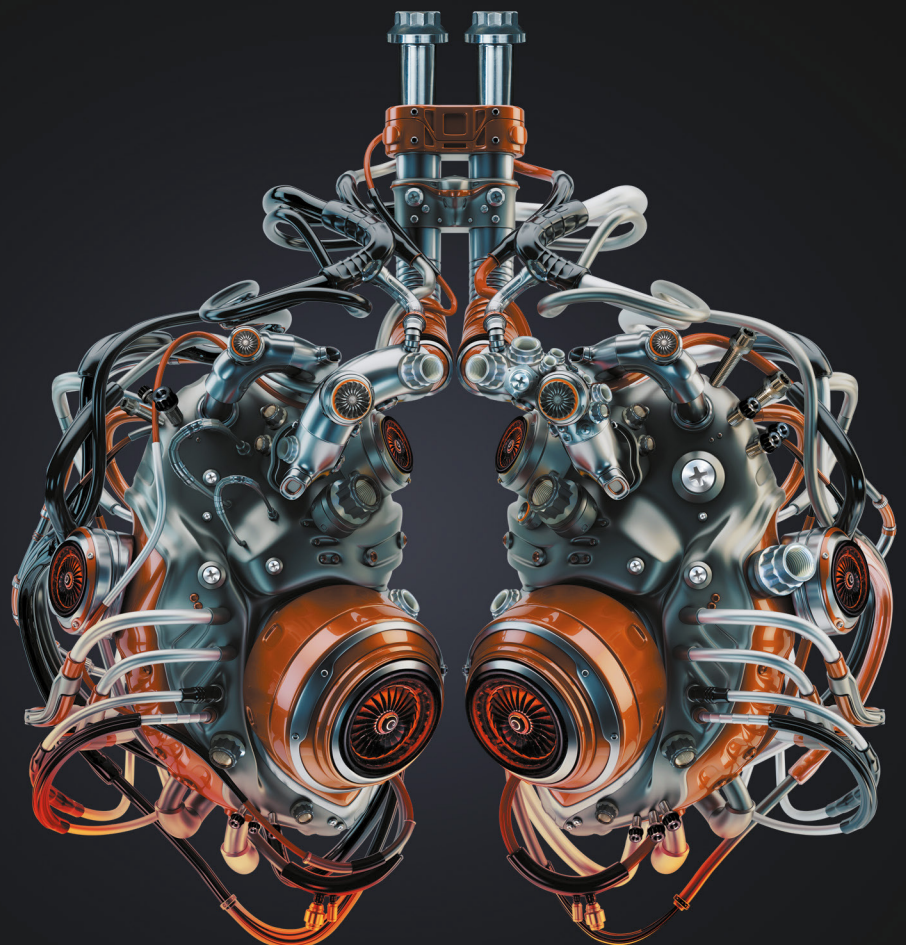
40 YEARS OF BREATHING LIFE INTO SUPPLY CHAINS

For 40 years, Farsound has supported the aerospace engine industry, delivering personalised service to every customer.



www.farsound.com

FARSOUND





▲ *Simon Spells, aviation specialist at Reed Smith.*

◀ *Joshua Ng, Director, at Alton Aviation Consultancy.*

flow of capital into the system. OEMs could then act as intermediaries, directing part of this liquidity to critical suppliers to ensure production continuity and capacity expansion.

Financial institutions would play a crucial supporting role by structuring working-capital facilities tied to production milestones. These could take the form of supply chain financing programs or other structured solutions designed to bridge funding gaps between initial investment and final delivery payments.

The objective of this model is straightforward, to improve liquidity across the manufacturing ecosystem. With more stable funding available earlier in the process, suppliers would be better positioned to scale operations, invest in capacity, and manage procurement risks. In theory, this would enable the entire supply chain to respond more effectively to rising demand.

"Among smaller, capital-constrained tier-2 and tier-3 suppliers, limited working capital can restrict the ability to hire labour, invest in tooling, and build inventory buffers, so additional liquidity can support incremental improvements in output," says Joshua Ng, Director, in the Singapore office at Alton Aviation Consultancy.

"However, today's supply chain challenges are not purely financial. The aerospace sector is also constrained by structural factors such as shortages of skilled labour, where developing experienced workers requires years of training and on-the-job learning. These are not constraints that can be resolved quickly, even with additional funding."

"In addition, the production ramp-up that OEMs are targeting requires suppliers to invest in new facilities and capital equipment. This involves securing sites, constructing facilities, and obtaining certification to produce aerospace-grade components, all of which are time-intensive processes that limit how quickly capacity can be expanded," adds Ng.

Another proposal gaining traction involves the introduction of "take-or-pay" style commitments within the aircraft supply chain. Under such arrangements, airlines or OEMs would commit to purchasing components or production capacity regardless of short-

term fluctuations in demand.

Simon Spells, Singapore-based aviation specialist who leads the Asia aviation team at international law firm Reed Smith said: "Liquidity constraints among some of the lower tier suppliers can be seen as one of the mechanisms feeding into the supply chain bottlenecks, though they interact with several other structural issues, in short, strong demand together with capital intensive ramp-ups and weaker supplier balance sheets engenders production delays."

Despite the potential benefits of collaborative payment models, adoption has been slow.

Several structural barriers remain. Aircraft financing is already highly complex, involving pre-delivery payments, export credit arrangements, and leasing structures. Introducing shared payment mechanisms could complicate risk allocation and contractual frameworks further.

There are also concerns around commercial sensitivity. Airlines often negotiate confidential pricing agreements with manufacturers, and greater transparency in financial flows could expose this sensitive information.

From the OEM perspective, some will argue that suppliers should maintain financial discipline and resilience independently, rather than relying on upstream funding.

Finally, cultural factors play a role. The aerospace industry has traditionally operated within rigid hierarchical structures, with OEMs maintaining tight control over supplier relationships. Moving toward a more collaborative financial model would require a significant shift in that mindset.

"In practice, OEMs have already provided targeted financial support to critical suppliers where it directly supports production. Beyond funding, they are also working with suppliers on operational and productivity improvements to maximise output from existing facilities and workforce," points out Altons Ng.

"Ultimately, the focus is on maintaining strong, long-term partnerships to ensure suppliers remain resilient and able to scale in line with OEM production needs." ➔

A large circular aircraft maintenance bay, likely for a wide-body jet, is shown from an interior perspective. Two technicians in blue uniforms are silhouetted against the bright light coming from the open bay door. They are working on a component hanging from the ceiling of the bay. The bay's interior is metallic and features various mechanical parts, cables, and structural elements. The overall scene conveys a sense of industrial scale and technical expertise.

India moves to make MRO a key sector

SHUTTERSTOCK

India has big ambitions when it comes to maintenance, repair and overhaul (MRO), and moves are happening to help it exploit its ambitions. **Shelley Vishwajeet** reports.

India has big ambitions to develop a robust and competent domestic MRO ecosystem to enhance operational efficiency, reduce costs and international dependency, and to emerge as a credible regional MRO destination.

Everyone knows the Indian aviation sector has grown impressively over the last decade, marked by phenomenal growth in air traffic, which grew from 95 million annually to 175 million in 2025. Existing international airports at hubs like Delhi, Mumbai, Bengaluru,

▲ *The Indian aviation MRO industry is currently estimated at around US\$2 billion.*

Chennai, Ahmedabad, and more have been transformed to world-class standards. India today boasts of 25 international and over 100 functional domestic airports. Air travel has been democratised and is no longer the exclusive domain of elites.

Understandably, the focus of the government as well as corpora-



AIR INDIA

▲ The Indian government has been proactively supporting the creation of a robust MRO ecosystem through many policy initiatives and fiscal incentives.

tions has until recently, largely centred on ensuring the growth of air traffic (as it makes good headlines for the government). It also wants to enhance air travel infrastructure, which includes modernising existing airports and building new airports (governments love capital expenditures). However, a critical backbone of the aviation sector, MRO, which is the third-largest expense for airlines after fuel and salary, has been escaping the attention it deserves. Little wonder that, despite impressive growth in fleet size, which currently stands at 900 civilian aircraft and is expected to grow to over 1500 in another decade, 80 percent of MRO work by value continues to be outsourced to foreign shores. But things are set to change.

The Indian aviation MRO industry is currently estimated at around US\$2 billion and is projected to grow to US\$4.0 billion by 2031, at an annual CAGR of 8.9 percent. Some experts see a much steeper growth and believe that, given the current momentum, 10-12 percent CAGR would be a realistic figure.

A few clear trends are visible. Mergers and acquisitions are taking place in this space. The Adani Group, India's leading corporate group, recently acquired majority stakes in two big MRO companies — Air Works and Indmar Technic. Secondly, JVs are happening between large Indian corporates and leading global aerospace

companies. And thirdly and interestingly, the two leading airlines — IndiGo and Air India — which together control 90 percent of the domestic market, are going in for massive in-house MRO capacity.

What has changed and what is driving this momentum? Ashok Gopinath, president of GMR Aero Technic, the largest MRO service provider in India, tells *Asian Aviation* that with one of the world's fastest-growing commercial and defence aircraft fleets, India will

If we execute well, the next decade will firmly establish India as a credible alternative to traditional MRO hubs.

ASHOK GOPINATH

generate sufficient domestic demand to anchor large-scale base maintenance, engine and component MRO. This situation is boosted by regulatory reforms and the government's strong push under Make in India and Self-Reliant India are enabling the creation of indigenous capabilities that were historically sourced overseas.

A spokesperson of Air Works, the oldest Indian MRO company and now part of Adani Defence & Aerospace, echoes similar sentiments. "With large-scale infrastructure expansion, integration of defence and civil MRO, progressive tax reforms, and innovative training

pipelines to address the chronic shortage of certified manpower, the industry is gearing for unprecedented momentum."

The Indian government has been proactively supporting the creation of a robust MRO ecosystem through many policy initiatives and fiscal incentives. Some key moves have been: A unified 5 percent GST rate on all aircraft components and engines was implemented, replacing the previous rates ranging from 5 percent to 28 percent; Exemptions from customs duties on aircraft parts/components/tools/tool kits imported by airlines and MROs; 100 percent foreign direct investment permitted via automatic route for MRO.

These steps are being noticed and appreciated by global aerospace companies too. Embraer, which has significant long-term plans for its India footprint, is all praise for the recent government initiatives. Talking to *Asian Aviation*, Raul Villaron, senior vice president and head of Asia Pacific, Embraer Commercial Aviation, points out that, "The aerospace sector offers a prime avenue for Indo-Brazil cooperation. In terms of policy and framework enhancements, we are encouraged by the vision, plans, speed and support given by the government both at central & state levels. We are closely tracking the major policy reforms introduced in recent years to ensure full alignment with India's evolving aerospace priorities. We remain sharply focused on delivering the advanced aerospace capabilities India needs, while fully meeting our Make-in-India and localisation commitments."

Embraer is not only looking at setting up an assembly line for its E175 regional transport aircraft but also developing a robust MRO facility. "MRO remains a key aspect of our industrial partnerships in India. Our partnership with Adani Defence & Aerospace for the E175 regional transport aircraft is focused not just on aircraft manufacturing, but also on building an ecosystem of which MRO and aftermarket services, pilot training and supply chain are essential aspects," says Villaron.

Leading aerospace companies such as Airbus and Boeing are also strengthening their MRO presence in India. Boeing has gone in for partnership with MRO companies such as Air India Engineering Services Limited (AIESL — a government entity), GMR Aero Technic, Air Works, for component, freighter conversion, and defence MRO. Under the BIRDS (The Boeing India Repair Development and Sustainment Programme), they are localising capabilities to strengthen India's position as a regional MRO hub.

Airbus, on its part, has partnered with Hindustan Aeronautics Limited (HAL) to establish an MRO facility in Nashik, Maharashtra, aimed at servicing the A320 family of aircraft. In addition, Airbus has scripted MRO tie-ups with GMR Aero Technic, Indamer and Air Works.

So what's driving the leading airlines to set up and enhance their in-house MRO facility? For the record, IndiGo is investing US\$150 million in setting up a huge MRO facility at Bengaluru airport, which is primarily aimed at lowering its annual MRO dollar outgo of around US\$300 million, of which 90 percent goes to foreign vendors. "With one of the largest and fastest-growing fleets globally,

enhancing in-house MRO capability is a strategic decision aimed at strengthening operational control, turnaround times, and aircraft availability. Developing in-house MRO capabilities allows us to build long-term resilience, optimise aircraft lifecycle costs, and respond more effectively to operational challenges while we continue to work closely with global OEMs and external MRO partners," an IndiGo spokesperson told *Asian Aviation*.

Air India too is developing a 35-acre MRO facility at the same Bengaluru airport. Set to be operational by early 2026, this hub will feature 12 bays for both wide-body and narrow-body aircraft, aiming to reduce dependence on foreign MRO providers and expand in-house maintenance for its expanded fleet. Asked what prompted Air India to go in for significantly enhancing its in-house MRO capability,



▲ Embraer and Adani are exploring MRO initiatives in India.

given the fact that airlines generally do not wish to divert their attention and resources towards non-core areas/business, an Air India spokesperson gives these insights: "The MRO business has evolved into a core strategic function for Air India, primarily driven by the need for diversification, operational resilience, and stronger control over fleet performance. Developing an in-house MRO capability allows us to exercise direct oversight of aircraft maintenance in a timely manner, which translates into improved operational outcomes and enhanced reliability."

So what does the future hold for the Indian MRO ecosystem? "As Indian MROs invest in infrastructure, digital technologies, OEM partnerships, and skill development, we will see a move up the value chain, from routine maintenance to complex, high-value work packages. If we execute well, the next decade will firmly establish India as a credible alternative to traditional MRO hubs," says a confident Gopinath. ➔



FBOs produce the show in APAC

The overall demand for private aviation services is increasing across Asia-Pacific, but within the region, markets are travelling at different speeds. While the sleek aircraft are the stars of the show, it is the Fixed Base Operators (FBOs) on the ground that keep the show on the road, reports **Michael Doran**.

In 2025, business jet departures from the Asia-Pacific region increased by 4.2 percent year-on-year, climbing from 125,479 in 2024 to 130,716 in 2025. In its 2025 fourth-quarter market report, Asian Sky Group revealed that total flights in Q4 2025 reached 36,060, with November recording the largest monthly increase of 10.4 percent YoY.

Domestic flights dominate the market, accounting for 72 percent and while international flights increased in 2025, their share of the Asia-Pacific market stayed constant at 28 percent. Flights of less than two hours accounted for 69 percent of all flights operated, while 23 percent flew between two and five hours, with just eight percent were in the air longer than five hours.

Indian cities figure prominently in the top ten departure cities in 2025, with Mumbai heading the list, followed by New Delhi in third, Bangalore eight and Hyderabad in tenth places. Singapore is a close second, and others in the top ten included Tokyo (4), Hong Kong (5), Bangkok (6), Jakarta (7) and Beijing (9).

BEIJING CAPITAL FBO

Paul Desgrosseilliers is the vice chair of the Asian Business Aviation Association and general manager of ExecuJet Haite, a provider of ground handling and MRO services at Beijing Capital International Airport. He told *Asian Aviation* that the business aviation sector remains regionally segmented with Southeast Asia, India and Australia outpacing the North Asia and Greater China markets.

"We already see FBOs at most large-scale international airports in north Asia, Singapore, Thailand, Malaysia and the Philippines and many Asian capitals can justify and support dedicated FBOs and business aircraft services," he added. "The specialised services of FBOs are increasingly important to deliver on the promise made by business aviation for safe, secure and efficient transport."

FBOs are an important link in the business aviation sector and generally provide a suite of services to crew, passengers and the aircraft. At ExecuJet Haite, these include dedicated channels for guests and crew to clear security and customs, along with aircraft

◀ *For 18 consecutive years, HKBAC has been recognised as the Best Asian Fixed-Base Operator.*

ground handling services such as fuel, parking and MRO support if needed.

"Scaling to the appropriate level of FBO infrastructure, service offerings and staffing become essential to selecting the right business model that supports safe, efficient and sustainable operations," he explains. "Thus it is important for FBOs to lessen the financial burden felt by customers to encourage growth of the sector through additional movements and not [be] burdened by excessive costs."

HONG KONG EXCELLENCE

In January this year, Hong Kong Business Aviation Centre (HKBAC) was named the World's Leading FBO Terminal at the 2025 World Travel Awards. For 18 consecutive years, HKBAC has been recognised as the Best Asian Fixed-Base Operator, and this year it reached the pinnacle as global leader.

In September 2025, HKBAC unveiled its new world-class terminal as phase one of its expansion project at Hong Kong International Airport, its home since opening in 1998. HKBAC CEO Vivien Lau said the award speaks to the city's confidence and the craft behind the services it provides.

"Our intention has always been clear, to create a world-class luxury aviation gateway as efficient as Hong Kong at its best," she said. "What makes HKBAC exceptional is not just the environment, but the people who deliver it consistently, calmly and with absolute focus."

From its opening HKBAC has provided the full range of professional aircraft support, hangarage, ground handling and passenger and crew services to clients from around the world. It was the first FBO in Asia to introduce co-located customs, immigration and quarantine services, giving passengers and crews a seamless introduction to Hong Kong.

The dual impact of political protests and the COVID pandemic was harshly felt at the airport, but the commissioning of the three-runway system in 2024 created a platform for a period of unprecedented opportunities in commercial and business aviation in Hong Kong.

While luxurious surroundings are expected by passengers using private aircraft HKBAC has gone beyond that by launching its exclusive Premier Direct service. It is described as a super-efficient boarding or disembarking service delivered in total privacy within three minutes of arrival or departure.

Departing guests are welcomed into VVIP suites, guided through a dedicated pathway to the private customs and immigration facilities and onto the weather-proof Sky Canopy to board their aircraft. Passengers connecting between commercial and private flights enjoy the JetLink Service that facilitates wing-to-wing transfers.

The operation routinely handles long-range aircraft such as the Gulfstream G650 and Bombardier Global 7500, reflecting Hong Kong's role as a key gateway for intercontinental business aviation across Asia-Pacific.

Rather than rest on its awards, the centre is expanding to add more services, with Lau adding: "This recognition raises the bar for us and for the region. It resets expectations about Hong Kong, and it reinforces our responsibility to keep moving forward."

Signature Aviation, a worldwide network with more than 200 locations, provides premier FBO services in the US, Canada, Europe, Africa, Latin America, the Caribbean and Asia.

Signature Aviation's Hong Kong presence is through its long-standing stake in the Hong Kong Business Aviation Centre, the airport's dedicated business aviation terminal. The structure reflects both the regulatory constraints and the strategic importance of securing access in one of Asia's most capacity-constrained markets.

SINGAPORE SERVICE

Singapore is an important location for business aviation, and that activity funnels through a dedicated facility at Seletar Airport, Singapore's first international airport, located 16 kilometres from Changi Airport. Seletar was opened in 1928 and today is focused on private, charter, and regional turboprop activity rather than scheduled airline traffic.



▲ *Seletar in Singapore is a key business aviation stop.*

ExecuJet operates a fully integrated facility that includes large hangars capable of accommodating long-range aircraft, dedicated passenger lounges, crew facilities and trip support. Its success comes from combining handling with maintenance, particularly for Bombardier types, making it a key provider for operators seeking both operational efficiency and technical support in one location.

Jet Aviation, a subsidiary of General Dynamics, is one of the world's most established business aviation service providers. It has operations at more than 30 airport sites in Europe, the Middle East, Asia-Pacific and the Americas.

It also operates more than 20 dedicated FBOs, including joint ventures, with its strategy of combining maintenance and handling services. The Seletar operation provides ground handling, fuelling coordination, and concierge services, supported by modern hangarage and workshop infrastructure. ➔



SHUTTERSTOCK

Safety in a fragmented sky

From airspace closures to intelligence-led risk assessments, global aviation is adapting to a more volatile operating environment. **Roetta Wang** reports.

The outbreak of the Iran war has once again exposed the vulnerability of global aviation to geopolitical shocks. As airlines grapple with widespread rerouting, flight suspensions and disruption on a scale

not seen since the Covid-19 pandemic, a fundamental question has come into focus: is the industry's safety framework equipped for an increasingly volatile and fragmented airspace?

◀ *As conflicts become more frequent, aviation must ask if the current safety culture up to the job.*

Airlines now operate in a risk environment shaped by misidentification in conflict zones, GPS interference and the strain of narrowing flight corridors. As conflicts become more frequent and unpredictable, the industry must confront whether its safety architecture is fit for this new reality.

THE CRISIS UNFOLDS

On February 28, the United States and Israel launched surprise airstrikes on multiple sites across Iran. Iran responded swiftly, unleashing retaliatory drone and missile strikes against Israel, US military bases, and US-allied countries across the region.

Gulf states, which have long positioned themselves as neutral commercial hubs at the crossroads of global aviation, found themselves caught in the crossfire. Within hours, at least eight countries, including Iran, Israel, Iraq, Jordan, Qatar, Bahrain, Kuwait, and the United Arab Emirates, declared their airspace closed.

The disruption that followed was swift and severe. According to Cirium data, cancellation rates peaked above 65 percent within the first days of the conflict, with more than 2,300 daily departures grounded.

Mass suspensions cascaded across carriers globally. Cathay Pacific cancelled all flights to and from Dubai and Riyadh, extending the suspension through 30 June, while Singapore Airlines halted services to Dubai until the end of May. The scale was not limited to airlines with Middle East routes. As Gulf hubs function as connection points for journeys across the globe, the disruption rippled outward to affect routes across Europe and Asia.

Regulators moved on the same day. The European Union Aviation Safety Agency issued Conflict Zone Information Bulletin (CZIB) 2026-03-R6, advising operators to avoid operating across a broad swathe of Middle Eastern airspace, including Iran, Iraq and Israel, as well as neighbouring Gulf states such as Bahrain, Qatar and the United Arab Emirates.

The bulletin cited an acute danger: the possession of all-altitude capable air defence systems, cruise and ballistic missiles makes the entire affected airspace vulnerable to what EASA termed "spill-over risks, misidentification, miscalculation and failure of interception procedures." The CZIB has since been extended, with its validity running through late April 2026.

The speed of the industry's reaction—including sovereign states, regulators, and the airlines—highlighted both increased awareness of geopolitical risks and the operational strain they create. "Airspace closures and flight cancellations can happen quickly and unpredictably in today's volatile geopolitical landscape, leaving operators scrambling to reroute flights and assess risk," according to Matthew Borie, chief intelligence officer of Osprey Flight Solutions.

Borie described the current environment as "the new normal"—a stark contrast, he notes, to the landscape of two decades ago.

International aircraft operators must now build flexibility into their global routing decisions to account for conflict zones, geopolitical instability and war risk insurance considerations as a matter of routine, not exception.

A NARROWING SKY

But the Iran war did not introduce these pressures. It inherited them.

The rerouting options available to operators were already narrowing before the first strike on 28 February. Borie identifies three remaining corridors for the long-haul routes connecting Europe and Asia: the polar route via Russian airspace, largely unavailable to Western carriers since the Russia-Ukraine War in 2022; routes over the Caucasus and Central Asia; and routes over the Middle East and Gulf—now the most severely affected by the current conflict. "These routings all create further issues in terms of added time, increased fuel costs, limited divert options and additional conflict zone risks," he said.

Airspace closures and flight cancellations can happen quickly and unpredictably in today's volatile geopolitical landscape, leaving operators scrambling to reroute flights and assess risk.

MATTHEW BORIE

As traffic concentrates onto fewer routes, the operational strain spreads and safety risks escalate. "When you only have a few corridors, air traffic control gets very crowded, overwhelmed," said Eric Schouten, CEO & Founder of Dyami Security Intelligence. "The air traffic control community has to work really hard. Long hours, fatigue kicks in. That's something that truly needs to be taken into account."

GPS interference adds a further layer of risk. Spoofing, which transmits counterfeit satellite signals that appear valid until an aircraft's position has diverged dangerously from its actual location, has become an increasingly common threat in and around conflict zones, with IATA reporting a 220 percent increase in GPS signal loss events between 2021 and 2024. Unlike jamming, which alerts crews through an immediate loss of signal, spoofing can go undetected until it is too late.

A STRAINED SAFETY SYSTEM

These operational pressures are the visible face of a deeper, systemic safety problem—one the industry has been grappling with since MH17 fundamentally changed how aviation thinks about conflict zones.

Schouten, who was directly involved in establishing the Dutch national expert group for overflight of conflict zones after MH17, describes MH17's impact in stark terms. "I always compare it with what 9/11 did for airport security. The whole system changed," he said. Before MH17, commercial airlines routinely flew over conflict zones at cruising altitude, assuming height alone provided sufficient

protection. “And then all of a sudden you had to take misidentification into account—weapon systems that can still take you down because they operate at high altitudes,” Schouten said.

MH17 was struck at approximately 33,000 feet, an open airspace for civil aircraft. Three days before the disaster, Ukrainian authority had increased the upper limit of restricted airspace imposed on civil aviation to 32,000 feet but had not closed the airspace entirely. The Dutch Safety Board’s investigation found that almost all airlines using routes over the conflict zone continued to do so as the armed conflict already expanded, and that not a single state or international organisation had explicitly warned of the risks. “The crash of MH17 demonstrates that an unrestricted airspace is not, by definition, safe if the state managing the airspace is dealing with an armed conflict,” the investigation concluded.

The industry’s longstanding safety framework relies on states to assess risks and declare their airspace open, restricted or closed, supported by oversight from global and national regulators. However, MH17 revealed that this system could malfunction, especially when the flight route crosses conflict zones.

There are still missiles and drones coming into the region, and there’s still air defence activity. But there is commercial and political pressure from countries saying, ‘Hey, it’s perfectly fine. We have it under control.’

ERIC SCHOUTEN

What followed was an industry-wide scramble. ICAO led one of the initial efforts to encourage states to share threat information via the Conflict Zone Information Repository (CZIR) but it proved difficult to sustain. “At the ICAO level, you cannot finger-point at another country,” Schouten said. “So that whole system failed within a couple of months.” A more decentralised approach emerged: governments and regulators were expected to issue their own warnings, while operators conducted independent risk assessments. In Europe, this produced mechanisms such as the EASA CZIB. But the system remains uneven across jurisdictions.

The inadequacy of that framework was exposed again on January 8, 2020, when Ukraine International Airlines Flight PS752 departed Tehran into airspace that was, by every legal measure, open for business—and was struck by two Iranian surface-to-air missiles minutes later, killing all 176 on board. The airspace had been legal to fly. It had not been safe. That gap between what is legally permitted under the current regulation and what is genuinely safe remains the central unresolved tension in how the industry manages conflict zone risk today.

PRESSURE TO FLY

The gap is widening under commercial and political pressure. “That’s something we truly see happening in the Middle East right now, es-

pecially around the UAE,” said Schouten. Following a brief shutdown after the outbreak of the Iran war, parts of the Gulf—including the UAE and Oman—moved quickly to reopen their airspace. On March 3, the UAE’s Minister of Economy and Tourism announced that safe air corridors had been established in coordination with neighbouring countries, Gulf Cooperation Council states and ICAO. Some Middle Eastern carriers resumed operations at reduced capacity along designated corridors. Operations saw a broader recovery after the US and Iran agreed to a two-week ceasefire on April 7, though no permanent agreement had been reached between the two countries.

Schouten argued that, in practice, there is no such thing as a truly “safe corridor.” “There are still missiles and drones coming into the region, and there’s still air defence activity,” he said. “But there is commercial and political pressure from countries saying, ‘Hey, it’s perfectly fine. We have it under control.’”

The problem, Schouten adds, extends beyond the current conflict. He explained that the risk is not confined to the Middle East. There are risks around Armenia and Azerbaijan, China and Taiwan, North Korea, etc. “More and more spots are of concern,” he said. Emerg-

ing conflicts, by definition, do not come with advance warning. “It’s all about the conflicts that you don’t read about in the newspaper—and then all of a sudden a plane gets shot down.”

“In the end, an aircraft operator is responsible for its own risk acceptance,” Schouten said. “And that is tough sometimes.”

THE ROAD AHEAD

The industry’s response is continuing to evolve. Borie argues that operators, regulators and security organisations must move toward a proactive, intelligence-led model—one built on real-time threat analysis, collaborative risk-sharing and adaptive flight planning rather than reactive compliance.

ICAO is stepping up efforts to strengthen the global framework. At its 2025 Assembly, the organisation adopted updated global safety and security frameworks that specifically address risks such as flights over conflict zones, GPS interference and cybersecurity threats, aimed at strengthening global safety coordination and reducing aviation risk.

The industry is also working to improve information-sharing mechanisms. Platforms such as Safe Airspace have emerged to support the kind of real-time intelligence exchange that earlier ICAO initiatives struggled to achieve, offering operators more independent and timely risk assessments.

The ceasefire may hold. Airspace may reopen. But risks persist. Schouten warned that every airline and aircraft operator should have a proper risk management capability.

“A lot of people do not have a proper intelligence picture,” he said. “They base decisions on gut feeling, hearsay, or media reports, without having a good network or proper risk assessments—that scares me.” ➔



AARON FRANCIS

Controller pipeline

Air navigation service providers in the Asia-Pacific are stepping up efforts to secure the next generation of air traffic controllers. **Emma Kelly** reports.

With air traffic in the Asia-Pacific region continuing to climb, the region needs a reliable pipeline of air traffic control officers (ATCO) like never before.

Air navigation service providers (ANSP) throughout the region are recruiting and training the next generation of controllers as they face shortages exacerbated by retirements, rising traffic and airport expansion.

The Civil Air Navigation Services Organisation (CANSO) says ANSPs in the region are facing increased recruitment and training needs, but the scale of the issue varies. "There is no single consolidated figure for controller shortages in the Asia-Pacific. The region is extremely diverse, and ANSPs are experiencing different levels of pressure depending on traffic recovery, training capacity, demographics and labour market conditions," it says.

The workforce is ageing considerably, says CANSO, with 64 percent of controllers now over 40 compared with 50 percent in 2010, and only 9 percent aged 30 or below, down from 18 percent in 2010. "These trends point to a growing need for recruitment and training to replace retiring staff and support traffic growth," says CANSO, adding that its Human Resources Workgroup is launching this year a dedicated study on operational staff shortages, ageing workforce

▲ ANSPs throughout APAC face controller shortages exacerbated by retirements, rising traffic and airport expansion.

and new work models.

Some ANSPs are managing steady pipelines and long-term planning, while others face more acute pressure due to rapid traffic growth or demographic shifts, CANSO adds.

A recent survey of its Asia-Pacific members by the International Federation of Air Traffic Controllers' Associations (IFATCA) highlighted the situation facing ANSPs in the region. "We don't have figures about 100 percent staffing and current staffing from our member associations, but we have done a survey asking our members about the situation which indicates staff shortages," explains Cheryl Chen, IFATCA Executive Vice President Asia Pacific Region.

Some 18 of its 19 regional members responded, with information on basic working hours indicating staff shortages and the frequent use of overtime, longer shifts or foregoing breaks or rest time due to staff shortages. In addition, some ANSPs are requiring ATCOs to handle combined sectors with higher traffic volumes. Some 80 percent of member associations in the region reported regular overtime, missed breaks or sector-combining to maintain operations.

Over half anticipate improvement through current recruitment and training programmes.

"Even the most attractive ANSPs in this region...are having issues recruiting new ATCOs, and of course some worse than others," says Chen, with people tending to migrate to places with better pay. "Whether aviation has remained attractive to the younger generation is being challenged all the time," Chen adds.

Last August, IFATCA told the conference of Directors General of Civil Aviation of the Asia and Pacific regions that the shortage is the result of "multiple inter-related challenges, including lengthy training requirements, an ageing workforce and limited inflow of new recruits". It noted that recruitment and retention are hindered by the demanding and high-stress nature of the job, as well as limited opportunities for career progression. The situation is exacerbated by rapid air traffic growth that exceeds current training capacity.

It's not straightforward recruiting and retaining controllers, with the role requiring a specific blend of cognitive ability, spatial awareness, ability to work calmly under pressure, communication skills and behavioural traits.

Airservices Australia says just 2 percent of the global population has the necessary traits and aptitude. Trainees need to be sharp, highly organised and calm under pressure, it says. "Our targets are women and men gamers, drone pilots, people who have studied STEM fields, strategic board game enthusiasts and more," it adds.

Airservices Australia, which manages 11 percent of the world's airspace and handles more than 3.8 million aircraft movements per annum, acknowledges being an ATCO is "a niche, high-pressure and dynamic role and not one for the faint-hearted".

Airservices, which has an operational requirement for 862 controllers, currently employs more than 900 in enroute, tower and approach control at two major operating centres in Melbourne and Brisbane and 29 air traffic control towers at airports throughout the country.

Airservices has been on a major ATCO recruitment drive. In 2025, it endorsed a record 91 controllers, exceeding its target of 85. "Airservices Australia is continuing to invest in our workforce across Australia, with up to 95 additional air traffic controllers expected to be endorsed in 2026 to add further depth to our rosters," it says. Training is undertaken in Melbourne, Perth and at Airways International in Christchurch, New Zealand, following a training partnership with the New Zealand ANSP.

Training can take up to 18 months and just because you have the necessary traits, it doesn't automatically mean you will qualify, with ANSPs in the past suffering a high rate of failure. Airways New Zealand's SureSelect solution, however, which is based on organisational psychology and the use of technology, is achieving a 95 percent training success rate. The selection solution, which is also used by other ANSPs in the region including Australia and Vietnam, uses on-line cognitive ability tests, ATC skill simulations and behavioural trait tests before successful candidates progress to the assessment centre.

Staff shortages are part of a vicious cycle, says IFATCA's Chen, contributing to the erosion of safety margins, increased fatigue and



▲ *Being an air traffic controller is not for the faint of heart.*

workload, reduced capacity and efficiency, and an over-reliance on overtime. Understaffing places additional strain on air traffic systems, increasing the risk of errors, incidents and accidents and eroding the margin of safety. Controllers are required to manage higher workloads, leading to fatigue and a heightened risk of operational errors. Thin staffing margins also leave little room for managing unforeseen circumstances.

Staff shortages can prevent air traffic systems from maintaining current capacity, and limit expansion and modernisation, with reduced capacity leading to longer flight times, increased delays and inefficiencies that ripple throughout the industry, IFATCA says.

While overtime can be an effective short-term solution, an over-reliance means it becomes a permanent fixture, leading to overworked controllers, further compounding safety risks.

In March, the Maldives Air Traffic Controllers Association (MATCA) warned that staffing gaps and fatigue due to workforce shortages are compromising aviation safety. Local airports have insufficient staffing levels, resulting in extended working hours and reduced flexibility in shift planning, it reported. In addition, controllers are increasingly being asked to manage high traffic volumes with limited personnel, increasing workload intensity and complexity.

MATCA warns that controllers are in danger of experiencing physical and mental fatigue due to the compressed schedules and irregular shifts, potentially impacting concentration, situational awareness and communication accuracy.

MATCA is calling for urgent action, including recruitment and retention measures, implementation of Fatigue Risk Management Systems, a review of duty rosters and greater engagement with frontline controllers in decision-making processes.

Elsewhere in the region, India's Ministry of Civil Aviation recently revealed to parliament the country has vacancies for 1,279 controllers. "Aviation safety is maintained through optimal utilisation of available manpower in accordance with the extant norms and standards. No key operational units have been shut down due to manpower shortages," according to Shri Murlidhar Mohol, Minister of State for Civil Aviation. ➔

AAV Events Calendar

Send event submissions to: info@asianaviation.com

26-28 MAY 2026

MRO Greater China Beijing
+86 13699176314
guoyuchen@casc.com.cn

20-24 JULY 2026

Farnborough Airshow UK
+44 (0) 1252 532800
enquiries@farnborough.com

31 AUG- 2 SEPT 2026

APATS Bangkok
+44 (0)1252 532000
events@halldale.com

22-24 SEPT 2026

MRO Asia Singapore
+1 347 751 8692
events@aviationweek.com

28-29 OCT 2026

MRO Europe Amsterdam
+44 758 458 7770
Amy.White@informa.com

10-11 NOV 2026

MRO Australasia Brisbane
+1 347. 51 8692
events@aviationweek.com



Watch this space!

Something new is on the way...



 **ASIAN**
Aviation

ASIAN Aviation

Regional Aviation News You Can Use



Airlines



Airports



MRO



Sustainability



Technology



People



The authoritative voice of aviation across Asia Pacific:

- Latest industry news and analysis
- Exclusive interviews and videos with C-suite executives
- Top viewpoints from industry leaders
- Key business insights



asianaviation.com



Asian Aviation Magazine



@AsianAviation



Asian Aviation (AAV)