Orient aviation
Vol. 32 No. 4
August-September 2025
orientaviation.com

THE THIRD WAVE

All eyes are on Akasa Air as a barometer of the India's aviation potential

Orient aviation 32 YEARS

Aircraft MRO breaking revenue records

And the boom goes on for lessors

Impact of global conflicts on airline operations


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CONTENTS

Volume 32, Issue 4

Countering threats to safe flying in a fragmented world

Airline managements know there is one irrefutable rule of the aviation industry - that no one knows when the next crisis will erupt only that it will turn up. In the meantime, our industry must continue to counter multitudes of threats to safe flying that are not of their making.

Delegates at the Association of Asia Pacific Airlines (AAPA) Air Safety Seminar (APASS) in Manila mid-month heard existing and emerging risks include the potential for cyber-attacks and the impact of global warming that is increasing more frequent severe weather events.

Already here, and in the headlines, are the daily challenges flight operations teams and cockpit crew face in ensuring their routings to destinations across the world avoid conflict zones. Airlines and their crews are flying longer routes to avoid the airspaces of the Middle East, Russia/Ukraine and more recently India/Pakistan. All these conflicts are globally recognised threats to safe flying and not so well known to the general public.

All too familiar to airlines are other bad actors: North Korea's propensity to test fire missiles across international air routes without warning. Or as happened earlier this year, Chinese naval vessels conducting a live fire exercise in the Tasman Sea between Australia and New Zealand without any pre-warning. Some 49 commercial aircraft had to be diverted from their pre-planned routes as a result of the exercise.

Also of serious concern to airlines is spoofing, or jamming of critical GPS navigation systems. The International Air Transport Association's Global Aviation Data Management Flight Data eXchange has reported GPS signal loss events increased 220% between 2021 and 2024.

With continuing geopolitical tensions, it is difficult to believe this trend will reverse in the near-term. While these events are not exclusively the result of military activities - a handheld GPS jammer can be bought online for $20 - in conflict zones and elsewhere, it is clear the majority certainly are.

At APASS, delegates from airlines, airline bodies, regulators, aviation industry manufacturers and security engaged in penetrating and complicated discussions about these threats to safe flying.

They also detailed myriad other factors that impact cabin safety: crew fatigue when diverted routes add hours to flights, turbulence, engineering and maintenance competence and turboprop and regional jet safety. The key takeout from the discussions at the two-day conference was aviation in its entirety must co-operate and co-ordinate efforts to find solutions to the latest threats to safe flying.No sector silos are to be allowed in neutralising the latest onslaught of threats.

The AAPA is to be congratulated on organizing such a significant air safety event. It brought together more than 300 delegates from 35 airlines, aviation regulators and key safety partners from across the region and beyond.

We should have more of them. ■

TOM BALLANTYNE
Associate editor and chief correspondent
Orient Aviation Media Group

Air New Zealand CEO-designate to formally succeed Greg Foran in October

After a global search, Air New Zealand chose one of its own to succeed Greg Foran as CEO of one of the world's globally recognized airlines.

On July 31, Air New Zealand chief digital officer, Nikhil Ravishankar, was named as Greg Foran's successor, taking up the role on October 20.

Highly regarded Foran, who has led the carrier through the pandemic, management of aircraft delivery delays, component shortages and protracted engine MRO issues that forced the carrier to curtail its network at a time of high passenger demand, announced his planned retirement in April, effective in the weeks ahead.

Air New Zealand chair, Dame Therese Walsh, told Bloomberg "Nikhil stood out from a global candidate pool because of his digital acumen, leadership skills and an alignment with Air New Zealand's values".

Previous to his five years as chief digital officer at the airline, Ravishankar was chief digital officer at energy company, Vector New Zealand after several years as an Accenture's managing director working across Hong Kong, Australia and New Zealand. ■

Aiming high at ICAO Assembly

The International Air Transport Association (IATA) has high expectations for the 42nd Assembly of the International Civil Aviation Organization (ICAO) to be held in Montreal from late September to the first week of October. ICAO has accepted 14 working papers authored by IATA covering a wide range of topics for the Assembly's consideration.

"IATA will be participating in the ICAO Assembly with safety, sustainability and efficiency at the top of our priority list," said IATA director general, Willie Walsh, in comments in the week before the assembly conference convenes.

"It is critical we secure stronger support for Sustainable Aviation Fuel (SAF) and CORSIA as key enablers of aviation's commitment to achieve net zero emissions by 2050. Equally, we need agreement to follow the principles and provisions of the Chicago Convention to avoid patchworks of debilitating tax measures and passenger rights regulations," he said.

"And we must shore-up safety with timely accident reports, mitigations for GNSS interference and preservation of critical radio-frequency spectrum."

Criticality of global standards to global aviation cannot be underestimated. "I am optimistic for the outcomes of this Assembly. Everybody wants flying to be safe, efficient and more sustainable. So, we have a common agenda with governments," Walsh said.

"Indeed, many of our submissions to the Assembly are simply asking governments to more effectively implement what they have agreed.

"The coming weeks in Montreal are essential to set the agenda, but even more important are the following three years of work to achieve what is agreed."

Among its papers submitted to the conference, IATA has asked States to protect safety critical frequencies used by aviation from interference, strengthen coordination among telecoms and aviation regulators to ensure safety of flight, follow best practices of successful implementations and agree realistic timelines for any retrofits.

On the growing problem of GNSS interference, IATA said jamming and spoofing incidents are rising in areas near conflict zones. While redundancies exist to preserve safety of flights, this is an unacceptable risk which must be mitigated. It wants better coordination between military and civil aviation authorities to provide airlines with timely risk information.

And the support of "a multi-faceted approach to mitigating risks, including better reporting/detection, measures to protect critical aviation frequencies, the development of interference-proof avionics and a cyber-hardening strategy, contingency planning and training (pilots and air traffic controllers)".

IATA supports increasing the retirement age for pilots from 65 to 67, "retaining the existing cockpit safeguard of at least one pilot under 65 and pairing the change with stronger, standardized medical oversight. This reflects longer, healthier careers while keeping safety safeguards in place", IATA said. ■

Airlines taking lead in funding SAF

oneworld alliance members, Cathay Pacific and Japan Airlines, have joined with Singapore Airlines and U.S. carriers, Alaska Airlines and American Airlines, and the UK's IAG to establish a US$150 million oneworld BEV Fund to "identify, enable and scale lower carbon jet fuel of the future".

The airlines and Breakthrough Energy Ventures (BEV) are establishing the fund to address the limited availability and high cost of today's Sustainable Aviation Fuel as currently supplied.

Goals of the BEV fund are:

** Invest in novel, next generation SAF technologies*

** Support the growth of alternative fuel markets to meet long-term needs of the global aviation industry*

** Create economic value for investors and regions around the world*

** Drive technology innovation*

** develop a diverse and resilient SAF supply chain to meet future demand*

BEV, Breakthrough Energy Venture's capital fund, founded by Bill Gates, will serve as the fund's investment manager, adding deep technical expertise, a rigorous diligence model and extensive experience in supporting the growth of early-stage climate change technology companies.

And the boom goes on

Aircraft leasing companies are booking record profits, committing to bumper aircraft orders and increasing their fleets to meet demand, reports associate editor and chief correspondent, Tom Ballantyne.

When lessor Avolon recently confirmed orders for 75 A321neo and 15 A330neo, after 70% Bohai Leasing Co., Ltd owner, approved the deal at a shareholders meeting, it underscored that the leasing market is on a definite upward trajectory.

The commitment takes Avolon's Airbus commitments to 413 aircraft made up entirely of A320neo family and A330neo new technology aircraft. The order includes purchase rights for another 25 A321neos and options for 15 more A330neos. Avolon has 145 A320neo family aircraft in its delivered fleet.

The massive investment follows a March order from BOC Aviation for 70 new A320neo family aircraft with deliveries scheduled to 2032. It built BOC's Airbus order book to around 200 aircraft and increases its Airbus aircraft deliveries to more than 700 since it signed for its first aircraft with the European OEM in 1996. In the same month, BOC announced it will acquire 50 B737-8s from Boeing with customer airlines to accept their single aisles to 2031.

"This order solidifies our position as one of the top five global aircraft operating lessors and provides us with a strong delivery pipeline into the next decade," BOC CEO, Steven Townend, said. "We look forward to providing more airline customers with this popular fuel-efficient and technologically advanced aircraft."

In May, Saudi Arabia's AviLease ordered 20 B737-8 jets with options for 10 more of the type. Its aim is to be a top 10 aircraft lessor. At press time, it owned and was managing 200 aircraft leased to 48 airlines.

Global Market Insights reports the aircraft leasing market was valued at $187.1 billion in 2024, will be $207.1 billion this year, $354.5 billion in 2030 and $565.1 billion by 2034 – an annual growth rate of 11.8%.

Supply chain unreliability, skilled labor shortages and strict production workflows have extended lead times for new aircraft resulting in airlines increasingly turning to leasing to meet short to medium-term capacity to fill the gap between supply and demand.

Its bumper business for lessors. Avolon, which had an owned, managed and committed fleet of 1,166 aircraft at June 30, reported net income of $143 million for the 2025 second quarter, up 36% year-on-year. It also raised $2.2 billion in new unsecured bank facilities in the three months.

"We continued our strong financial performance in the second quarter, delivering $143 million in net income," Avolon CEO, Andy Cronin, said. "The momentum in our performance has been reflected in ratings upgrades with the agencies recognising our growing profitability, balance sheet strength and high levels of liquidity that fundamentally underpin our business."

Market leading lessor, Aercap Holdings, with a portfolio of 3,508 aircraft, engines and helicopters that are owned, on order or managed, announced a profit for the three months to June-end of near $1.9 billion. Its profit for the 12 months ending June 30 was $7.6 billion, a 2.37% increase over 2024.

AerCap was awarded approximately $1 billion in an insurance payment by London Commercial Court for aircraft and engines lost in Russia. AerCap CEO, Aengus Kelly, said: "We generated record net income driven by strong operating results and the favorable June court judgment in our insurance case.

"We also announced a new strategic partnership for engine leasing with Air France-KLM that will expand our ability to support LEAP engine operators.

"Global demand for aviation assets remains high as evidenced by our 97% lease extension rate in the second quarter. Based on AerCap's strong first-half results and positive outlook for the remainder of the year, we have increased our 2025 full-year earnings per share guidance."

Another leading lessor, SMBC Aviation Capital, has booked a record profit before tax of $563 million for the year to March 31, up 22% against the previous 12 months before exceptional items. Pre-tax profit was $1.2 billion when Russian insurance settlement proceeds of $630 million were included.

SMBC CEO, Peter Barrett, said the very strong results demonstrated the company's ability to perform through the cycle and deliver for customers and shareholders. "Despite recent volatility, leading airlines continue to turn to SMBC Aviation Capital in even greater numbers. We are strongly positioned to drive profit growth from our strategically timed asset purchases."

Overall, all the signs indicate aircraft leasing is a business with a more than bright future in the short, medium and long term. ■

DEALING WITH RISKS OF MORE REGIONAL CONFLICTS

It has been more than a decade since Malaysia Airlines flight MH17 was shot down by a Russian missile, killing all passengers and crew on board. Today, the threat to commercial aircraft from conflict zones is much worse. And the airspace over regions of war is not the only concern of the airline industry. Associate editor and chief correspondent, Tom Ballantyne, reports from Manila.

It appeared to be a routine flight. Until the pilot of a Virgin Australia aircraft flying from New Zealand to Australia suddenly received a radio message from a Chinese warship warning him to stay outside a ten-mile exclusion zone because a live-fire exercise was underway. The pilot contacted air traffic control in Australia to ask if they were aware this was happening. The answer was "no".

In the Tasman Sea, thousands of miles away from their home bases, China's navy was firing missiles into the sky below a busy air route without informing local air traffic control authorities.

While operating in international waters, the live firings were a breach of accepted protocol, which calls for pre-warnings of such actions. Some 49 flights were diverted from their pre-planned routes as a result of the exercise.

The incident was a stark illustration of the complex threats airlines face that are quite apart from avoiding the known conflict zones of the Middle East, Russia/Ukraine and more recently India/Pakistan and Thailand Cambodia. And not to be overlooked, North Korea. It has launched test missiles across international air routes without warning.

Just how complex this and other threats are to safe flying were outlined to delegates at the mid-month Association of Asia Pacific Airlines (AAPA) air safety seminar (APASS) held this year in Manila. At panel session "Conflict Zone Risk Management Best Practices", Osprey Aviation Solutions head of risk, Stanislav Bukhman, whose consultancy provides alerts and forecasts to more than 6,000 customers, including airlines and regulators, said from August 2024 to August this year, it had issued a staggering 18,105 "pings", or alerts, about various incidents impacting aviation.

Apart from events such as warning of the likelihood of conflict erupting between India and Pakistan earlier this year, they included incidents of "spoofing", or GPS jamming, a growing threat to aviation that disrupts aircraft navigation systems. This more frequent danger was highlighted when Russia was accused of jamming the GPS of an airplane with European Union president, Ursula von der Leyen, on board as it approached an airport in Bulgaria. Having lost his navigation systems, the pilot had to circle for an hour before landing guided only by paper maps.

Osprey was established in 2017 with four employees. Its staff numbers 52 today. It analyses a minimum of 200,000 data sources, reporting at least 300 events a day.

Circumnavigating conflict zones and dealing with GPS jamming is placing additional stress on cockpit crew, Captain Matsumoto (Max) Hideaki, a B787 pilot and Safety General Manager, Corporate Safety at All Nippon Airways, told APASS attendees.

"We are constantly training for a multitude of scenarios such as adverse weather conditions and aircraft malfunctions. But recently one of the most complex issues has become navigating airspace near conflict zones. They are real time threats that can materialise with little to no warning," he said.

Matsumoto said long before stepping into the cockpit, the

pre-fight briefing becomes critical. "We are not just looking at the weather or making fuel plans. Information is gathered and an assessment is done by the dispatchers and other related safety divisions well before the flight," he said.

"They are meticulously reviewing and summarising, gathering sources from the regulators, international bodies like EASA (European Air Safety Agency), the U.S. Federal Aviation Administration, the International Air Transport Association and sources such as Osprey.

"The question is: what are the specific threats? Are they conventional military activities? Are there groups with anti-aircraft capabilities? What is the maximum altitude of these threats?

"The reliability of this information is paramount. We are constantly weighing the credibility of the sources. Is the information up-to-date? Is it specific enough to be actionable or has it become such?"

The cockpit crew also keeps a vigilant watch on the Guard Frequency, 121.5, used by military activity, he added.

Matsumoto pointed to other operational issues resulting from avoidance of conflict zones. These include longer flight times due to re-routing, crew fatigue and the need for an additional pilot on board a flight at a time of pilot shortages.

"Also, there are human factors. The stress and psychological impacts on crew are significant. We are trained to remain calm under pressure but the thought of what could happen is always present," he said.

"What if we have a medical emergency? What if we have a technical issue that requires a diversion? We brief on emergency procedures like loss of communication. These are scenarios we hope to never encounter but we must be thoroughly prepared."

Commitment to safety is non-negotiable, "however to uphold this commitment, we must be empowered with the best possible information. The most significant challenge, therefore, is not the existence of the conflict itself, but the battle for information and clarity in the fog of war. And the safety of global air travel depends on it", he said.

Keeping up with fast changing situations also is a challenge for regulators, who play a critical role in issuing NOTAMs, (Notices to Airmen) about developments or threats. EASA Southeast Asia representative, David Waller, said conflict zones are a very hard challenge for aviation today.

"The risks are there, but the information available is often incomplete or very fast moving. We can try and help airlines navigate this uncertainty by providing highly practical and hopefully harmonized guidance," he said.

With civil aircraft - passenger and cargo - routinely crossing multiple borders and regions far away from their home bases, they are facing unpredictable risks.

"There has been unreliable communication between military and civil authorities. We have learned some very hard lessons. So, the downing of Malaysia Airlines flight MH17 in 2014 showed that even an aircraft at altitude and flying a published route can be at direct risk from conflict on the ground."

A structured support for decision making is essential, Waller said. "What can regulators contribute? First of all, co-ordination.

"Regulators such as EASA can help connect States, airlines and intelligence sources as Osprey does, which is an intelligence consultancy EASA employs. The key is transparency and tidiness.

"Delays in sharing information can put flights at risk. By publishing advisories quickly, even if details are incomplete, we aim to deliver to airlines actionable information without delay.

"This has to be global. Risks don't stop at borders. It is why this information is made available worldwide. It is why we work with ICAO, the FAA and others to push for harmonisation.

"Because inconsistent or fragmented messages undermine safety.

"Conflict zones don't respect borders and neither should our safety solutions. The lesson of MH17 is early warnings and transparency save lives.

"Regulators like EASA cannot replace the judgement of airlines or the sovereignty of states, but we can help connect the dots, turning fragmented intelligence into clear guidance and promoting international consistency."

Spoofing events are not exclusively the result of military activities in conflict zones – a handheld GPS jammer can be purchased online for as little as $20 – but it is clear the majority of them certainly are.

IATA's Global Aviation Data Management Flight Data eXchange has reported the number of GPS signal loss events increased by 220% between 2021 and 2024.

With continuing geopolitical tensions, it is difficult to see this trend reversing, certainly in the near term. It is becoming worse rather than improving.

Speaking during a panel session "GNNS/GPS Spoofing: Threats to Navigation and Aviation Safety" at APASS, Civil Air Navigation Services Organisation Asia-Pacific director, Soh Poh Theen, said the GNNS (Global Navigation Satellite System) is the cornerstone of modern aviation.

Vulnerabilities include ionosphere disturbances, unintentional interference and intentional interference such as jamming and spoofing.

When it happens recovery time for avionics can exceed 30 minutes and it can lead to a missed approach while landing, loss of separation or worse, he said.

Delegates were told jamming episodes are not only occurring around conflict zones. In the Asia-Pacific for example, there were an astounding 123,333 events involving bad GPS jamming through June and July this year.

What is clear is cockpit crew are well aware of the issue and are being trained to cope with it. ■

THE THIRD WAVE

All eyes are on Akasa Air as an important barometer of India's aviation health. Anjuli Bhargava reports.

In August 2022, as the global aviation industry was crawling out of the pandemic Akasa Air announced itself as a fully-fledged low-fare carrier to be launched in an increasingly crowded space. India's aviation industry and its observers were aghast.

Almost everyone raised an eyebrow or two about the timing and even the need for "yet another carrier" in a sector where many participants were struggling as airlines shut down with unerring regularity.

But for Akasa founder, Vinay Dube, who had done stints at Jet Airways and Go First, and his team, it felt like an ideal time to take the plunge. They could see the market would rebound with a vengeance and that the sky was literally the limit especially for India with a population of 1.4 billion served by barely 600 aircraft at the time.

Not only could the India market support four to five strong players, they could thrive if run well as witnessed with market leader IndiGo.

This was precisely what Dube and his team set out to do. Three years after Akasa took off, they stand vindicated. And the proof of its success is its latest fund raising. At press time, the company had not released details of the additional funding, but the grapevine says US$125 million has been raised. It places Akasa in a stronger position as it convincingly overtakes rivals – thanks to some external factors - but largely because of strategic competence.

The airline has strong backers, including tech billionaire, Azim Premji of Premji Invest, Claypond Capital (Ranjan Pai's family office) and 360 ONE Asset. A pat on the back has been an additional infusion of funds from the Jhunjhuwalas, the primary investor in the airline at its launch via a family trust that keeps its holding below 51%.

The fact Akasa has attracted marquee investors comes as no surprise. The airline's aircraft induction has been on track, both swift and consistent. Its fleet has grown to near 30 aircraft in three years. No mean feat. It is one of the first

> "The past has clearly shown us the fate of airlines in India is primarily in their own hands and very little to do with government actions or policy"
>
> **Vinay Dube**
> Akasa Air CEO

airlines in the world to achieve this milestone. Compare Akasa's acquisition of 20 jets in its first year with IndiGo's 12. Other airlines in India such as Go First and AirAsia India took so long to reach the same milestones that a comparison is superfluous. In an era of low aircraft availability, Akasa has more than 200 aircraft on order, an initial 75 B737 MAX commitment followed by a 150 aircraft order.

Akasa has been helped by its rivals. They are in a state of flux. Air India is running well behind schedule in its proposed plan to take the leadership position in India aviation by March 2027.

IndiGo is shedding its original skin and emerging as a full-service player on the global stage.

Air India's low-fare subsidiary, the merged entity of Air India Express and AirAsia India, is rejigging and transforming itself into a full blown copy of the IndiGo of the past. SpiceJet is struggling to stay afloat in a market full of uncertainties and well out of its control.

In 2019, Jet Airways shut shop followed by Go First in May 2023. Full-service Vistara has been subsumed into the Air India fold.

Besides the radically altered aviation landscape, the India market quickly shrugged off the gloom of COVID. India's citizens started traveling with a vengeance as the pandemic threat declined. As well, oil prices - one of the industry's biggest party poopers – are giving airlines a breather although the rupee remains volatile.

So the future is looking rosier than the past has been. To Akasa's clear advantage, the fact it launched without any of the pandemic baggage afflicting rivals helped it set the fastest pace of growth in a highly competitive market.

Many other parameters seem to slowly but surely be turning in Akasa's favour. It is consistently reporting high loads with July load factor numbers at 90%, bettering both the mid-80s load factor at SpiceJet and IndiGo and sustaining that lead in the last several months. Cancellations and complaints are amongst the lowest compared with competitors. The outcome for Akasa is a 5% market share in a short period and quite high aircraft utilization.

A quick comparison with its closest rival, SpiceJet, is revealing. India's Directorate General of Civil Aviation (DGCA) data of passengers affected by cancellations in July was 620 for Akasa against 6,675 for SpiceJet. DGCA said 8,901 Akasa passengers were affected by delays beyond two hours in the month compared with SpiceJet's 21,202 passengers.

The airline also has delivered good on time performance, despite launching with a small fleet. Deployment of alternate aircraft is harder with a smaller fleet. Now, operating almost 30 aircraft, Akasa's on time performance at six of the country's major airports is 85%, second to IndiGo's 91% but better than Air India's 82% and far higher than SpiceJet's 62%.

Taking a leaf out of IndiGo's book, Akasa's executive team has maintained a low profile focused on establishing the airline for the long-term unlike the founders of several rival airlines who are more focused on publicity and appearing in the news to tom-tom their purported successes. Keeping its head down has helped Akasa command a bigger market share today than SpiceJet, an airline that has been around since 2005.

It's no-frills, efficient inflight service with clean and new aircraft and on time performance are the reasons for its high load factor. It also does not discount its fares.

The airline's route selection has mirrored IndiGo. "Akasa has been getting into a market, increasing frequencies to be number two or three in this aspect and connecting the dots within the network rather than opening new stations with one or two flights," pointed out a former ministry of civil aviation secretary. "The advantages of not spreading oneself too thinly too early are many," he said.

The airline also was quick to enter the international market and now operates to six international destinations without adding a new aircraft type to its fleet.

Several players in India's aviation landscape have made a hash of such expansion, failing to understand the nuts and bolts of a network strategy despite having dollops of experience. The airline's frequencies on some of the major routes, including Mumbai-Delhi and Delhi-Bengaluru, still remain quite low, a weak spot observes industry pundits.

Akasa justifies this situation on the grounds that slots are not easily available. But when the new airports at Navi Mumbai and Greater Noida are fully operational, this is likely to change quite rapidly.

According to industry experts and observers, there are two strong factors in Akasa's favour, both of its own doing.

Firstly, the airline is mostly staffed by qualified staff with plenty of combined experience. Many of them have cut their teeth with full-service carriers, but they are aviation professionals through and through. This could be a distinguishing factor contributing to Akasa's success, argue observers and experts watching Air India struggle with a senior management that is a hotch potch from several Tata run businesses.

One of the biggest factors working in Akasa's favour is its staff focused policies. In an era when airline employees have many grievances and the relationship between management and staff has been turning quite hostile, Akasa seems free of this affliction, facing no large-scale discontent. While some in the industry attribute this to its relative newness, others argue it is a result of a very deliberate and focused policy.

An airline insider said this "employee centric focus:" is being led by Dube himself who has seen Go First pay a very heavy price for its poor people management.

In a sector where it is presently rare to find pilots who are happy with their employers, Akasa is an outlier. Almost all the commanders to whom this writer has spoken said that despite one unpleasant face-off with its pilots in 2023, the LCC has the happiest cockpit crew with the airline optimizing career advancement for both first officers and commanders; Akasa has a 21 day work pattern with nine days off. The casual dress for crew - sneakers as opposed to heels to make their working shifts more comfortable -resonates well with younger fliers, with many choosing Akasa as the more "hip, with it" airline than the comparatively stodgy Air India. Recently, the airline started rewarding employees at airports with a system that recognizes exceptional on ground passenger handling.

Akasa is working to build the most "open" and democratic culture with easy access to management for all staff members.

Dube points out that at the airline's Mumbai headquarters, no top manager has a cabin with access to a window just to himself or herself.

"We have been careful to ensure everyone has a light filled space and the windows are not reserved for those with cabins," he explained.

It may seem like a small matter, but several corporate offices tend to design spaces with the senior and top management in mind above all others.

Akasa has chosen to be as democratic as possible in its design. "The message is that people, our staff matter. This is consistent across functions", a company insider told Orient Aviation.

A former Air India director said this factor could help Akasa steadily rise and retain the position of a strong number three in a market grappling with all the negatives of a duopoly post the sale of the national carrier in October 2021.

"Across airlines, this aspect has been ignored and disgruntled staff can be the reason for the downfall of any of the carriers in an industry that works on the harmonious and smooth blend of men and machines," he said.

In a woke world, a lot of the airline's sustainability initiatives resonate well with the younger fliers it seeks to attract. A set of sustainability initiatives have helped Akasa create the youngest and "greenest" fleet in India. It also is

Sustainability is the rule

On almost every front, sustainability and environmentally friendly practices appear to be one of the carrier's cornerstones. To cite a few instances: crew trousers and jackets are crafted using recycled polyester fabric derived from marine waste plastic bottles, all perishable meal packaging is 100% recyclable and made from paper ethically sourced from sustainably grown crops, uses biodegradable wooden cutlery on board.

saving approximately 60,000 litres of water per aircraft with a host of tiny steps including being the first airline in India to forgo ceremonial water cannon salutes at flight and route inaugurations.

But it is not as if all is hunky dory at the carrier. Questions have been raised time and again about Akasa's failure to turn a profit in an environment where IndiGo has been raking it in. Even Air India has managed to report a small operating profit for this fiscal year

Akasa has high loads and the environment has been quite favorable with lower oil prices, a stronger rupee and robust traffic but Akasa continues to report losses.

Dube posits the losses are in line with the airline's expectations and that the foundational years of any airline are dedicated to investing in its people, fleet, training, operating infrastructure and network and hence no airline registers profits in these years.

That the airline has yet to break even has not deterred its newest investors. "We remain very vigilant as aviation leaves no room for complacency," Dube said.

Perhaps a bigger worry is it takes very little time for losses to tot up in India. There is perhaps no sector as susceptible to every kind of externality and to have so many variables to manage that remain out of an airline's control.

A second red flag raised by sector analysts and experts is the airline appears top heavy. Comparisons with IndiGo might not be completely fair, but they are regularly voiced as the market leading LCC launched with a very lean team and maintained this approach until it went public.

While there is no denying, from a passenger point of view, that Akasa's survival and well-being is far more significant today than in the months after its launch especially in an environment of negative sentiment about a duopoly that includes fare collusion, dismissal of passenger concerns and ad-hoc charges.

Industry sources argue that Akasa is "too small to matter" but that predatory pricing and other hurtful business tactics threaten any small fish in a big pond.

"Competition in the form of a minor irritant is often welcomed by the biggies. We will have to see what happens when Akasa reaches a sizable number of planes for the bigger players to notice it," a DGCA former senior staffer noted. Competition can be aggressive even for talent within the industry, he said, and added Akasa has "shot itself in the foot once" when it decided to take its own pilots to court in 2023. Although Akasa has weathered and even emerged stronger from the experience, it has to make sure it doesn't ruffle any more feathers, he said.

Although Dube and his team maintain the airline is well positioned for future crew requirements, industry sources claim after IndiGo began to re-hire and Tata's have started luring crew, its crew recruitment rate became more challenging.

To counter future staff shortages, Akasa has established learning academies in Gurugram and Bengaluru, where it trains 750 employees a month.

"The airline's investment in a 50,000 sq ft learning academy represents our focus on employee centricity and is a significant step in laying the foundation for building a long-term business," Dube said.

As the Akasa team gears up for its next phase, whether the smaller boat steering through India's choppy waters will be resilient or flounder will depend as much on the skills and abilities of the captain as on tempests of the seas. ■

Aircraft MRO breaking revenue records

Supply chain issues and aircraft delivery delays may be dogging airline operations, but they are generating new revenue records for aircraft MROs. Associate editor and chief correspondent, Tom Ballantyne, reports.

An ageing global airline fleet that requires more servicing is contributing to a super cycle for the airline MRO market, a recent Oliver Wyman research paper reports. The sector is set to be worth US$119 billion in 2025, surpassing the previous record high, in 2019, by 12%. The average age of the global fleet, the consultancy said, has increased to 13.4 years this year from 12.1 years in 2024.

At an annual growth rate of 2.7%, Oliver Wyman forecasts the airline MRO sector will have a value of $156 billion in a decade. Apart from a plethora of older aircraft needing more regular MRO checks, additional factors will drive demand including unexpected durability issues necessitating earlier than anticipated maintenance visits.

Additionally, each aircraft is putting in more flying hours to compensate for the shortfall in aircraft needed to match passenger demand. Increased aircraft utilization is projected to exceed 112 million flight hours a year by 2035, 39% more than 2024.

Oliver Wyman is not alone in forecasting robust growth for the sector. Alton Aviation Consultancy has written that in 2024 the global MRO spend was $124 billion, will increase to $127 billion this year and reach $153 billion in 2035 - annual growth of 1.9%.

"The combination of higher materials, cost escalation, labor cost inflation, higher aircraft utilization and fewer than expected airliner retirements contribute to strong long-term year-on-year MRO growth," Alton said.

The Asia-Pacific will be the largest source of MRO demand, at 36% globally, followed by North America (20%) and Europe at around 20%, the consultancy said.

Within the industry, collectively there is no doubt one of the major factors feeding MRO growth are aircraft delivery delays. Last July, as an example, Airbus revealed it had approximately 60 commercial aircraft awaiting engine installations, commonly referred to as "gliders" in the industry.

The jets, mostly from the A320neo family, are completed in structure but remain grounded due to missing engines, a direct consequence of ongoing supply chain disruptions. The European planemaker confirmed the backlog in its latest financial update and noted delays from engine OEMs, Pratt & Whitney and CFM International, have held back a planned ramp up of aircraft output for full-year 2025.

Boeing is facing similar challenges. It's long delayed B777-9 was expected to enter service in 2020. Certification issues and technical challenges have delayed it by at least six years. Entry into service is targeted for 2026.

As a result, airlines awaiting delivery of the new twin aisle have to continue operating older existing aircraft. In the region, B777 series customers include Cathay Pacific Airways. On August 6, the Hong Kong-based carrier announced it had added 14 more of the type to its order book, increasing its commitment to 35 of the new wide-body type.

Air India, All Nippon Airways, China Airlines, Korean Air and Singapore Airlines also have confirmed orders for the airliner.

Alton forecasts narrow-bodies will create the biggest demand for MRO, increasing their 55% market share to 65% in the next decade.

By category, engine MRO is predicted to be 50% of the entire MRO spend, followed by component MRO (21%), line maintenance (12%), air frame heavy maintenance (7%) and modifications (6%).

New generation engines are 27% of engine overhaul volume today, but will skyrocket to around 77% of engine overhaul volume by 2035. Some new generation engines suffer from low time-on-wing performance, but this situation is expected to improve as programs mature, Alton said.

Modifications will be the fastest growing MRO segment, at 3.7% annual expansion in the next decade, driven by airlines intent on differentiating themselves from competitors. It is forecast they will invest in cabin interior modification/ refurbishment programs and inflight connectivity installations.

Another problem for airlines is engine maintenance. General Electric (GE) and Rolls-Royce are reporting significant challenges in meeting demand for engine repairs. Wait times have surged 150% for modern engines and 35% for older models.

This situation is a result of ongoing supply chain disruptions, an increase in fleet utilization and component shortages.

There is little sign of an early resolution to many of these issues. Oliver Wyman said aircraft MRO is grappling with supply chain disruptions fed by the global pandemic, geopolitical tensions and raw material shortages.

"These disruptions have delayed availability of essential parts and components, leading to longer turnaround times and increasing operational costs. The industry's reliance on global

supply chains for parts and materials means any interruption can cause widespread delays in MRO activities," the consultancy said.

GE Aerospace is investing more than US$1 billion to upgrade its engine repair shops to address these challenges and enhance repair capabilities. "As more companies invest in expanding capacity, the global MRO sector must adopt a more resilient and adaptive approach to its supply chain logistics," analysts universally agree.

Integration of AI and automation will be critical for MRO providers if they are to remain competitive. AI-powered diagnostics identify issues difficult or time-consuming for human technicians to detect. Digital tracking systems deliver real-time updates on the status of repairs, improving transparency for clients.

In response to a shortage of skilled labour, MRO providers must focus on workforce development, particularly training and retaining the next generation of aviation technicians, engineers and managers in advanced technologies to create a culture that attracts young talent to the industry.

"As the global fleet size grows, the shortage will be exacerbated. An aging technician work force combined with a lack of interest in entering the field from younger talent threatens the industry's ability to service increasing MRO demand and erodes knowledge and expertise. MROs face rising costs as they need to pay more to retain their existing workforce and/or attract recruits," Alton said

For airlines, it is a business of catch up. Air passengers hit an all-time high of 4.9 billion in 2024 and will be well more than five billion this year.

Yet today the backlog of unfilled aircraft orders is more than 17,000 jets, its highest ever. Given current rates of production, these orders will take 14 years to clear, twice as long as airlines had to wait for deliveries pre-2019.

As a result, more airlines must fly older planes, pushing up the average age of the global fleet by almost a full year in 2024. It also is taking a toll on fuel efficiency, which benefits from the more efficient engine technology of new jets. The International Air Transport Association, has reported global fuel efficiency was unchanged in 2024, a significant departure from the 1.5% to 2% annual improvement typically realized as new aircraft enter airline fleets.

What is certain is when 6,000 plus attendees gather at Aviation Week Network MRO Asia-Pacific at the Singapore Expo and Convention Centre on September 16–18, it's 25th year as the region's leading gathering for the aviation MRO industry, there will be more than enough topics and challenges to discuss. ■

GE Aerospace investing US$75 million in Asia-Pacific MRO in 2025

In a pertinent response to airline and engine demand in the Asia-Pacific, GE Aerospace most recently announced it is developing more MRO shop capacity across the region following an announcement of a US$45 million investment in MRO facilities unveiled in 2024.

The Seletar Aerospace Park expansion will fund additional engine test cells, new equipment and cutting edge technology including A1-enabled inspection techniques. The upgrade is focused on reducing turnaround times for customers and expanding component repair capability at all GE and CFM LEAP engines MRO shops.

"A significant portion of the Asia-Pacific investment will support major projects in Singapore as the group's largest component repair site – managing more than 60% global repair volume - and also Malaysia with its functions for CFM56 and CFM LEAP engines MRO.

In Singapore, the engine company said its investment will transform GE Aerospace's Seletar Aerospace Park campus.

It will be a technology incubator, advancing repair capabilities with more manufacturing, robots, automation and digitalization. Completion of the new technology shops is scheduled for completion next year.

At the Malaysia shop, the OEM will expand its facilities for MRO work on CFM LEAP engines, doubling its capacity for LEAP engine MRO within three years.

A state-of-the-art engine test facility, using the latest software and hardware, and dedicated to LEAP 1A and 1B engines will equip the hangar shops.

GE Aerospace MRO ON Wing GE Support Facility in South Korea also will receive funding to upgrade technology and test capabilities.

Addressing region's demand for turboprop MRO

One of the world's leading providers of aircraft propeller blade overhaul and repair services, Aircraft Propeller Service (APS), which opened a facility in Subang, Malaysia last June, is planning to expand in the region to meet demand for regional turboprop MRO.

With facilities in Chicago and Sao Paulo APS is the licensed propeller overhaul facility for Collins aerospace propeller systems in the Americas and Asia.

The decision to expand into Asia was prompted by the booming order book for aircraft from European planemaker ATR, the world number one manufacturer of new generation turboprops up to 78 seats.

APS chief executive, Daniel Colbert, said the potential growth of the region's turboprop fleet is huge. "The turboprop fleet is roughly 800 now and almost 500 of them are ATRs. Looking at the next 20 years, that is more than 1,000 ATRs."

For example, ATR has a big order book in India, up to 100 airplanes. They also are flying in Indonesia, New Zealand, Australia and elsewhere. "As I tick them off - Taiwan, Korea, Japan - everybody seems to be adding ATRs," he said.

Setting up in Malaysia was decided after consideration of potential locations including Indonesia and Thailand. Malaysia checked a lot of boxes, Colbert said.

"It was central to the region, with labour force, cost balance, access to the customers – and Malaysia has a pretty stable economy. We are very happy with our decision", he said.

The technical workforce at Subang is 100% local and trained in Brazil and the U.S. One of the incentives for APS was the Malaysian government commitment to pay up 50% of some training costs.

While the propeller system business is the "foundational operational capability" at Subang, Colbert said there are plans to diversify beyond the core business. "We feel we have a facility [at Subang] that has a lot of room physically for expansion, he said.

"We are working with a number of OEMs, in addition to Collins, on other capabilities. So, number one, we will grow and add to our capability in Malaysia.

"Then number two, we have talked about India a little bit and are working on the business case for a satellite shop we would like to open there.

"But Kuala Lumpur will be our centre of excellence for the region. It is where we will maintain the highest level capability.

"It has not been plain sailing. Like other sectors of the aerospace industry there have been supply chain issues."

As an example, Colbert said APS has had difficulties securing parts from Collins. "People have parked aeroplanes because they can't get parts and they can't fly planes. They end up cannibalising planes to keep other planes flying," he said.

The key component is the propeller hub that the blades are attached, "They are extremely difficult to find. If you do locate one, I have heard people paying up to four times the list price for the part," he said.

"It's a critical component. It's the alloy: it's the steel, it's machined and they have had incredible difficulty ramping back up post COVID."

However, Colbert is confident about the future of APS in Asia. "We have already received our first couple of blades. It's been a great journey, the 12-14 months to open Subang. We are really invigorated by it and excited."

For Asia's operators the benefits APS Subang offers is reduced turnaround time, minimising of supply chain and shipping costs of components because there is no need to send parts to overseas shops for repair. ■

Korean Air and Boeing strengthen predictive maintenance collaboration

Korean Air (KAL) has entered into a strategic partnership with Boeing for enhanced collaboration in predictive maintenance in an agreement signed at a September MRO conference and exhibition in Singapore.

KAL established its Predictive Maintenance Team in August 2023 and utilizes its own in-house developed operational solution.

By analyzing fleet-wide operational data to forecast component health, the collaboration aims to enhance operational readiness, maximize aircraft availability, and reduce maintenance costs and flight disruptions, ensuring the highest levels of fleet reliability.

"Korean Air has made substantial progress in enhancing fleet reliability with our Smart MRO strategy, specifically by leveraging predictive maintenance. This strategic collaboration with Boeing will build on that success, taking our capabilities to the next level," said KAL senior vice president and Head of Maintenance and Engineering, Chan Woo Jung.

"United by a shared mission to leverage predictive maintenance analytics for improved efficiency and fleet reliability, Korean Air's extensive operational experience pairs well with Boeing's engineering expertise and advanced technical operations software," Boeing Global Services senior director digital services, Crystal Remfert, said.

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