A LONG MARCH
Tough times ahead for Indian carriers despite record yields

PREPPING FOR THE FUTURE
Asia-Pacific air navigation providers gear up for UAM traffic management

CHINA BUSINESS AVIATION
Market looks to improve once COVID restrictions fully lifted

Rotor Recovery
APAC SECTOR FORECASTS
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What a difference a year makes

AS THE YEAR WINDS DOWN and we look forward to 2023, it’s worth taking a look at what’s happened in this (fingers crossed), turnaround year for aviation in Asia.

Live events return
Starting with the Singapore Airshow and more recently with the MRO show in Singapore, aviation conferences and events, while not exactly roaring back, are certainly making a solid return which bodes well for the industry. I wrote previously that just having the Singapore Airshow take place made it a success, as muted as it was and as few deals were announced. The MRO show however was a different beast. While the conference sessions were somewhat lightly attended, the exhibit floor was where the action was, and it was packed. Aviation Week Network’s MRO Asia-Pacific Conference and Exhibition final report said the show attracted more than 4,000 registered industry professionals from 67 countries and 188 exhibitors. CAPA too has renewed its in-person events both in Australia and other locations like Singapore, the Association of Asia Pacific Airlines (AAPA) scheduled a live version of its annual presidents meeting and the FTE show was once again live in Singapore.

Hong Kong & China
While the rest of the world moves on from draconian COVID-related quarantines, public meeting restrictions and mask wearing in many cases, Hong Kong and China remain holdouts. Hong Kong took a baby step recently in doing away with its tough quarantine on arrival policy but it may be too little too late to salvage the city’s once freewheeling capitalistic society, especially following a report that Singapore has now overtaken Hong Kong as Asia’s top financial centre.

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Rest of APAC
It’s good to see the rest of Asia opening up as well in places like Japan and South Korea. Australia and New Zealand are open, Cambodia was one of the first to reopen and do away with everything but COVID vaccination proof and even that requirement has now been removed in the kingdom.

The Outlook
It’s always dangerous to predict what will happen in this day and age. But if Mother Nature cooperates and doesn’t throw a new COVID variant at us that is more dangerous or some other bug for which there is no vaccine, aviation can look forward to a good recovery. If the last two years have taught us anything, it’s that lockdowns don’t really work. They may make politicians feel like they’re “doing something”, but by the time a border is closed the virus has already arrived.

There are challenges remaining. Supply chains remain stretched throughout Asia and the world, the industry is struggling to cut its carbon emissions despite the thousands of press releases to the contrary, and the deep cuts inflicted on the labour segment of aviation will not be healed soon and geopolitical tensions across the globe may mean that the heady days of go-go growth in aviation may be behind us. But here’s hoping 2023 will bring better news for the industry.

Matt Driskill
EDITOR
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**EXECUJET HAITE COMPLETES CHINESE JOINT VENTURE**
ExecuJet Haite, a wholly owned subsidiary of the Haite Group, and Metrojet, the Hong Kong-based business jet operator, announced the completion of their Chinese joint venture. The new company, Metrojet Haite Business Aviation Company Ltd., is registered in Shenzhen and allows both companies to build on existing strengths in aircraft management, flight operations and MRO services. As a first step in the future long-term plans for the joint venture, Metrojet Haite Business Aviation Co. Ltd., has now formally acquired the shareholding of Funian Aviation Co. Ltd, which will be followed by a wider portfolio of companies and acquisitions as opportunities arise.

**CAE EXPANDING IN SINGAPORE**
CAE will grow its business aviation training footprint in the Asia-Pacific region, with the deployment of a Gulfstream G650 FFS and the start of training in November at its existing CAE Singapore training centre. In addition to its centres in Las Vegas, Savannah and Singapore, CAE provides business aviation training in locations worldwide, including CAE Abu Dhabi Aviation Training Centre, CAE Dallas, CAE Dubai Al Garhood — Emirates CAE Flight Training (ECFT), CAE London Burgess Hill, CAE Montreal, CAE New Jersey Morristown, CAE Orlando, CAE São Paulo Guarulhos and CAE Shanghai.

**METROJET RECEIVES SECOND RENEWAL OF IS-BAO STAGE 3 CERTIFICATION**
Hong Kong-based Metrojet announced its second successful renewal of the International Standard Business Aircraft Operations (IS-BAO) Stage 3 certification for another three-year period through to 2025. IS-BAO is a set of safety standards developed by the International Business Aviation Council (IBAC) establishing a framework for effective safety and operational processes, providing tools to facilitate the implementation of best practices, and delivering an appropriate Safety Management System (SMS).

**JETCRAFT SAYS YOUNGER BUYERS ARE IN BUSINESS AVIATION**
Ever Forward, Jetcraft's five-year pre-owned business jet market forecast reveals that the share of Jetcraft clients under 45 has risen by 20 percent in the last five years. Further, these buyers are driving a trend towards larger aircraft purchases, with their average transaction price hitting $25 million, some 31 percent higher than their over 45 counterparts. Nearly a quarter (24 percent) of Jetcraft's pre-owned jet buyers in Europe are younger than 45, with this figure rising to 38 percent in the Middle East and Africa.

**MUMBAI AIRPORT OPENS RENOVATED FBO**
Mumbai International Airport has launched the all-new, renovated General Aviation terminal facility, exclusively for private jets. The Chhatrapati Shivaji Maharaj International Airport (CSMIA) terminal offers expansive lounges with butler service. The terminal can handle over 50 passengers every hour.

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ExecuJet MRO Services Malaysia breaks ground on new facility

ExecuJet MRO Services Malaysia, a Dassault Aviation subsidiary, has started construction of its new purpose-built maintenance, repair and overhaul (MRO) centre at Malaysia’s Subang Airport, helping to reinforce Malaysia’s position as a regional hub for MRO. ExecuJet - which is already Malaysia’s largest business aviation maintenance, repair and overhaul organisation — has a facility at Subang Airport, but will be relocating to the larger, purpose-built facility in 2023’s fourth quarter when construction is completed. The new facility will have a gross floor area of approximately 149,500 sq. ft. including corporate offices, customer areas and back-shops that further expand ExecuJet’s MRO capabilities. The ultra-large aircraft hangar will be able to accommodate 10 to 15 business jets of various sizes simultaneously plus there will be a dedicated apron area for use. ExecuJet MRO Services serves Dassault, Bombardier and Gulfstream operators from across the Asia region.

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Volocopter raises US$182 million

Volocopter said it has raised an additional US$182 million in the second signing of its Series E funding round. NEOM — the Red Sea’s smart, cognitive region project — and GLy Capital Management of Hong Kong have joined Volocopter’s diverse investor base. This will carry the company beyond the certification of its electric passenger aircraft, the VoloCity air taxi. “Attracting NEOM and GLy as investors is a great success and highlights our pole position in the commercial certification race. This is the key requirement to launching commercial operations and starting to generate revenue,” said Dirk Hoke, CEO of Volocopter.

EHANG AND HAECO EXPLORE PARTNERSHIP IN ADVANCED AIR MOBILITY

EHang announced that it has signed a memorandum of understanding for potential cooperation with Hong Kong Aircraft Engineering Company (HAECO Group), a subsidiary of Swire Group. The two parties plan to cooperate in multiple areas such as manufacturing and assembly, continued airworthiness, digital platforms, aircraft maintenance, and talent training. The focus is to co-develop systems and solutions that cater to the needs of continued airworthiness and after-sales maintenance services in preparation for the commercial operation of EH216-S, EHang’s passenger-grade autonomous aerial vehicle.

AW609 TILTROTOR PRODUCTION AIRCRAFT MAKES DEBUT

The Leonardo AW609 aircraft took to the air in Philadelphia on 13 October testing general handling and systems. This tiltrotor will support mission capability evaluation and expansion as the programme moves closer to certification. Three customers’ production aircraft are on the final assembly line in Philadelphia.

The first production aircraft joins a prototype based in the US and two more located in Italy, all currently involved in the last stages of testing activities ahead of (Federal Aviation Administration) FAA certification. AC5 will be retained by Leonardo contributing to customer demonstrations, mission capability evaluation and expansion, and supporting the manufacturer and the operators in the transition from the developmental to the operational phase once on the market.
IAE, China Eastern extend fleet hour agreement for V2500 engines

Pratt & Whitney announced that China Eastern Airlines has extended its Fleet Hour Agreement (FHA) for over 100 of their V2500 engines, powering 50 Airbus A320/A321ceo aircraft. The agreement includes EngineWise Data by ADEM (Advanced Diagnostics and Engine Monitoring) services to provide on-wing monitoring. The highly versatile and proven V2500 engine is offered through IAE International Aero Engines AG (IAE). Shanghai Engine Centre (SEC) is a joint venture between China Eastern and Pratt & Whitney with growing capabilities including Line Maintenance Service for Pratt & Whitney GTF engines recently certified by the Civil Aviation Administration of China. “China Eastern and Pratt & Whitney are important collaborators along the industrial chain,” said Cheng Guowei, executive vice president, China Eastern Airlines.

SATAIR SIGNS CONTRACTS WITH GAMECO, CHINA EASTERN

Satair and GAMECO (Guangzhou Aircraft Maintenance Engineering Co., Ltd.), in China have signed a multi-year agreement for Satair’s Integrated Material Services (IMS) programme. Satair’s IMS service offers an end-to-end supply chain solution that includes planning, forecasting, sourcing, purchasing and logistics, covering all expendables required in the typical aircraft maintenance lifecycle. With the new agreement, the solution is developed in close collaboration with GAMECO as both a partner and a customer. The new solution covers a large scope of parts leveraging on Satair’s global capabilities and local competencies to deliver increased flexibility and plannability through consignment stocks, guaranteed service levels and the support of onsite personnel. Satair also announced it has signed a deal with Eastern Airlines Technic covering a selected scope of part numbers. The agreement will optimise Eastern Airlines Technic’s inventory by leveraging on the availability of local inventory in Satair’s Beijing warehouse, increasing the dispatch rate of materials and improving the asset turnover ratio.

EFW, AMECO COLLABORATE ON A330P2F CONVERSIONS

Elbe Flugzeugwerke GmbH (EFW) and Aircraft Maintenance and Engineering Corp (Ameco) in China announced a new collaboration on Airbus Passenger-to-Freighter (P2F) conversions. Under the partnership, Ameco will carry out P2F conversions as a third-party service provider for EFW’s A330P2F programme. Conversions will be carried out at Ameco’s facilities in Chengdu, China, with the first induction of an A330 aircraft scheduled in 2023. EFW’s family of Airbus P2F programmes — A320P2F, A321P2F and A330P2F — are developed in collaboration with ST Engineering and Airbus, with EFW holding the Supplemental Type Certificate and leading in the overall programmes as well as marketing and sales efforts. The A330P2F programme comes with two variants — the A330-200P2F and A330-300P2F — which are both equipped with advanced technology that offers airlines additional operational and economic benefits. To meet the rising demand for freighter conversions, ST Engineering and EFW have set up new conversion sites in China and the U.S. to ramp up total conversion capacity.
Interiors/IFEC News

Inmarsat survey shows APAC pax confident and Wi-Fi in demand

Three-quarters of airline passengers in Asia Pacific (APAC) feel confident about flying again. This is a significant rise from just 6 percent last year, according to Inmarsat’s 2022 Passenger Experience Survey which surveyed 4,000 people across the APAC region who have travelled by air in the past 12 months. India, at 88 percent topped the list, followed by Australia and Singapore (79 percent), and South Korea (53 percent). As appetite for travel rebuilds, airlines are now enhancing efforts to create the best possible flying experience. Inflight connectivity remains one of the leading factors that influence which airline is selected by APAC passengers, with more than four-fifths (83 percent) more likely to rebook with an airline if quality inflight Wi-Fi was available, an increase from 78 percent in the previous year. The heightened desire to stay connected while travelling is also evident with almost three-quarters (74 percent) of those surveyed saying it is important to connect to Wi-Fi when flying, up from 39 percent in 2021. The greater zest for travel and increasing demand for connectivity presents an opportunity for airlines to create more meaningful and compelling digital experiences for travellers beyond just inflight connectivity. Inflight connectivity remains one of the leading factors that influence which airline is selected by APAC passengers, with more than four-fifths (83 percent) more likely to rebook with an airline if quality inflight Wi-Fi was available, an increase from 78 percent in the previous year. The heightened desire to stay connected while travelling is also evident with almost three-quarters (74 percent) of those surveyed saying it is important to connect to Wi-Fi when flying, up from 39 percent in 2021. The greater zest for travel and increasing demand for connectivity presents an opportunity for airlines to create more meaningful and compelling digital experiences for travellers beyond just inflight connectivity. Inflight connectivity is a prime example. Passenger demand for fast and reliable Wi-Fi has never been higher, so providing access to such services is absolutely essential for airlines. This also serves as the foundation to enhance the overall onboard experience through digitalisation, which our survey results indicate will not only be embraced by passengers, helping to drive their future brand loyalty, but also unlocks even greater revenue generation opportunities for airlines across Asia Pacific." The volume of APAC passengers using digital devices on flights remains high at 96 percent — mostly for entertainment and administrative tasks. In addition, 78 percent have connected to inflight broadband when available on a flight, more than double the percentage from the previous year (38 percent).

RECARO AIRCRAFT SEATING WINS DEAL WITH LUFTHANSA FLEET

The Recaro Aircraft Seating CL3710 and CL3810 seats were selected by the Lufthansa Group to outfit its Economy Class cabins. The order for nearly 24,000 Economy Class seats will equip nearly 100 Lufthansa and SWISS aircraft. Delivery of the first seats is slated for the fourth quarter. The CL3810 Economy Class seat will be retrofitted on both SWISS A330-300 and Lufthansa B747-8 aircraft. The CL3810 seat is 15 percent lighter in comparison to its predecessor, which can save airlines on fuel costs and optimise cabin performance. Both seats were built with sustainability in mind and feature lightweight structures, which will reduce carbon emissions for the aircraft.

UNNUM SIGNS UP TO ‘GREEN CABIN ALLIANCE’

Business Class seating manufacturer Unum Aircraft Seating is joining the Green Cabin Alliance as its first seating manufacturer member. The Green Cabin Alliance aims to decarbonise the industry by bringing together like-minded organisations involved in the design, manufacture, usage and disposal of parts and products for aircraft cabins and identifying strategies to sustainably operate. Chris Brady, CEO of Unum, says: “Aligning ourselves with the Green Cabin Alliance reinforces our sustainable mindset, something we are incredibly serious about. We must all do something to formalise, inform and grow our plans for sustainability and the alliance is pushing forward with all these objectives.”
Changes at the top for Cathay Pacific

The Cathay Pacific Group announced a number of senior management appointments, effective over the next few months. Augustus Tang, chief executive officer, will retire from the Cathay Pacific Group on 31 December 2022. He will assume a new role at John Swire & Sons (H.K.) Ltd. effective 1 January 2023. Ronald Lam, chief customer and commercial officer, will be appointed CEO effective 1 January 2023. He will continue to serve as chair of HK Express. Lavinia Lau, director customer travel, will be appointed chief customer and commercial officer, replacing Lam, and will also be appointed executive director on the board of Cathay Pacific effective 1 January 2023. Greg Hughes, chief operations and service delivery officer since June 2017, will retire from the Swire Group after 36 years of service in 2023. Alex McGowan, director service delivery, will be appointed chief operations and service delivery officer and also executive director on the board of Cathay Pacific effective 1 April 2023 upon Hughes’ retirement from the board. McGowan will also be appointed chair of Cathay Pacific’s wholly owned all-cargo airline, Air Hong Kong, replacing Hughes. Other appointments to the senior leadership team are: Erica Peng, currently general manager planning at Cathay Pacific will succeed Lau and is appointed director customer travel effective 1 January 2023. Mandy Ng, currently chief executive officer of the Cathay Pacific group’s wholly owned low-cost carrier HK Express, will return to Cathay Pacific and succeed McGowan as director service delivery effective 1 April 2023. Jeanette Mao, currently general manager inflight services at Cathay Pacific, will succeed Ng as HK Express chief executive officer effective 1 April 2023.

Commenting on the appointments, Cathay Pacific Group Chair Patrick Healy paid tribute to Tang’s leadership of the Cathay Pacific Group and congratulated Lam on his appointment as CEO. “It gives me great pleasure to congratulate Ronald on his well-deserved appointment to chief executive officer. I have worked very closely with Ronald in recent years, and I have been impressed by his long-term vision for the company, his intellect, and his determination to see the group succeed. He is without doubt ready to lead our organisation on our path to becoming one of the world’s greatest service brands.”

ATR APPROVED IN CHINA

The Civil Aviation Administration of China (CAAC) has provided validation of the type certificate for leading turboprop manufacturer’s ATR 42-600. This milestone opens the opportunity for ATR to re-enter the Chinese market with a firm order from an undisclosed customer for three aircraft. The most sustainable option for regional air travel, the ATR 42-600 is an ideal route opener for China, a vast country looking to grow essential connections profitably and responsibly. Nathalie Tarnaud Laude, ATR’s Chief Executive Officer, said: “Receiving CAAC’s validation of the ATR 42-600 type certificate, along with a firm order, is a major achievement marking the re-introduction of ATR turboprops in China. The ATR 42-600 will undoubtedly prove to be a game-changer. ATR offers an eco-responsible alternative to jets while bringing comfort and convenience to passengers, and essential air services for communities and businesses to thrive.” Regional aviation has a well-researched positive effect on a country’s economy and society: increasing regional flights by 10 percent generates a 5 percent rise in tourism, 6 percent rise in regional GDP and an 8 percent increase in foreign direct investment. Fabrice Vautier, ATR’s Senior Vice-President Commercial added: “By 2035, we anticipate that over 150 airports will be built in China and turboprops will play a key role in creating a new network of short, thin routes, complementing the high-speed train offering. Our 20-year forecast predicts a need for 280 new turboprops in the region, and ATR is perfectly placed to meet this demand, whilst also contributing to decrease the reliance on public subsidies and delivering reduced CO2 emissions.”
EMBRAER E190-E2 GRANTED TYPE CERTIFICATION IN CHINA

The Embraer E190-E2 has been granted its Type Certificate by the Civil Aviation Administration of China (CAAC) marking the start for Embraer’s E2 programme in China. It is expected that certification for Embraer’s larger E195-E2 aircraft, which is ongoing, will follow shortly. “CAAC’s certification of the E190-E2 is great news for Embraer and our prospective customers in China,” said Arjan Meijer, President and CEO of Embraer Commercial Aviation. “Certification paves the way for significant E190-E2 business opportunities in China — data reveals that one billion people living in China’s second and third tier cities have never taken a flight.” Meijer added, “The E190-E2 and E195-E2, seating up to 114 and 146 passengers respectively, offers complementary capacity to China’s indigenous ARJ21 and C919 aircraft. The E2 will not only provide the best-in-class economics and emission reductions for airlines, but also help to accelerate implementation of China’s Essential Air Service program to connect more secondary and tertiary cities.” Embraer’s latest market forecast revealed that 1,445 new aircraft in the up to 150-seat category will be delivered in China through 2041; driven by the nation’s long-term economic development, and the continuing trend of the Chinese civil aviation system evolving from point-to-point, to a more hub-and-spoke based network. “It’s a big moment for our newest generation Embraer jet — the E190-E2 — to be certified by CAAC,” said Guo Qing, managing director and vice president of commercial aviation for Embraer China. “Besides its right-size and fuel efficiency, the E190-E2 was born with superior hot-and-high capability. It’s the first aircraft in its class to have flown to some of the world highest airports in western China including Lasha and Yushu. We believe the E190-E2 is the best aircraft to serve low density but high elevation markets in western China with the right performance and more profitability.”

ACI ASIA-PACIFIC ACHIEVES POSITIVE OUTCOMES AT DGCA CONFERENCE

Following the global agreement on achieving net zero carbon emissions in aviation by 2050, ACI Asia-Pacific presented a policy paper on decarbonisation at the 6th ICAO Conference for Director General of Civil Aviation for the Middle East in Abu Dhabi, calling for enhanced government support for airports to achieve net zero goals. Acknowledging the suggestions made by ACI Asia-Pacific, the conference urged airport operators in the Middle East to implement the Airport Carbon Accreditation Programme (ACA) and adopt the Airport Carbon and Emissions Reporting Tool (ACERT) in their decarbonisation strategy. Stefano Baronci, director general, ACI Asia-Pacific said, “We would like to express our gratitude to the Middle Eastern governments for the support they provided the aviation industry during this pandemic. The global agreement for aviation to achieve net zero carbon emissions by 2050 requires the same level of support from governments to incentivise airports and implement plans in partnership to reach net zero goals. To this end, the aviation ecosystem as a whole, including governments, airports, airlines, and others, must work together. It is encouraging to see airports in the region pursuing net zero targets as they explore potential pathways. There are already 12 airports from the Middle East in Airport Carbon Accreditation programme, recognised at different levels. With over 100 airports in the Middle East, we would like to see more airports participating in the ACI ACA programme.”

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AAPA: Airlines cautiously optimistic as regional traffic improves

Asia Pacific airline leaders gathered at the Association of Asia Pacific Airlines (AAPA) 66th Assembly of Presidents in Bangkok, Thailand, in November welcomed the resumption of international air travel, which has surged as the region’s governments gradually removed border restrictions imposed since 2020. As cross-border travel was progressively restored, regional carriers have raced to put on flights to meet runaway demand, stimulated by the pent-up desire to travel and savings accumulated in the two years of isolation. During the first nine months of 2022, Asia Pacific airlines recorded a robust increase in the number of international passengers carried by more than five-fold to 62 million compared to the same period in 2021.

Consequently, with capacity expanding by 125 percent over the same period, the international passenger load factor jumped by 40 percentage points to average 70 percent.

By contrast air cargo markets, often an indicator of the state of the global economy, saw demand as measured in international freight tonne kilometres (FTK) fall by 4.4 percent during the first nine months of 2022 as export orders waned and supply chain problems mounted. The macro-economic outlook has weakened, with rising inflation rates in many countries, stubbornly high energy prices and a strengthening US dollar. Nevertheless, prospects for the region’s airlines remain promising as long as pent-up demand continues to hold up and cargo yields remain healthy despite the easing of demand.

Subhas Menon, director general of AAPA, said “The region’s recovery still lags behind the rest of the world and is expected to reach only 75 percent of 2019 levels by year-end. Except for mainland China, the gradual re-opening of borders in many economies in Asia and strong recovery in air services only serve to underscore the magnitude of pent-up travel demand.” Apart from consolidating the lessons learned from managing the pandemic, the industry is also bracing to navigate the multiple headwinds that appear ahead as a result of a moderation in the outlook for the global economy. Overall, airline margins remain under pressure.

Noting that the pandemic brought regional air transport to a complete standstill for two years, Menon added: “As air travel gradually recovers, the airline industry is taking extra care to maintain its outstanding safety record. Airlines continue to actively invest in recruitment and training to address additional manpower needs as air travel demand is expected see healthy growth in the coming year.”

AAPA members also called for regulations to be changed relating to passenger facilitation, safety and sustainability. Noting the proliferation of onerous regulations imposed on the air transport industry during the pandemic, AAPA airline chiefs stressed the critical importance of governments adopting a more coordinated approach to ensure the speedy recovery of the sector in the coming months. “AAPA carriers have shown great resilience in confronting the challenges brought about by the prolonged COVID-19 pandemic, whilst maintaining highest safety standards,” said Menon. “However, the lack of coordination of travel requirements across borders, and the burden of restrictive government regulations, hold back the sustainable recovery and growth of Asia’s carriers, as well as their ability to fully contribute to the social and economic development of the region.”

The International Air Transport Association (IATA) at the AAPA meeting also urged the Asia-Pacific region to prepare for the anticipated surge in traffic and provide policy support for the industry’s decarbonisation efforts, as the region moves forward from COVID-19. “The last three years have been extremely challenging for the airline industry. Asian airlines in particular were hit hard, accounting for about a third of the industry’s losses between 2020 and this year. With the region finally emerging from COVID-19, governments have a key role to play in accelerating the recovery, and supporting the industry’s sustainable growth,” said Conrad Clifford, IATA’s senior vice president and deputy director general.
SEX & AVIATION

The good thing about travel coming back is borders are open — as this issue is being written China has loosened its entry rules, although that could change in a flash — and for the industry, in-person shows are coming back. Although not jam-packed as they were pre-pandemic, they are coming back. Asian Aviation recently attended two events in Singapore where the topics were greatly similar. China, labour (or the lack thereof), and automation or “going digital” were the topics on everyone’s minds.

Sex, funny enough, also came up, specifically when the topics of labour shortages arose during panel discussions. The sex we’re talking about is not the reproductive or ‘fun’ kind but was posed as more of a question by Subhas Menon at the CAPA Asia Summit, and later echoed by another panellist at the Future Travel Experience show.

Menon posed the question, “how do we make aviation sexy again” for people to want to work in the industry or return to a job they lost to a microscopic virus that killed tens of millions of people and caused billions of dollars of losses.

While everyone else was talking about China and the surge in leisure and business travel, the main topic seemed to keep returning to “how do we get the millions of people we laid off or fired (sacked) during the pandemic to want to come back to work for us?”

Various ideas were bandied about by the so-called expert panellists from airlines, alliances, MRO providers, ground handlers and other sectors. They hemmed and hawed about “upskilling”, “retraining” workers to turn ground handlers into lounge staff thanks to the increasing automation of airport jobs (but lounge jobs are also increasingly being automated).

What these “experts” seemed to miss was the industry is very much not sexy in any sense of the word any longer. Absent a fair wage that would allow a ground handler to make a down payment on a new house or put his or her kid through university, and insurance for when your back goes out after loading heavy bags all night in the pouring rain, why would anyone want to come back?

Sexy for an airline CEO is his or her stock grants (not options mind you, but grants), his or her multi-million-dollar salary, free travel (First Class where still available on certain planes), and other similar perks.

Sexy for a ground handler or a flight attendant, is, as mentioned above, a salary that allows that employee to live a decent life, keep the car filled with fuel, the fridge filled with good food for a family and insurance for when they get COVID.

Automation is not sexy unless you’re a robot builder or a computer programmer. While every airport talks about biometrics, automation, etc., what they’re really talking about is being able to use a machine or a computer to eliminate jobs. That’s not sexy.

That includes border patrol or immigration agents. Changi Airport is the best airport in the world, but it has managed to keep costs down by employing automation wherever it can. That’s great for the airport’s bottom line, but why would someone come back to work at the airport when a machine may take their job. That’s not sexy.

What aviation leaders need to do is put themselves in a ground handler’s steel-toed boots, work a 12-hour shift heaving heavy bags to and fro and try desperately to meet the turnaround times demanded by the airlines. That would be sexy. — MATT DRISKILL
WITH ADVANCED AIR MOBILITY (AAM) set to take off in various parts of the world within a few years, air navigation service providers (ANSP) and their technology partners are preparing their air traffic management systems to accommodate eVTOL vehicles and eventually unmanned eVTOLs.

As much as possible, ANSPs and eVTOL operators will use existing airspace rules, but changes are required, particularly to accommodate autonomous vehicles of the future. As Boeing and its uncrewed urban air mobility (UAM) subsidiary Wisk say in their recently released concept of operations: “While current certification, airspace, and operating rules will be used to the greatest extent possible, modifications will be needed to address the capabilities of new UAM platforms, for example, electric distributed propulsion, detect and avoid and autonomy. Globally, regulatory changes will need to evolve and be harmonised to enable this new UAM ecosystem.”

Boeing and Wisk envisage a “stepping-stone” approach supporting uncrewed UAM operations, with a long-term vision of automated traffic management, allowing reduced aircraft separation and higher traffic density; UAM flight tracks designated as UAM corridors managed by automated traffic management; and flight planning and separation services automated within the UAM corridor environment. While based on the United States’ national airspace system, Boeing and Wisk’s concept is designed to be a blueprint for operations around the world, it says.

Uncrewed UAM will be the result of numerous enabling technologies, including battery and distributed propulsion advancements,
ubiquitous communication and localisation capabilities, and advances in automation systems. In terms of ATM, Boeing says this technology will enable the adoption of trajectory-based flight plans providing flow management to enable timely separation and sequencing at destinations using predictable, published flight paths for procedural deconfliction and conformance monitoring. In addition, it will involve comprehensive air and ground situational awareness to support optimised flight planning around weather, traffic congestion, airspace, obstacle and terrain constraints; automated systems at vertiports to streamline capacity and allocate real-time landing zone availability to minimise air traffic control action in managing UAM traffic; and C2 link infrastructure to provide reliable and deterministic ground-to-air command and control capabilities. It will also require detect and avoid and landing hazard avoidance systems to provide tactical conflict management capabilities; and digital communications to allow constant communication integrity monitoring between ATC operational centres and UAM fleet operational centres, as well as automated transfer capability as UAM aircraft cross ATC facility boundaries.

A number of Asia-Pacific countries are seeking to be at the forefront of AAM, with the promise of resolving urban congestion and providing regional transportation links. As a result, they are preparing their ATM systems to support the safe and efficient operation of these new forms of transportation.

Airservices Australia was one of the first ANSPs to consider the ATM requirements for urban air mobility when it launched its concept of operations in conjunction with EmbraerX in December 2020. That concept of operations has formed the basis for planning for the future for other ANSPs around the world. It determined that initial UAM operations could be delivered safely within the existing ATM capabilities and scaled over time with the implementation of urban ATM (UATM) services, which would support high-density UAM operations with piloted and autonomous vehicles.

Airservices is making a range of investments to prepare its ATM system for the future landscape, Bruce Dowdall, director of operations said at the recent Australian Association for Uncrewed Systems AAM Summit. "We recognise the growth in digitalisation, automation and machine learning means we must not only adjust our services for existing services, but we must transform our services to meet the emerging landscape, including the introduction of AAM," he says. While the existing ATM system and procedures are expected to be able to incorporate AAM initially, long-term developments will require a new approach.

"As new airspace entrants and user cases emerge, a system of systems will predominate, catering for increased demand in both low-level airspace and the stratosphere. In the early phase of this transition, the need for information exchange between bespoke traffic management systems will be of paramount importance, with an indicator for operations at and across these various system boundaries. While existing ATM airspace structures and procedures are expected to be utilised to integrate early stage AAM operations, this traditional approach is unsuited to the mature integration of AAM.

Volocopter has already signed deals with several cities such as Singapore to launch its services. Also, the broader suite of uncrewed services when we consider them operating at scale," he explains.

Dowdall says Airservices’ vision of the future is an integrated traffic management system that delivers safety, regulatory and efficiency of air navigation for all airspace users. The service provider is currently working on 10 transformational investment projects to deliver the system.

Australia’s harmonised civil-military ATM system, OneSky, which will be implemented in 2026, will be the backbone, opening airspace in a centralised and coordinated way. A flight information management system (FIMS) will allow the ANSP to safely integrate uncrewed services into existing operations in the future. FIMS prototype testing and development is under way, says Dowdall. "FIMS is the hub of a whole bunch of systems that need to be integrated to provide an active ecosystem with the information and data they [uncrewed vehicles] would need to function," he says. FIMS will play a “critical coordination role” between the management of low-level airspace and traditional ATM, says Dowdall, with the different systems required to exchange information to work in coordination with each other. Airservices was hoping to enter the final phase of prototype testing in the fourth quarter of 2022.

Demonstrations of integrating AAM into airspace will be important to highlight system safety and efficiency. New Zealand is working towards controlled airspace demonstrations as part of its Airspace Integration Trials Programme (AITP) which is seeking to integrate advanced aircraft safely into the country’s aviation system. The AITP, which started in 2019 and will continue through to the end of 2024, is being led by the New Zealand Ministry of Business, Innovation and Employment and includes the Ministry of Transport, the Civil Aviation Authority and Airways New Zealand.

The programme involves 10 industry partners, including Wisk. Successful demonstrations of airspace integration in a simulated environment were conducted earlier this year and the partners are now working towards replicating this in controlled airspace, according to Joe McKay, director Innovative Partnerships at the MBIE.

Singapore has conducted a number of demonstrations of both unmanned aircraft systems (UAS) and UAM in its airspace, including demonstration flights by Volocopter of its eVTOL over the Marina Bay area of Singapore in October 2019. Volocopter is aiming to launch air taxi services in Singapore next year.

"We have seen quantum leaps in UAS and UAM developments in recent years. The scaling and full deployment of UAS and UAM operations, involving the use of eVTOL aircraft, and the realisation of their full potential will require concomitant development of regulations to assure safety and security and build public confidence and acceptance," says Tan Kah Han, chief technology officer and senior director (Unmanned Systems Group) at the Civil Aviation Authority of Singapore (CAAS). He adds: "CAAS is working closely
with various Singapore government agencies and international civil aviation authorities to develop regulations and operational procedures to facilitate safe and secure piloted eVTOL operations. We are also working with institutes of higher learning, research institutes and industry and technology partners to facilitate the development of the UAM industry ecosystem in Singapore.”

CAAS initiatives include facilitating piloted eVTOL commercial trials using specific flight profiles, away from the airport environment and safely coordinated with other airspace users, supported by the current ATM system. “The lessons and insight from these trials will guide us on how and what changes may be made to the future ATM systems,” he says. CAAS is also developing an unmanned aircraft traffic management (UTM) system to manage drone activities and later UAM.

South Korea is aiming for a UAM test and demonstration next year under its K-UAM Grand Challenge programme which is working towards the commercialisation of UAM in initial operations from 2025-2029, widespread implementation from 2030 and a mature transportation sector from 2035. Working towards this, the Ministry of Land, Infrastructure and Transport (MOLIT) is validating Korea’s UAM concept of operations in an airport environment. Recent demonstrations at Gimpo Airport determined that the current ATM system can manage UAM aircraft in real-time, as well as domestic and international traffic at the airport.

During the demonstrations, advanced ATM technologies developed for UAM operations in an airport environment were tested. The flight data of the UAM aircraft was transmitted to a system wide management system which is being developed under the country’s National ATM Reformation and Enhancement plan. All essential information for air navigation, including the flight information of domestic and international flights and the UAM demonstration aircraft were shown on a single SWIM monitoring screen. The demonstration also used real-time image monitoring technology to automatically detect and track the flight route of the UAM demonstration aircraft. MOLIT is also demonstrating three-dimensional digital twin technologies for simulating UAM traffic changes in urban areas.

“It is absolutely imperative that we test and try out UAM services in various environments through demonstrations,” says MOLIT Minister Noh Hyeong-ouk.

Technology company OneSky (not to be confused with Australia’s ATM system) is working with a number of Asia-Pacific countries to safely incorporate unmanned operations in their airspace systems. OneSky has developed a UTM system which it says provides “a scalable, collaborative ecosystem of real-time airspace status between commercial and recreational operators, civil aviation authorities and ANSPs.” Automated digital UTM platforms will be the foundation for all future airspace traffic management systems and is a critical enabler for both small UAS through to passenger-carrying AAM operations, says OneSky. “We make it easy for airspace authorities to register, identify, track, monitor, approve and manage UAS operations and all types of restricted flight areas in real time,” says OneSky.

OneSky has been active in the region for a number of years, initially incorporating drone operations into the airspace system of various Asia-Pacific countries.

In Singapore, for example, in 2018 it was awarded a contract as part of a consortium with Nova Systems to develop technological capabilities in UTM to allow drone package delivery services in urban environments. This resulted in the development and testing of a number of advanced UTM services, including flight authorisation, strategic deconfliction, conformance monitoring, real-time alerts, constraint management and remote identification capabilities. “This culminated in the final project milestone which was conducted in March 2021 where OneSky demonstrated these capabilities in a working UTM
system through live BVLOS [beyond visual line-of-sight] flight trials in the skies above the Maritime Drone Estate in Singapore located off Marina South Pier,” says OneSky. The company demonstrated the safe implementation of widescale BVLOS, multi-UAS and multi-site drone delivery with a UTM system configured for Singapore.

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In South Korea, OneSky has been selected as a UTM provider to support AAM operations in a corridor between two airports, while in Australia, it has been down-selected to Phase Four of Airservices’ FIMS prototype project that will be a critical component of Australia’s UTM ecosystem.

In all of these projects, collaboration is vital, says OneSky. “Our roadmap and our product are focused on enabling BVLOS operations within each country’s airspace – from rural to densely populated areas,” it says. OneSky adds: “We work closely with various partners within the UAS and AAM ecosystem, including ANSPs, regulators, infrastructure providers, operators and OEMs in each country to advance safe, open access to airspace for commercial operations. We believe in the importance of cooperation between these groups to advance the industry.”

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The good news is that the helicopter market in Asia-Pacific is rebounding strongly from the pandemic with all of the major OEMs seeing good results so far in 2022 as Michael Doran reports.

THERE IS DEMAND COMING FROM ALL PARTS OF THE REGION, with orders coming in from Bangladesh to Australia and from Indonesia to Japan. To put that in context, a good place to start is with a summary of where the market stood at the end of 2021.

Despite the ravages of COVID, Asia-Pacific’s helicopter fleet continued to grow in 2021. According to Global Sky Media’s annual Fleet Report, at the end of 2021 there were 4,458 civil turbine helicopters in operation in the Asia-Pacific region.

With 908 aircraft, Australia is the largest helicopter country market, accounting for 20 percent of the Asia-Pacific fleet. Mainland China’s fleet stood at 766, followed by Japan (680), New Zealand (564) and India (284).

Reflecting the popularity of helicopters in Oceania, Australia and
SIMPLICITY FOR THE WIN

WHEELS AND BRAKES IT’S THAT SIMPLE
New Zealand have a combined total of 1,472, or just on a third of the regional market. The top five have more than 70 percent of the fleet, with a total of 3,202 aircraft.

Unlike fixed-wing aircraft where fleet sizes can significantly change year on year, helicopters tend to be added and removed incrementally. In 2021 there were 393 changes to the fleet, including 91 new deliveries, 137 pre-owned additions and 165 deductions.

Australia had the most new additions in 2021 with 32, followed by New Zealand (22), with only the Philippines (13) and Indonesia (10) also reaching double digits. After Indonesia, there were only two countries that had new additions, Japan (7) and Sri Lanka (1).

The Global Sky Media report also looks at where the helicopters are used and the missions they operate. More than half of the region’s fleet are used in the multi-mission or utility market. The balance was fairly evenly dispersed, with VIP transport accounting for 16 percent, law enforcement (7 percent), offshore (7 percent), search and rescue (6 percent) and EMS (6 percent).

The two major helicopter OEMs, Airbus and Bell, have a combined 70 percent share of the market, lead by Airbus with 1,860 aircraft (42 percent) and Bell with 1,233 (28 percent). Also in double digits is Leonardo with 10 percent, but after that six types comprise the balance of the market.

There were 91 new deliveries into Asia-Pacific in 2021, with Bell
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gaining the major share delivering 37 new aircraft. Airbus delivered 26, Leonardo 13 and Robinson 11, with 74 percent of the new helicopters going into the utility sector.

With Bell leading the new deliveries market in Asia-Pacific, Asian Aviation spoke with its Asia-Pacific managing director, Jacinto Monge, to find out what they were doing right and how the market was receiving what Bell has to offer the region. When asked about the state of the market in the region, Monge told Asian Aviation there has clearly been a rebound which has benefited all makers, not just Bell.

“I think it was six months later in APAC than everywhere else but it’s a very strong rebound and business is good for the industry as a whole,” he says. “We’re going to do really well in terms of share this year, but when I talk to my peers they’re doing well too.”

In 2022 Bell has seen a lot of success for aircraft across all models in both commercial and government sectors. Monge mentions how well the Bell 429 has done with Australian law enforcement agencies, now in service with the Queensland and New South Wales police departments.

In July, the Queensland Police Service ordered three twin-engine Bell 429s, which are also used by the Royal Thai Police and the Indonesia National Police. Another Queensland success was five 407s for Nautilus Aviation, which specialises in tourism flights to the Great Barrier Reef.

“The corporate market’s been really good too, where we’ve sold the 505, 429 and 407s in Australia, the Philippines and Bangladesh and we’re seeing orders for the 412 from Japan and India. So far, it’s been an amazing year that’s beat our expectations by a long shot and it’s because of our product, our service and our people,” Monge said.

Helicopters operate in a lot of rugged and remote parts of Asia-Pacific, so reliability and service are paramount to operators. The main service facility is at Bell Textron Asia in Singapore, supported by Eagle Copters Maintenance in Australia, which Bell acquired this year.

Bell also has a joint venture blade repair company in Australia, a Bell MRO facility in China and a subsidiary service partner in Japan. It has around 16 customer support engineers working around the region and a network of authorised maintenance centres across Asia-Pacific.

Looking at the types of missions the Bell aircraft are used in, Monge says military training is an important one and that the utility market is big in the region. “We do law enforcement and that connects with search and rescue and disaster relief. There’s been a lot of aero medical and a little bit of oil and gas, but all the segments have been performing really well.”

In May, Bell signed a deal with the Republic of Korea for up to 40 Bell 505 helicopters, to be delivered by 2025. The 505, which is a light single engine helicopter, will be used to train the next generation of army and navy pilots. In Asia-Pacific the 505 is also used for pilot training by the Indonesian Navy and Japan’s Coast Guard.

In September, a Bell 505 performed a demonstration flight in Singapore using Neste MY Sustainable Aviation Fuel (SAF), which Bell said was the first in Southeast Asia. “All our demonstration and training flights are running with 35 percent SAF, as part of Textron’s goal to reduce emissions by 20 percent by 2025,” Monge says. “Scalability is going to be a big thing for sustainable aviation fuel and it’s the only way of getting the price down to an acceptable level. It’s really for the companies in the chemical industry to answer that but today for our demo flights we don’t have a supply issue.”

With more than 1,860 helicopters and 42 percent of the Asia-Pacific fleet, Airbus is a major player in the region. In the 10 countries with the largest fleets, Airbus is number one in seven, missing out to Bell in Australia and Thailand and to Russian Helicopters in South Korea.

▲ Japan Coast Guard uses the H225 for maritime missions.

AIRBUS

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In 2021 Airbus logged 419 orders globally, up from 289 in 2020. The orders came from 167 customers in 45 countries, while at the other end of the factory 228 helicopters were delivered in 2021.

In January, Airbus Helicopters CEO Bruno Even said: “We have had a first sight recovery in the worldwide market, which progressed by 40 percent in 2021 from 2020. It will take two to three years to recover to levels before the crisis, but the trend is there.”

In July, Airbus released its results for the first half of 2022, which reported total group revenue of €24.8 billion (US$24.38 billion).

Airbus accounted for 70 percent of total revenues, Airbus Defence and Space 20 percent and Airbus Helicopters 10 percent.

In the first six months, Airbus Helicopters gained orders for 163 aircraft and delivered 115, with its revenues rising by 6 percent year on year, reflecting a growth in services and a favourable aircraft mix. It has 787 helicopters in backlog and it’s worth pointing out these figures include both civil and military programmes.

In March India’s leading operator in the pilgrimage, transport and aerial work sectors, Himalayan Heli Services received its seventh Airbus H125 helicopter. The aircraft went into service at the end of March on transportation and aerial work operations.

Himalayan Heli Services is the largest operator of the H125 in India and South Asia. Since 1998 it has logged more than 50,000 flying hours using Airbus helicopters and carried more than 200,000 passengers on its various services.

All Nippon Helicopter has a fleet of 11 Airbus helicopters, including five AS365s, five H135s and one H160. In December 2021 All Nippon Helicopter received the first multi-role H160, prior to its entry into service this year for electronic news gathering.

To support the entry of the first H160, All Nippon Helicopter signed a five year HCare parts-by-the-hour contract with Airbus in March. Under the contract the operator is guaranteed the supply of spare parts and repaired parts at a fixed rate per flight hour, with access to a dedicated pool of parts maintained by Airbus.

The Global Sky Media reports lists Leonardo as delivering 13 helicopters to Asia-Pacific in 2021, bringing its fleet up to 468 aircraft. This year the Italian OEM has had good success in penetrating the China market, starting with an order in December 2021 for two AW189 super-medium twin-engine helicopters. These were ordered by Beijing General Aviation Co. for delivery to the Beijing Police for law enforcement, search and rescue and firefighting missions. This contract is a milestone for Leonardo as it marks the entry of the AW189 into the Chinese market.

Beijing Police is an established Leonardo operator, with three AW139s, three AW109 Powers, one AW109 GrandNew and with the two AW189s will have the largest police aviation unit in China.

In March Leonardo announced it had signed a contract for six AW189s with China’s Rescue and Salvage Bureau of Ministry of Transport, or PRC (MOT CRS). These will be delivered in 2023 to do coastal maritime missions and extend the unit’s SAR capability to a 200 nautical mile radius. MOT CRS already operates 20 helicopters from eight bases along China’s coastline.

Australia has a number of Leonardo aircraft on parapublic missions, and in June the OEM secured an order for three AW139s, for use in Western Australia’s Emergency Rescue Helicopter Service. The aircraft will be supplied by CHC Australia to carry out a range of HEMS, SAR and patient transport services in West Australia.

More success in China came in July with orders for six helicopters, starting with four AW139s for CITIC Offshore Helicopter Company (COHC). They will be used for offshore oil and gas production operations, with deliveries completed by the first half of 2023. COHC has four AW139s, one AW169 and one AW109 Power in its current fleet.

The second order was for one AW139 and one AW109 Trekker, to be used by various municipal branches in China’s Hunan province. The aircraft will operate HEMS, firefighting and public security missions and are due for delivery in 2023.

There are more than 200 Leonardo civil helicopters working on a range of commercial and public services in China. More than 40 of those are AW139s, with another 60 performing similar roles in Australia.

Since its certification in 2004, the AW139 has gathered more than 1250 orders from close to 300 operators in 80 countries. They have proved particularly successful for emergency medical services and search and rescue missions in all corners of the globe.
A long march to financial recovery

CAPA India forecasts tough financial times ahead for Indian airlines despite record yields, as Shelley Vishwajeet reports.

THE AVIATION SKIES IN INDIA are appearing both sunny and dark at the same time while operators are experiencing tailwinds and headwinds simultaneously. Optimists would wish that the tailwinds are strong enough to negate the impacts of headwinds toward a faster financial recovery of operators who are staring at a cumulative three-year loss of over US$10 billion for FY21, FY22 and FY23. Will that happen?

Unfortunately, for now the headwinds appear fierce enough to sink some weaker airlines such as SpiceJet and GoAir and give a serious jolts to other airlines. Amid all this, it comes as no surprise that every Indian airline has a negative net worth at the moment. CAPA India's latest mid-year forecast for FY2023 minces no words by pointing out that despite higher yields, much better than earlier estimated, these gains are likely to be negated by rising operational
costs, maintenance issues and the grounding of over 75 aircraft for multiple reasons.

CAPA points out that the cost environment will remain hostile due to multiple factors such as higher fuel costs, currency depreciation, rising interest rates, inflation, higher labour costs, rising airport charges and higher aircraft ownership cost combined with global factors. "Overall, the cost base will remain a structural risk in the near to medium term."

CAPA notes that despite impressive yields, especially since 1QFY23, they remain insufficient to absorb all the increases in costs. "The next 12 months will remain extremely challenging due to fuel prices, high inflation, continued geo-political tension and the emergence of recessionary conditions in several leading economies. This will be further compounded by supply chain issues and labour shortages, particularly in the west," says the CAPA report.

On this front, CAPA is bang on. For example, take the example of Vistara. For FY22, its revenue doubled to US$659 million but losses also widened by 35 percent to US$256 million. This is the story of every airline be it market leader IndiGo or Air India.
Indian Aviation

CAPA has upwardly revised its earlier loss estimate for FY2023 from US$1.4 billion-US$1.7 billion to US$2.5 billion in its latest report. CAPA's latest estimate now matches earlier forecasts by credit rating agencies such as Fitch and ICRA.

CAPA in its previous report had also pointed out that the removal of fare caps is going to be no solace as it may lead to significantly higher losses, although it did not say how that was going to happen.

The CAPA report says that losses at low-cost carriers (LCCs) are expected to account for US$0.9 billion-US$1 billion while losses for full-service carriers would be around US$1.5 billion. With this upward revision, CAPA points out that Indian airlines could lose close to US$10 billion across FY21, FY22 and FY23.

CAPA further points out that operators' financial health will be further impacted by the grounding of over 75 aircraft. "CAPA India estimates that these aircraft, equivalent to 10-12 percent of the Indian fleet, are grounded due to maintenance or engine-related issues. They have a significant impact on financials in the second half," CAPA India said.

CAPA warns that supply chain issues are likely to continue in FY24 which will impact future deliveries. Delays in future deliveries could also result in liquidity issues for some carriers, as the income from sale and leaseback financing may be less than planned. Moreover, the report says that delays in aircraft deliveries may also result in increased unit costs for carriers due to the need to extend the leases of older aircraft in the fleet, which have higher maintenance costs and fuel consumption than the new aircraft that would have replaced them.

Close on the heels of the CAPA report, Go First announced its FY22 results and reported a whopping loss of US$226 million for the fiscal year. Among the major reasons for the massive loss, Go First blamed delays by Pratt and Whitney in supplying engines, as well as multiple waves of COVID-19 that affected air travel. To add to the challenges of Indian airlines, CAPA says that non-supply chain issues such as shortages of pilots and engineers are also expected to emerge next year.

To save the aviation industry from collapsing, CAPA points out that Indian airlines will require US$3.5 billion to US$4 of capitalisation over the next two years, of which around US$1.5 billion to US$2 billion will need to come in the form of equity. "With unprecedented losses post-COVID, all airlines have negative net worth. Funding requirements over the next two to three years, especially to achieve solvent recapitalisation (which is more critical than ever) may be much higher than previously estimated," says the CAPA report.

Without naming any particular airline, CAPA says that aircraft financing may become challenging for some operators due to their elevated credit risk and weak balance sheets. Equity infusions therefore will be critical. It is obviously pointing toward SpiceJet and GoFirst. SpiceJet's cumulative losses for the FY19, FY20, FY21, FY22 and 1QFY23 now stands at over US$600 million. If no equity infusion takes place, the airline faces serious possibility of being grounded. But the million-dollar question is, will any bank or financial institution risk picking up equity in an airline whose financial transparency and financial viability have been questioned several times. Go First, in a recent statement, had claimed that it has secured a further loan of US$145 million from its bankers. Market leader IndiGo is also sitting on a ballooning cumulative loss of around US$4 billion, but it has cash on hand of US$1.8 billion.

CAPA's traffic forecast is optimistic. "Traffic will be closer to 130 million, while domestic capacity is expected to be similar to pre-COVID levels," the report said. This is indeed good news. International traffic will also remain buoyant, though it could be 10 percent lower than pre-COVID levels, says the report.

The next 12 months will remain extremely challenging due to fuel prices, high inflation, continued geo-political tension and the emergence of recessionary conditions in several leading economies.

CAPA

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China business aviation has potential, but challenges

Despite the strictest COVID rules in the world, China's business aviation sector is still set to grow once restrictions are lifted. Matt Driskill reports.

Various reports show while the US is still the largest market for business aviation at more than US$5 billion, these same estimates show China's business aviation market could be worth up to US$5.4 billion by the year 2027. Led by countries such as Australia, India, and South Korea, the market in the Asia-Pacific region overall could reach US$3.4 billion by the year 2027.

That potential is leading to a number of deals recently and operators like Sino Jet are also ramping up their operations to take advantage of the potential growth.

One recent deal that was completed is Silkwings Jet, which is a Sino-French joint venture in Hangzhou. The operator plans to operate Dassault models like the Falcon 2000LXS, Falcon 6X and Falcon 10X series.

The General Aviation Chinese Market Forecast Annual Report (2001-2040), published by the Aviation Industry Development Research Centre of China, said there were 22,409 business jets worldwide as of 2021. Of these, China held about 600 jets, and this number is tipped to increase fivefold to 3,000 by 2040.

Silkwings Jet said it will offer a jet-sharing programme model or a fractional ownership model that allows clients to purchase a certain portion of the right of use of the aircraft for several years and obtain a certain amount of flight hours. The rights can be sold or cashed out. "While the pandemic has dealt a heavy blow to the global civil aviation industry, there are signs of growth in the market demand for business jets," said Franck Dubarry, founder and chief executive officer of the company, in a press release.
Bombardier jets have proven popular in China with business jet owners.

In China, Dassault says COVID is still affecting its supply chains.

Another recently completed deal was a joint venture set up by ExecuJet Haite, a wholly owned subsidiary of the Haite Group, and Metrojet Limited, the Hong Kong-based business jet operator. The new company, Metrojet Haite Business Aviation Company Ltd., is registered in Shenzhen and allows both companies to build on existing strengths in aircraft management, flight operations and MRO services, and to reinforce their already well-established positions as market leaders within the region. As a first step in the future long-term plans for the joint venture, Metrojet Haite Business Aviation Co. Ltd., has now formally acquired the shareholding of Funian Aviation Co. Ltd., which will be followed by a wider portfolio of companies and acquisitions as opportunities arise.

Funian Aviation Co., Ltd. was founded in 2017, with their main operation base and offices located in Shenzhen, China. Its focus is providing both aircraft management and high-end charter services, with extensive experience in operating a fleet of Gulfstream G450/G550 aircraft. Funian Aviation holds CAAC Part 91 and has a CAAC Part 135 Air Operator Certificate, CAAC Part 145 maintenance organisation approval and has FAA Part 91 operation experience. The company has also obtained IS-BAO STAGE II certification.

"With the completion of the joint venture, we now have a strong foundation in place to grow our combined businesses across a larger spectrum of business aviation services delivering added value to our customers and partners through our shared commitment to excellence," says ExecuJet Haite General Manager Paul Desgrosseilliers.

"The collective goal of Haite and Metrojet is to ensure that Funian Aviation continues to expand, promote and provide superior business aviation services and solutions to the highest international standards of safety, quality and service in the greater China region and abroad. We see this acquisition as an important first step in our relationship with Haite that will lead to an expanded maintenance, support service and aircraft management network across China," says Metrojet CEO Gary Dolski. The CEO later told Asian Aviation that both companies in the JV have faith in China. "There will be a bounce back, (but) how soon and how high we don’t know. We have a very long vision and accompanying patience."

Dolski said business aviation in China is “I would say, slowing down further. (The market is) fully dependent upon how the PRC government deals with COVID and it does not appear that there are any drastic changes coming forward shortly. The charter business is the most likely potential light at the end of the tunnel short term. There remains an exodus of aircraft from PRC with no OEM showing an increase in new aircraft sales that I am aware of.”

Dolski said flying “has definitely increased with us and with the other operators and the somewhat relaxation of the Hong Kong government’s quarantine restrictions benefits those that are based in Hong Kong. However, I have not seen an increase in visits to Hong Kong given the three-day monitoring of where you can go, which is still an impediment to outside clientele coming to Hong Kong.”

A China success story has been Sino Jet, which has become the Asia-Pacific region’s biggest operator by having the most new deliveries of aircraft directly from OEMs, including the Bombardier Global 6500 and Gulfstream G650. Sino Jet said recently “amid strong demands for business jet travel, stringent restrictions and quarantine requirements in many countries have placed new challenges on scheduling aircraft deliveries and aircraft maintenance work overseas, sustaining safety and efficiency have become the keys to success in the market.”

In regard to rising challenges, Sino Jet has put forward a business strategy to develop an “extensive service network,” “comprehensive maintenance capabilities” and an “integrated information management” system. In addition to its operating bases in Beijing and Hong Kong, Sino Jet continued to boost investment in its Shanghai branch in 2021 and established a new Jiangsu branch, which complements its Hangzhou base to form a strong Yangtze River Delta service network. At the same time, Sino Jet has also set up offices in Hebei and Fujian. Recently, Sino Jet signed a strategic cooperation agreement with the Hainan Free Trade Port, and its Hainan subsidiary has increased its charter capacity to meet demand from the Port. To date, Sino Jet has operating bases and branches in 20 cities around the world.

Honeywell’s 31st annual Global Business Aviation Outlook forecasts up to 8,500 new business jet deliveries worth US$274 billion from 2023 to 2032, which is up 15 percent in both deliveries and expenditures from the same 10-year forecast a year ago. This year, surveyed operators reported new jet purchase plans on par with 2019 levels, with fleet addition rates doubling from last year’s reported intentions. Respondents’ feedback in this year’s survey aligns with industry reports of sold-out business jet production lines for the next several years.
Your face is your pass

Airports in Asia-Pacific and around the world are turning to technology like biometrics to speed up the journey. Matt Driskill reports on some recent moves.

ANYONE WHO HAS SEEN THE MOVIE MINORITY REPORT with Tom Cruise will remember the eye scanners connected to computers that remember you, your last purchase at a shopping mall and your identity for police purposes. While the aviation industry is far from what Steven Spielberg imagined when he directed the film, the industry is headed in that direction.

Biometrics are increasingly at the forefront of airport technology. A recent announcement by Air New Zealand shows why. The airline said boarding passes may be a thing of the past due to biometrics.

Recently, Air New Zealand customers were some of the first to experience biometric verification at the boarding gate after a successful trial at Los Angeles Airport. “It’s all part of Air New Zealand’s plan to take the friction out of travel and to make the journey through the airport that much smoother. No sighting passports and no scanning boarding passes,” the airline announced.

Upon entering the US, customers are provided with the opportunity to register with Customs and Border Protection (CBP) using their biometric information. Using the automated airport kiosks, this same data is then used to verify their identity at the time of boarding. Biometric information is secured by CBP and not directly accessible to Air New Zealand or any other airline using this service.

Air New Zealand Chief Digital Officer Nikhil Ravishankar says this technology will speed up the boarding process, creating a “seamless experience” for customers and airport staff. “We’ve heard from customers that they want their airport experience to be hassle-free and technology is a key enabler of that. According to IATA, more than 75 percent of customers see huge value in biometric verification and want to use it instead of passports and boarding passes. The feedback from more than 1,000 customers who have used this technology to board our flights has been really positive.”
Airports around the world like Tokyo’s Haneda used COVID to invest in technology.

Air New Zealand said it will roll out the programme on flights to San Francisco, followed by the airline’s other US ports. “Contactless technology changes are coming thick and fast and we’re continuing to learn and adapt to new innovations that will make travel easier. In the new travel era, we need simplicity not complexity,” Ravishankar said. “Using biometrics at the boarding gate is only the beginning and we’re in talks with industry players, globally and here in New Zealand, about how we can use biometric technology throughout the whole airport process.”

Airport service providers around the world are also introducing their own systems of biometric technology. Vision-Box, a global provider of biometric recognition systems, recently launched the “Seamless Kiosk” to help speed passengers on their way.

“Seamless Kiosk has been developed to provide an exceptional user experience through its biometric and biographic capture performance, increasing the passenger handling process speed with an accessible design and a smart passenger guide system, based on artificial intelligence that better helps any user to follow the instructions intuitively with a new immersive camera system,” the company said in announcing the system.

Seamless Kiosk provides the most flexible solution in the market, with customisable capabilities and features enabling it to fit any use case for passenger processing, delivering an elevated level of security, fast and precise biometric processing to the latest International Air Transport Association (IATA) recommendations and International Civil Aviation Organisation (ICAO) standards. With a small footprint, Vision-Box’s latest solution combines the newest Common Use Self-Service (CUSS) 2.0 platform and Border Control processing, including Entry/Exit System (EES) requirements.

Alessandro Minucci, head of Product at Vision-Box said “We are very pleased to launch Seamless Kiosk, a truly nimble device which can be deployed in multiple markets such as identity management, travel & tourism, and border control, allowing the user to enjoy the best seamless experience, with the highest accuracy and speed via a biometric-by-design solution.”

Another Vision-Box executive, Jeff Lennon, vice president of Strategic Sales and Global Partnerships, said at a recent conference that “Contactless biometric based technologies are the key here — both for consumers to regain confidence and for airports and airlines to effectively manage crowds and cut down bottlenecks created by the additional paperwork. By implementing touchless automated technologies, passengers can confidently walk into the airport and speed through the processes, from check-in to boarding, without the need to interact with another person. Airports and airlines which are investing now in upgrading their infrastructure to seamless travel technologies are getting ahead of the curve, will stand to withstand periodical pressures from the evolving pandemic and its variants, and ultimately recover the fastest.”

COVID, despite the deep losses and deaths, provided an opportunity for airports to increase their use of technology. In 2021, when COVID was ravaging the aviation world, airports invested in biometrics and automation. Australia’s Elenium Automation won a deal with Airport Development Group, the owners and operators of Darwin International Airport (DIA), to deploy the VYGR (short for Voyager) end-to-end solution that will improve passenger experience, enhance operational efficiency, and enable future growth.

The scope of the Elenium solution at DIA includes 30 portable kiosks to provide a full and fast check-in process, all of which can be easily moved for greater operational flexibility and utility, as well as 23 bag drops, six of which can also function as agent-assist and rework stations.

Elenium will also supply operations and monitoring software to ensure operational issues can be addressed pro-actively. Elenium’s Flight Deck platform optimises operational support by providing a live view of the status of all hardware devices, enabling quick resolutions, leading to better customer experience outcomes and greater operational efficiency. All Elenium’s kiosks and bag drops can operate in touchless mode and are delivered with biometric-ready capability.

Collins Aerospace was also chosen to deploy biometric solutions at Tokyo Haneda Airport. Called the ARINC SelfPass, uses the company’s “Face Express” system that “will allow passengers to efficiently proceed through procedures at the airport (baggage drop, security checkpoint entrance, boarding gate) utilising facial recognition, eliminating the hassle of showing their passport and boarding pass,” said Shoichi Ohashi, Tokyo International Air Terminal Corporation’s senior manager for the Facility Department. “We worked closely with Collins Aerospace to achieve this and enhance passenger convenience at Tokyo Haneda airport.”

Rakan Khaled, vice president, Airport Systems for Collins said, “Our ARINC SelfPass biometrics solution at Tokyo Haneda Airport streamlines passenger processing while improving airport efficiency and security. Despite the challenging pandemic environment, we were able to manage staffing and suppliers to ensure smooth delivery of the solution.”

This project includes the installation of 98 Self-Service Check-In Kiosks, 30 biometric enrolment kiosks, 104 biometric devices for Self-Bag Drop, 17 biometric Automated Security Gates and 42 biometric Automated Self-Boarding Gates.

Late last year, Malaysia Airports also deployed at Kuala Lumpur International Airport new SITA biometric-enabled self-service touchpoints following a significant technology upgrade. The extensive technology deployment features a hardware and software overhaul, including introducing more than 100 SITA biometric-enabled self-service Smart Path kiosks — the TS6, SITA Smart Path Bag Drop, and an IT infrastructure refresh. SITA’s slimline TS6 kiosks feature wireless connectivity. The kiosks are ready and enabled for SITA Flex and the next generation of common-use API-based services that facilitate a low-touch, fully mobile passenger experience.
AAV Events Calendar

Send event submissions to: info@asianaviation.com

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Routes Asia Chiang Mai, Thailand
world@informa.com

28 FEB-01 MARCH 2023
Aviation Festival Singapore
enquiry.sg@terrapinn.com

28 FEB-5 MARCH 2023
Avalon Airshow Melbourne
+61 (0)3 5282 0500
expo@amda.com.au

01-02 MARCH 2023
MRO Middle East Dubai
+1 718 730 3192
anitajoyce.wright@aviationweek.com

17-18 MAY 2023
MRO Australasia Brisbane
+65 9736 1722
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23-25 MAY 2023
EBACE Geneva
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06-08 JUNE 2023
Aircraft Interiors Hamburg
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26-28 SEPT 2023
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