Issue
2
Wednesday
16 February 2022

FLIGHT DAILYNEWS

With distribution supported by
ATR

ydrogenesis

to launch research effort into climate-neutral in Singapore with plans for hydrogen hub

yesterday set out sion for creating drogen hub" in apore as part of its re the potential of e power source. an airframer has peration agreement ear study with on Group (CAG), ion Authority of AAS), and industrial Linde. acific region will as we work towards e-neutral aviation a abine Klauke, chief ficer at Airbus (*right*). llows a similar gned in South Korea to look at the f hydrogen. ng with Changi th Incheon s will leverage al and technical vo of the world's The studies we will ther reflect the need ctorial approach, ufacturers, airlines, orts, energy academia. We need dinated action to als," says Klauke. hat the study infrastructure upport hydrogen- aft at Changi. be hydrogen rage, and d the implications vices, operational equipment, and refuelling systems.

CAG will also look at the potential for hydrogen fuel cells to support airport operations, in addition to operational standards for the safe use of the gas.

Klauke also touches on the topic of hydrogen's influence on aircraft design, particularly conceptual "blended wing" configurations. While she acknowledges that a blended wing planform provides ample space for hydrogen, she is doubtful such an aircraft can enter service by 2035, when Airbus believes the potential of hydrogen-powered commercial flight can be realised.

Klauke also observes the various alliances of companies, regulators, and other stakeholders coming together to support sustainable solutions for the industry. She feels such moves are important steps to move the sustainability agenda forward.

BillyPix

Issue 2
Wednesday
16 February 2022

FLIGHT DAILYNEWS

With distribution supported by ATR

SINGAPORE AIRSHOW 2022
WHERE AVIATION'S FINEST MEET · 15–18 Feb

Thousand and counting: Martin and MacKenzie

BOC bags eight Leap shipsets

Aircraft lessor BOC Aviation has placed an order covering eight CFM International Leap-1A engine shipsets to power Airbus A320neo family aircraft.

The order for eight shipsets from CFM, announced at the Singapore Airshow, covers aircraft due for delivery in 2023.

BOC Aviation chief executive Robert Martin says: "CFM engines have powered our fleet since 1998, and we are pleased to build on this long-standing relationship.

"This contract signifies our continued confidence in the CFM Leap engine and reflects our customers' satisfaction in CFM Leap-powered A320neo aircraft as an efficient and reliable airframe and engine combination."

The lessor notes the order takes to 486 the number of aircraft in its portfolio powered by CFM engines.

Last October BOC ordered 10 Pratt & Whitney GTF engine shipsets to power A320neos, and options on 15 more, for delivery in 2023 and 2024.

BOC and GE Aviation have also celebrated at the show the delivery of over 1,000 GE aircraft engines to the lessor.

"We are excited to extend our long-term relationship with BOC Aviation," says Kathy MacKenzie, president and chief executive of GE Aviation's commercial engine operations.

Martin notes that the relationship between the two companies goes back to 1995.

BillyPix

Hydrogenesis

Airbus to launch research effort into climate-neutral aviation in Singapore with plans for hydrogen hub

Greg Waldron

Airbus yesterday set out its vision for creating a "hydrogen hub" in Singapore as part of its drive to explore the potential of the alternative power source.

The European airframer has entered a cooperation agreement for the two-year study with Changi Aviation Group (CAG), the Civil Aviation Authority of Singapore (CAAS), and industrial gas company Linde.

"The Asia-Pacific region will play a key role as we work towards making climate-neutral aviation a reality," says Sabine Klauke, chief technology officer at Airbus (*right*).

The move follows a similar agreement signed in South Korea a week earlier to look at the opportunity of hydrogen.

"By partnering with Changi Airport and with Incheon Airport, Airbus will leverage the operational and technical expertise of two of the world's leading hubs. The studies we will carry out together reflect the need for a cross-sectorial approach, including manufacturers, airlines, regulators, airports, energy providers and academia. We need bold and coordinated action to achieve our goals," says Klauke.

CAG adds that the study will look at the infrastructure necessary to support hydrogen-powered aircraft at Changi. Key topics will be hydrogen production, storage, and distribution and the implications for ground services, operational equipment, and refuelling systems.

CAG will also look at the potential for hydrogen fuel cells to support airport operations, in addition to operational standards for the safe use of the gas.

Klauke also touches on the topic of hydrogen's influence on aircraft design, particularly conceptual "blended wing" configurations. While she acknowledges that a blended wing planform provides ample space for hydrogen, she is doubtful such an aircraft can enter service by 2035, when Airbus believes the potential of hydrogen-powered commercial flight can be realised.

Klauke also observes the various alliances of companies, regulators, and other stakeholders coming together to support sustainable solutions for the industry. She feels such moves are important steps to move the sustainability agenda forward.

BillyPix

Recovery on the way, say aviation leaders

Alfred Chua

Senior industry leaders speaking at the Aviation CEO Forum, organised on the opening day of the Singapore Airshow by FlightGlobal with partners Experia Events and CFM International, believe that recovery is on the horizon – but that potential headwinds mean the sector is not fully on course to recovery.

During a wide-ranging panel debate, Malaysia Airlines chief executive Izham Ismail, speaking virtually from Kuala Lumpur, said the carrier is "cautiously optimistic" about its prospects. He attributes a better-than-expected 2021 performance – the carrier was cash positive by October 2021 following a successful business restructuring – to a "yield-active focus".

Leisure travel is expected to rebound first, followed by business and corporate travel, adds Izham.

Other panellists at the forum were, from left, FlightGlobal contributing editor Mark Pilling; AirAsia Aviation group chief executive Bo Lingam; Avolon chief executive Domnhal Slattery; BOC Aviation managing director Robert Martin; CFM International president Gael Meheust; and Lim Kim Hai, executive chairman of Australia regional airline Rex.

The AirAsia group of carriers, meanwhile, expects growth from the second-half of 2023, with "plans to ramp up" by 2024. By end-2022, the group's carriers – in Indonesia, Malaysia, Thailand, the Philippines and India – are expected to operate two-thirds of their fleet, says Bo Lingam.

He also doubles down on the prospect of more AirAsia units in the region, hinting at two more airline joint-ventures to be announced within the year. FlightGlobal previously reported that AirAsia will announce in the next two months a new airline unit in Southeast Asia.

Lingam and Izham also called for a unified strategy among governments on reopening borders, given that the region has disparate rules and timelines on dealing with the pandemic.

Fellow panellist Lim Kim Hai of Rex said a "meaningful size" for its jet operations – which it rolled out in 2021 – would be between 20 and 30 aircraft. Lim added that the airline is aiming to take between six and 10 jets a year.

Domhnal Slattery, from aircraft lessor Avolon, meanwhile is bullish about the Chinese market – still tightly shut amid strict pandemic restrictions – opening up.

Slattery said when the international borders reopen, which he predicts will be in the third or fourth quarter of this year, demand will rebound "dramatically".

Concurring, CFM International's Gael Meheust is "convinced" that the pent-up demand to travel will lead to growth across the industry.

"This industry is resilient... when you look at the longer term, I am convinced that because of the desire of the public to travel, we are going to see a growth of the traffic that we will continuously exceed the growth of the GDP in the coming year," Meheust added.

Still, Robert Martin at lessor BOC Aviation, warned that airlines will have to "raise equity... to grow, going forward". A failure to do so, said Martin, could set the industry back two to three years, especially in light of "potential headwinds" to come.

This is especially so as a number of carriers in the region exit restructuring.

"[We] have three potential headwinds coming this year, as traffic will grow. Oil prices have gone back up again...[interest] rates are going up, [and] we're seeing a lot of wage inflation and commodity price inflation that will feed through potentially in any contract," he said.

FlightGlobal's Mark Pilling (*left*) chairs the debate

BillyPix

An ocean of opportunity

Territorial water disputes, pirates, submarines lurking beneath the surface – there's plenty of reasons why South East Asian countries are in the market for maritime patrol aircraft (MPA).

Seeing opportunities, manufacturers at the Singapore Airshow are pitching several different maritime patrol concepts. Given the tight spaces and littoral waters of the region, these companies are selling smaller aircraft compared with Boeing's 737NG-based P-8A Poseidon.

For example, Leonardo is pitching two turboprop aircraft: the ATR 72MP and the C-27J Next Generation ISR-MPA-ASW. The company sees potential customers in Australia, Malaysia, New Zealand, Thailand and the Philippines, among others.

"Together with the Mediterranean Sea, [South East Asia] is probably the most congested area", says Giovanni Timossi, Leonardo's marketing manager for Asia and Oceania. Keeping an eye on the South China Sea and the Strait of Malacca are particularly of interest to nearby militaries, he says.

Based the ATR 72-600 turboprop regional airliner, the ATR 72MP benefits from greater crew "comfort", as well as the lower lifecycle cost associated with commercial aircraft, says Timossi.

It comes with the Leonardo Seaspray 7300E active electronically scanned array (AESA) radar and an electro-optical sensor turret for searching for surface targets.

Leonardo has designed the C-27J Next Generation ISR-MPA-ASW so that the crew stations sit atop a roll-on/roll-off pallet, allowing rapid reconfiguration of the aircraft.

It can also be equipped with an AESA radar and electro-optical and infrared camera system. For submarine hunting, the aircraft can carry a magnetic anomaly detector system and sonobuoy launchers.

Israel Aerospace Industries is also pitching a commercial aircraft that has been turned into a maritime patrol aircraft, the ELI-3360 MPA, which is based on the Bombardier Global 6500 business jet.

The company notes that the platform carries over commercial aircraft efficiencies, which translate into cost savings.

The C-27J MPA is a potential maritime patrol platform for several Asian countries

BillyPix

Bauer: On track for certification

BillyPix

Volocopter to take-off commercially in 2024

Alfred Chua

Urban air mobility developer Volocopter is targeting a commercial launch in Singapore around 2024 – with intra-city tourist flights likely to be its initial offering.

Christian Bauer, chief commercial officer at Germany-based Volocopter, says the company is "well on track to finalise" its type certification and operating licences with the European Union Aviation Safety Agency.

Volocopter has now released its "Singapore Roadmap", which details its operational plans in the city state – one of the first places in the world in which the company will operate.

The company is bullish about its prospects in Singapore: it expects to generate nearly S$4.2 billion ($3.1 billion) in "cumulative economic benefits" by 2030, and create up to 1,300 jobs.

The roadmap comes more than two years after Volocopter successfully completed its first manned electric vertical take-off and landing (eVTOL) flight over downtown Singapore.

Since then, the company has been working with the Singapore authorities and other local partners to roll out the service commercially.

Initially, Volocopter expects to use its eVTOL aircraft for tourist flights in downtown Singapore, as well to the tourist island of Sentosa.

This will be followed by cross-border flights between Singapore and Malaysia and Indonesia. However, this would be in the longer term, given the "complexities" in areas like cross-border certification, as well as immigration.

Meanwhile, Singapore has signed agreements with Volocopter and Skyports to explore ways to grow the fledging sector at the Seletar Aerospace Park.

The partnership, which was unveiled on the first day of the air show, will see the two companies work with JTC – the developer of the aerospace park – as well the country's Economic Development Board (EDB). Seletar has been earmarked as a future advanced air mobility hub.

The partnership with Volocopter will examine the development of MRO facilities for electric take-off and landing (eVTOL) aircraft.

Meanwhile, the Singapore government hopes to tap into Skyports' expertise in vertiport development to explore the creation of the required infrastructure for air taxis, including terminals, airside facilities and hangarage.

Singapore has signalled its support to develop the urban air mobility sector. At the show's opening ceremony, deputy prime minister Heng Swee Keat said his government will work closely with industry players and "capitalise on the growth" of the global eVTOL market.

"We hope to create an enabling ecosystem for a wide range of activities – from R&D, commercialisation, manufacturing, to eventually MRO," he says.

Singapore is considering trial eVTOL flights along its southern waterfront region, and will work with Volocopter and Skyports.

Alliance Air is adding ATR 42s to serve Himalayan routes

ATR

AllianceAir to lease two ATR 42s from TrueNoord

Indian regional carrier Alliance Air is to acquire a pair of new ATR 42-600s via lessor TrueNoord, adding to the airline's existing fleet of larger ATR 72 turboprops.

Alliance Air has chosen the turboprop to support services operating into challenging airfields in the Himalayas and delivery of the ATR 42s will begin mid this year.

The airline already operates a fleet of 18 ATR 72-600s. The aircraft will operate on the short runways of Shimla and Kullu airports, both located at high altitudes, and exposed to high temperatures.

ATR chief executive Stefano Bortoli says: "The fact that we will deliver the aircraft by the middle of this year is testament both to the recovery of the Indian domestic market and the essential need for affordable and reliable connectivity throughout the country."

TrueNoord in December purchased two ATR 42-600s to support Silver Airways' development in the United States.

Boeing's Korean logistics treble

Boeing has announced a trio of performance based logistics (PBL) contracts covering platforms in service with the South Korean military. The contracts, signed with South Korea's Defense Acquisition Program Administration, cover the F-15K fighters and 737-based E-7 Peace Eye airborne early warning and control (AEW&C) aircraft operated by the air force, and the CH-47 Chinook helicopters flown by the army.

"Our partnership with Korea is continuing to grow as we shift from transactional support approaches to customized models driven by agreed-to readiness outcomes," says Thom Breckenridge, senior director of Far East Programs for Boeing International Government & Defence.

"These agreements enhance the value of PBL contracts that have delivered high mission-capable rates and improved parts forecasting and procurement of the F-15K fleet for more than a decade, and will extend benefits to the AEW&C and CH-47 fleets as well"

Boeing says the contracts will involve local industry in South Korea, and use an "integrated logistics model to coordinate supply chain forecasting procurement, delivery, maintenance training, and risk-management practices" to support air force and army objectives.

Airbus Helicopters eyes APAC replacement market

Airbus Helicopters anticipates strong helicopter replacement demand both for military and civilian rotorcraft in the Asia-Pacific.

Speaking at a Singapore Airshow media briefing, the company said it has a 22% share of the overall market in the region, and it claims leadership of the civil and parapublic segments.

In total, there are 2,150 of the airframer's rotorcraft in service with 700 operators in 27 countries across the region. Of the installed fleet, roughly 60% are in pure civilian use, while the balance serve military or parapublic roles.

Overall, Airbus Helicopters estimates the total Asia-Pacific market at 9,800 in-service helicopters.

On the military side, the company sees strong potential for the H135 in the training space, with the light-twin already used by the Australian Defence Force on its Helicopter Aircrew Training System contract with Boeing.

In addition, the heavy-twin H225M remains a strong contender in the region, building on an operator base that includes Indonesia, Thailand and Singapore.

But a notable gap in the manufacturer's range is the lack of a dedicated attack helicopter following the end of Tiger production. However, Fabrice Rochereau, the company's head of sales for the Asia-Pacific, says most militaries in the region require a platform that can perform multiple missions.

"Nobody [in the region] expects Russian tanks to come over the border," he says.

Airbus Helicopters believes its HForce modular weapons system, which has proved most popular on the H145M light-twin, is the ideal solution for cost-conscious customers. Rochereau says there has been regional interest in HForce but declines to offer specifics.

Intriguingly, Patrick Le Barbenchon, operational marketing manager at Airbus Helicopters, also touts the potential of the H175M in the region for operators that do not need the range or payload offered by the H225M.

Airbus Helicopters only launched the H175M last year, principally in pursuit of a looming UK requirement, having previously been prevented due to Chinese workshare on the civil variant of the super-medium-twin. That issue has since been overcome.

The two executives stress that militaries place a premium on reliability, and during the briefing, the company announced the renewal of two support contacts for the Japanese military.

In recent years the market for civil helicopters flown in support of offshore oil and gas operations has been hammered by low energy prices. Although Rochereau points out that rising prices are now offering some support to the sector, the focus remains on the H175 rather than larger rotorcraft.

"The [energy industry] still has a need for modern, economic helicopters and this is where the industry went down to smaller helicopters such as the H175," he says.

Fabrice Rochereau (*left*) and Patrick Le Barbenchon

BillyPix

Embraer mulls turboprop launch as early as this year

Greg Waldron

Embraer continues to explore the development of a turboprop airliner, and in particular sees opportunities for a prospective new type in the Asia-Pacific.

Arjan Meijer, president and chief executive of Embraer Commercial Aviation, reiterates the company's position that an announcement about the new programme could come by the end of this year, or possibly early in 2023.

"We're building the business case and we're working towards a launch, hopefully at the end of this year, early next year," he says.

"But the big decision we need to take is the engines."

While Embraer is clearly serious about a turboprop, Meijer stresses that it is not yet a done deal.

"It's not a foregone conclusion that we will launch it, because it will depend on whether we can get there with the right engine and the right business case. Second is timing: if we pick an engine which needs more time, then automatically we also have some more time to launch the aircraft."

Embraer remains in discussions with the major propulsion suppliers. "The engine is all about innovation level, fuel burn, and reliability... the [turboprop], for us, is a huge opportunity here in Asia."

In the next two decades, Embraer forecasts a global market for 2,260 turboprops, with 900 of these in the Asia-Pacific.

So far, engine makers have received Embraer's "full deck" of proposals for the platform, and have provided solutions on that basis. The airframer may provide more details on this process in 2022, he says.

Embraer is proposing both 70- and 90-seat turboprops. The pair will use the same fuselage as its E2 regional jet family, which will simplify production and bring an additional level of comfort to passengers through a spacious cabin, says Meijer. Moreover, the aircraft will also be able to use an air bridge.

But while the fuselage will be common with the E-Jet line, a new wing with less sweep will be required in order to accommodate turboprop engines.

The aircraft will also feature an auxiliary power unit, equipment that is not available as standard on the competing ATR aircraft. It will also be able to run on sustainable aviation fuel.

The company sees India, Indonesia and the Pacific islands as having the most immediate potential, particularly for fleet replacement.

Speed will also be a consideration for the new aircraft, but primarily because it will need to fit in with regular airport operations.

"It needs to have the proper climb out speeds so as not to hold back the rest of the traffic," adds Meijer.

Meijer says Embraer is still working through turboprop business case

BillyPix

KC-46 poised for KC-Y

Greg Waldron

A US Air Force KC-46 on the static

BillyPix

Boeing stands ready to pitch the KC-46 should the US government hold a competition for a possible acquisition of up to 160 new tankers under its nascent KC-Y requirement.

Leanne Caret, chief executive of Boeing Defense, Space & Security, also suggests that acquiring another tanker type would place an undue financial burden on American taxpayers.

"I'm extremely proud of the KC-46 programme," says Caret.

Speaking at a media roundtable in Singapore, she listed a number of accomplishments with the programme, such as its being cleared for 70% of receiving aircraft, and the delivery of over 55 examples since early 2018. The aircraft has also participated in exercises. A US Air Force (USAF) example is on static display.

The programme has faced challenges, however, namely with its remote vision system (RVS). Caret observes that the system is "based on technology that wasn't even envisioned or possible when we signed the contract".

The US Government Accountability Office (GAO) recently said that it believes that plans to fix issues with the RVS could result in additional risks for the programme, and takes issue with a plan by the USAF and Boeing to fully replace the system.

The aircraft's existing RVS performs poorly in certain light conditions, limiting the tanker's utility. For the time being, the aircraft is restricted to training duties, and is not cleared for combat missions.

As for KC-Y, Caret says the US government needs "to make a determination what they are going to do next... if they choose to compete, which is my understanding that they have not made a decision yet".

In June 2021, the USAF said it was seeking industrial partners to deliver up to 160 "Bridge" tankers, a commercial aircraft-based aerial refuelling jet that the service intends to acquire after Boeing stops producing KC-46s in 2029. KC-Y is envisaged as taking pressure off the service's ageing KC-135s and filling a gap between 2029 and the acquistion of a new tanker under its future 'Advanced Air Refueling Tanker' effort.

Lockheed Martin has been vocal about its willingness to compete for KC-Y. It recently disclosed its production strategy for the LXMT tanker, a proposed derivative of the Airbus A330-200. The A330-200 is also the basis of the Airbus Defence & Space A330 multi-role tanker transport, which has enjoyed strong success in international markets.

A key element of Lockheed's proposal is local production in Mobile, Alabama, with military conversion work to be performed in Marietta, Georgia.

Caret, for her part, insists that the KC-46 is the right aircraft for the USAF. "It is the most advanced tanker out there in the world today and it plays multiple roles," she says.

Moreover, there would be significant costs involved should the USAF obtain a new fleet of tankers under KC-Y. Says Caret: "Financially, why would you hurt the taxpayer with something like that?"

Bells chime for Asian customers

Military operators in the Asia-Pacific continue to express interest in Bell's civil helicopters, such as the 412 medium-twin, as they seek cost-effective solutions for their vertical lift requirements.

The ease-of-use and low cost of civil derivatives relative to dedicated military models makes the rotorcraft favourites with Asian defence buyers, says John Woodbery, Bell's director of international campaigns for Asia.

Woodbery highlights the 412 utility helicopter as an "easy aircraft to operate" which is also "very cost effective".

"For countries that are cash strapped or have limited budgets, it's a perfect solution for them," he says.

The four-blade 412, as well as its 212 predecessor, are civil derivatives of the Vietnam War-era's UH-1 Huey. Large operators of the legacy types include the armies of Indonesia, Pakistan and Thailand.

Bell and Subaru also jointly developed the 412EPX, the latest variant of the twin, which is being acquired by the Japan Ground Self-Defence Force under its UH-X programme. The updated model has a greater maximum take-off weight and Bell's BasiX Pro avionics suite.

BillyPix

A modified Bell 429 is being pitched at an Australian Army requirement

Another example of a civil helicopter being repurposed for military operations is Babcock Australia's plan to bid a modified version of Bell's 429 light-twin for an Australian Army special forces requirement that calls for 20 examples of an in-service rotorcraft that can support operations in urban environments.

Bell also sees a few remaining opportunities to sell its AH-1Z Viper attack helicopter in the region, especially to services that operate in the littoral environment and need a helicopter that can deploy from ships. A previous attempt to sell the Viper to Pakistan foundered after the US government stepped in.

"I think there may be one or two [potential deals] left," he says. "We're keeping our fingers crossed and keeping those conversations going."

Bell also announced at the show that Ad-din Foundation, a private non-profit healthcare service in Bangladesh, has bought two Bell 505s.

The helicopters will be used to transfer patients to and from the eight hospitals Ad-din operates across the country.

New bid to find Piaggio rescuer

Piaggio Aerospace is at the show in the midst of a second attempt to find a new owner for the Italian airframer after a previous effort foundered last year.

The Italian aircraft manufacturer is showcasing on the static an Avanti Evo, owned by Malaysia-based company Kris Sakti Aero. Villanova d'Albenga-based Piaggio has been in extraordinary administration since December 2018 after its previous owner, Abu Dhabi sovereign wealth fund Mubadala, pulled out.

Vincenzo Nicastro was appointed to run Piaggio as its extraordinary commissioner, charged with restructuring and selling the business on behalf of the Italian ministry of economic development.

Nicastro's efforts, including the securing of orders from the Italian ministry of defence, have been responsible for returning the business to an even keel. The manufacturer achieved turnover of €154 million ($174 million) in 2021, with an EBITDA that was "substantially at break-even", he says; the backlog now stands at €452 million and should rise to €570 million by the end of 2022.

It is the "first time for many years" that Piaggio has achieved profitability, Nicastro says, adding: "To have that level of turnover and EBITDA is a great performance for a company that is in extraordinary administration."

But despite a return to profit, Piaggio is no closer to finding a new owner: negotiations with an exclusive bidder in 2021 were discontinued after it failed to table a concrete offer, forcing Nicastro to restart his effort to sell the business early this year. Under an accelerated timeline, potential buyers have until 28 February to register their interest, leading to a process that could see a new owner selected by the middle of the year.

However, the economic development ministry must still approve the sale and the Italian government could veto the deal as it considers Piaggio a strategic asset.

While noting that he is unable to offer any guarantees, Nicastro is hopeful that a sale will be concluded this year.

"I cannot assure that we have a new owner, but I'm confident on this; however, I don't have a solution in my pocket," he says.

Kris Sakti Aero's Avanti on the static

BillyPix

FLIGHT DAILYNEWS

Produced by FlightGlobal, 1st Floor, Chancery House, St Nicholas Way, Sutton, Surrey SM1 1JB, UK

HOW TO CONTACT US

Editorial office A-S35

Editor Murdo Morrison
murdo.morrison@flightglobal.com

Executive Editor, Flightglobal Graham Dunn
graham.dunn@flightglobal.com

Reporting team Alfred Chua, Dominic Perry, Mark Pilling, Garrett Reim, Greg Waldron

Production Louise Murrell

Designer Sarah Eversfield, Tim Noonan

Picture editor Jim Robbins

Photography Tom Gordon

Distribution Dawn Hartwell, Steve Wood

Divisional Director, FlightGlobal Sophie Wild

Printers Times Printers, Singapore

DVV Media International

End all Covid-19 border restrictions, says AAPA

Mark Pilling

For the tentative Asia-Pacific traffic recovery to fully take hold governments in the region must remove the need for fully vaccinated travellers to quarantine and all Covid testing should go, Subhas Menon, director general of the Association of Asia Pacific Airlines (AAPA) told FlightGlobal on the eve of the Singapore air show.

"Testing is becoming an onerous requirement and we want progressive governments to get rid of it," he says. In addition, AAPA is calling for governments to bring in health protection measures that are "co-ordinated, streamlined, and risk-based," says Menon, with the association cranking up its engagement with governments to help get the message across. "This needs to happen so travellers can really figure out what they should be doing."

After optimism among AAPA's member airlines at its general assembly in November that recovery had started, the Omicron variant of the Covid-19 virus saw borders closing again, says Menon. Its impact has however been less severe than anticipated and the hope is more countries will open again, such as Australia announced last week.

"For recovery to really take hold the big markets need to reopen," says Menon, referring to China and India, although with China's zero tolerance Covid policy this is not imminent.

Menon says 'stop-start' nature of rules has held back air travel recovery

Studio/Shutterstock

Although the pandemic has been a "huge calamity" for international travel, domestic traffic in the region has picked up and will be back to pre-Covid levels by the end of this year. It will take up to 2024 for international traffic to reach this mark, says Menon.

With international traffic only reaching a feeble 20% of 2019 levels, cargo has become an increasingly important revenue generator for the region's airlines. "Cargo has provided some consolation. It used to represent about 10% of AAPA member carrier annual revenues but is now almost a third of revenue," explains Menon.

The association chief believes once the "stop-start" nature of the travel restriction period ends and confidence returns to the market, the region will come roaring back. And although airlines have built up heavy and costly debt burdens, Menon says the industry has been able to withstand this crisis.

"The resilience of airlines is commendable. They have been doing a huge service to the world by repatriating citizens and delivering essential supplies. Airlines have been doing all the heavy lifting," says Menon.

Safran to open China nacelle MRO station

Safran is to open a nacelle MRO facility in Suzhou in China in the second quarter.

The French company says the facility — located at an existing Safran complex — will be certificated by Chinese and European Union civil aviation regulators.

The Suzhou unit will repair nacelles and thrust reversers for joint-venture CFM International engines on the Airbus A320neo family, as well as A330ceo aircraft.

It will also work on CFM Leap-1C engines that will power Chinese airframer Comac's C919 narrowbody aircraft.

The Suzhou MRO site will double up as a storage base for large nacelle components, including thrust reversers and air inlets, for the Asia region.

Safran Nacelles' vice president of support and services Alain Berger says: "Our customers operating in the region will be able to benefit from timely, local support and services whilst reducing transport costs."

Northrop scouting for its first foreign MQ-8C sale

Garrett Reim

Northrop Grumman remains on the hunt for the first international sale of its MQ-8C Fire Scout unmanned maritime patrol helicopter, roughly two and a half years after the aircraft reached initial operational capability with the US Navy (USN).

The company declines to name potential customers, but notes that the unmanned air vehicle (UAV) "is of interest to several nations".

Asia-Pacific – home to the world's two largest navies, the Chinese navy and USN, as well as the world's largest ocean and more than half of the world's population – seems a likely place for the Fire Scout to land its first international sale.

Northrop believes the maritime patrol helicopter's anti-surface ship warfare capabilities make it particularly appealing to Asia-Pacific navies. The UAV carries a Leonardo AN/ZPY-8 Osprey lightweight active electronically scanned array radar that has a range of digital modes including weather detection and a ground-moving target indicator.

Northrop Grumman MQ-8C Fire Scout lands on guided-missile destroyer USS Jason Dunham

Northrop Grumman

Northrop is also working to incorporate A- and G-sized sonobuoy deployment pods to the helicopter, which would give the UAV greater anti-submarine warfare capabilities.

"Both manned and unmanned [anti-submarine warfare] is a growing need around the world as threats to maritime security increase," says Lance Eischeid, director of the Fire Scout programme with Northrop Grumman.

The UAV is based on the commercial Bell 407 airframe, although seats and other manned avionics equipment are stripped out and replaced with remote controls and extra fuel tanks. The aircraft has a flight endurance of 12h, a max payload of 318kg (700lb) and a range of 150nm (278km).

Northrop Grumman is incrementally upgrading the capabilities of the MQ-8C, allowing the helicopter to take on more missions for the USN, including airborne sea mine countermeasure and potential cargo missions. The company says it has also tested the Fire Scout with an undisclosed offensive weapon, although the USN does not have a requirement for that type of payload at the moment.

New Capabilities Extend Naval Power Beyond the Horizon

IAI's leading naval combat suite | IAI

The sea has always been a strategic playground for nations all over the world.

In the past, projecting naval forces to the high seas was sufficient to demonstrate a nation's military might. Today, national interests also focus on littoral areas and inner seas – as vessels operate closer to the mainland, the battlespace becomes congested, complicated and even more challenging. The situation may become exacerbated in arenas where the enemy maintains anti-access and area denial (A2AD) capabilities, in the form of long-range air defenses, coastal anti-ship missiles, and sea mines. Such threats are limiting freedom of navigation and operation of naval forces and risking merchant shipping, threatening the sea lanes.

Today's navies face rapidly evolving threats, powered by significant technical advances in targeting and attack systems. Advanced threats include aircraft and combat vessels with low radar cross sections – both manned and unmanned; sophisticated, long-range anti-ship cruise missiles; and targeting sensors including airborne and satellite imaging radars. These threats boost the enemy's ability to attack the vessel from beyond its line of sight, and threaten to saturate legacy defensive systems with multiple simultaneous attacks.

In order to provide naval forces with effective countermeasures against these developments, Israel Aerospace Industries (IAI) has leveraged its rich technological heritage and culture of innovation to introduce state-of-the-art, integrated naval systems, including the BARAK MX air and missile defense system with LRAD and ER interceptors, loitering munitions, VTOLs, and others.

A Challenging Arena

To adjust, navies are called to dominate the maritime arena by maintaining continuous, complete situational awareness and control of their surroundings. Such dominance covers the sea, air, land, and subsea domains, for the naval force would have no second chance when facing an immediate hostile activity unprepared.

Based on a decades-long experience, delivering naval combat-proven offensive and defensive weapons, sensors, combat management, and information systems, Israel Aerospace Industries (IAI) has cooperated with navies across the globe, fielding the latest defense solutions and keeping naval fleets and maritime security forces ready for new challenges.

Maintaining Maritime Situation Awareness

IAI offers navies a comprehensive sensors suite to secure their coastal waters, littorals, and Economic Exclusion Zone (EEZ). Such systems suites range from SAR & Optic satellites to aerial maritime patrols by aircraft and UAVs, to coastal radars, including Over-the-horizon (OTH), Signal Intelligence (SIGINT), and electro-optical observations. Through the integration of this wide variety of capabilities, customers establish Total Maritime Situation Awareness (MSA).

These systems rely on multiple sources of information, from commercial, open-sources such as AIS and vessel traffic monitoring, wide-area scanning using space-based synthetic aperture radars (SAR), over the horizon, and surface radar scans, electronic surveillance, communications interception, and tracks by imaging sensors. By employing sensor fusion, artificial intelligence, machine learning, and decision support algorithms, IAI's MSA information systems streamline the operator's workflow, thus buying more time for decision making and cost effective resource allocation.

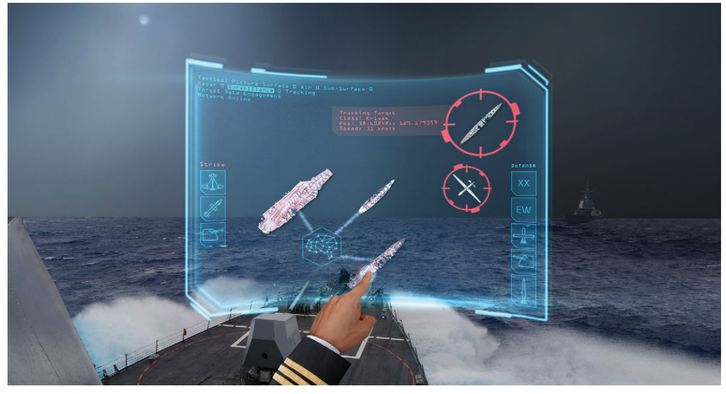
Integrated Combat Suite

Naval vessels follow a similar path by integrating the sensors and weapons onboard with IAI's Naval Combat Suite. IAI's open architecture CMS integrates these capabilities across weapons, platforms, and entire task forces, enabling net-centric operations.

IAI's BARAK MX naval air and missile defense system reflects this capability. Employing Area Defense to intercept aircraft, missiles, or drones at a range up to 70 km (LRAD) or 150 km (ER), the Barak MX family of weapons extends the defensive coverage across the entire task force by combining multiple vessels carrying the BARAK systems into an integrated defense network. Users can also network their offensive weapons across a task force to achieve scalable and optimized effects. These capabilities could include a range of IAI-made weapons, including long-range missiles, loitering weapons, or precision-guided missiles with wide variety of homing capabilities.

IAI's leading naval combat suite | IAI

Leveraging cutting-edge technologies and innovation, and backed by decades of experience developing and fielding integrated naval suites, sensors, and combat systems, IAI's innovative naval systems enable navies to find and decisively defeat threats under the most challenging conditions and provide Maritime Superiority to their nations.



Managing IAI's naval combat suite | IAI

Artist's impression of BriteCloud 218 deployed behind F-16

Leonardo

BriteCloud's bright prospects in region

Garrett Reim

As geopolitical tensions in the Asia-Pacific continue to build, Leonardo sees an opportunity to upgrade the region's more than 500 Lockheed Martin F-16 fighters with its BriteCloud 218 decoy.

The Italian company already has a customer in the UK Ministry of Defence, which plans to buy the BriteCloud for use with the Royal Air Force's Eurofighter Typhoons. Pending successful foreign comparative testing, the kit may also be selected by the US Air National Guard.

Leonardo says it is in discussions with a number of F-16 operators in the Asia-Pacific about purchasing BriteCloud, although it declines to name the nations involved.

The BriteClould digital countermeasure is small enough to be deployed from a standard chaff and flare dispenser, minimising aircraft integration work, says Leonardo. The jammer is more effective than chaff or flares at luring away radar-guided surface- or air-launched missiles, says the manufacturer.

"BriteCloud is substantially more effective than traditional [radio frequency] countermeasures such as chaff decoys because its [digital radio frequency memory] technology allows BriteCloud to tailor its powerful electronic ghost signal to the specific threat radar, allowing it to defeat modern, sophisticated threats," says Wayne Smith, vice-president of sales for electronic warfare with Leonardo.

The decoy also has advantages over on-board jamming pods, he adds. "Because BriteCloud is expendable and is fired away from the host aircraft like a flare, it avoids the home-on-jam issue associated with on-board jamming pods, creating a large miss distance from the aircraft," says Smith.

ST Engineering signs series of deals at show

ST Engineering has signed a number of long-term component maintenance contracts with Asian carriers covering their fleet of narrowbody aircraft.

The Singapore-based company expanded its component support partnership with China Airlines, covering its Airbus A321neo and A330 aircraft. The multi-year contract adds to an existing component MRO contract for Boeing 737-800 aircraft which dates back to 2010.

ST Engineering also signed a similar contract with China Airlines low-cost unit Tigerair Taiwan, providing support for the carrier's fleet of A320neo aircraft.

The contracts span between seven and 12 years, adds ST Engineering.

Cirium fleets data shows China Airlines to have a fleet of 21 in-service A330s, as well as two A321neos. The SkyTeam carrier has another 15 A321neos on order. Tigerair Taiwan operates two A320neos, with another eight examples on order.

Meanwhile, Korean low-cost carrier Jeju Air has extended its component support contract with ST Engineering for another five years.

The renewal is effective 1 January 2025 — after existing contracts expire — and covers the carrier's fleet of Boeing 737NG and Max aircraft. Jeju Air first picked ST Engineering for component support in 2015.

The Korean carrier has 32 737-800s in service, and 40 737 Max 8s on order, according to Cirum fleets data.

ST Engineering's component maintenance facilities are located in Asia and Europe — Singapore and Hanoi, as well as in Stockholm.

Zhoushan set to restart Max deliveries

Boeing's 737 Max completion and delivery centre in Zhoushan, China is ready to support deliveries of the narrowbody when they resume to the Mainland.

Stan Deal, chief executive of Boeing Commercial Airplanes, says that Chinese carriers are – as other 737 Max operators have done globally – conducting proving flights in China, to be followed by scheduled services.

"We expect deliveries to resume after that," he says. "The Chinese government and our customers are going to determine that."

He notes that 737 Max aircraft bound for Chinese customers are in production at Renton. Once deliveries resume, Zhoushan is "spooled up... so we'll be able to deliver both out of Renton Field and our Zhoushan facility. That's our plan through the year."

Deal was speaking during a media roundtable in Singapore.

His statement comes after Boeing chief executive Dave Calhoun's recent remarks that the company expects to resume 737 Max deliveries to China from the first quarter of this year.

The Civil Aviation Authority of China was one of the last major regulators to recertify the 737 Max, having been among the first to ground it in 2019 following a pair of fatal crashes.

The Zhoushan completion and delivery centre opened in late 2018, and delivered its first aircraft – a 737 Max 8 – to Air China in December of that year. The completions centre is a joint venture with Chinese airframer Comac, while the delivery centre is wholly-owned by Boeing.

Deal: Chinese centre is spooled up

Boeing

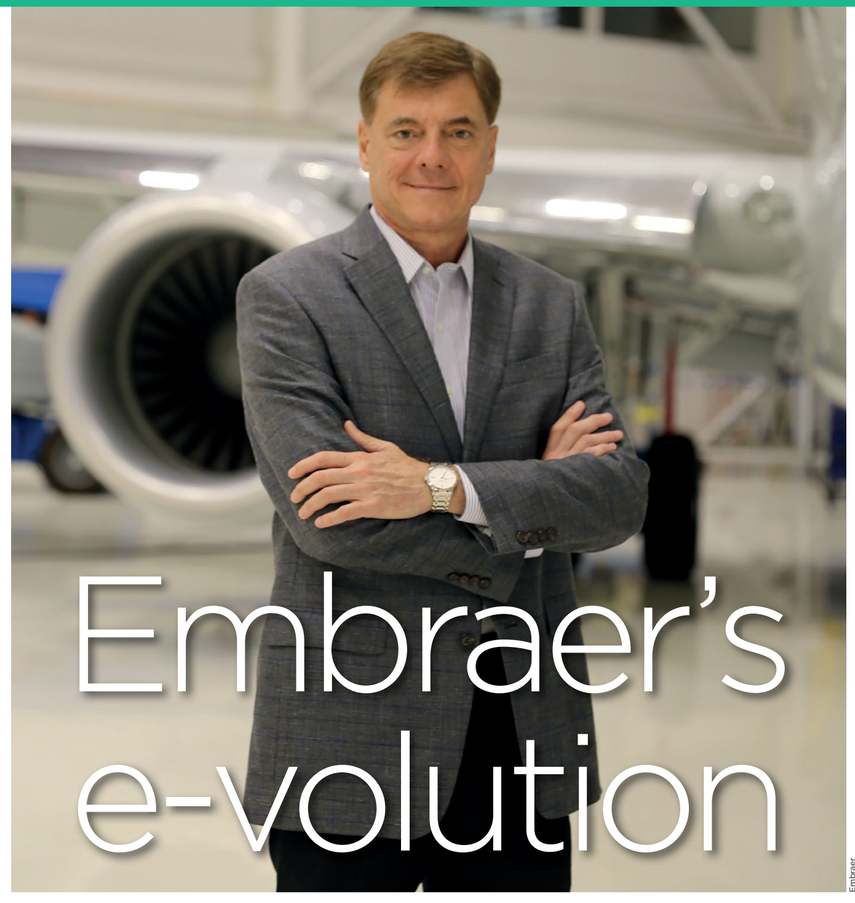
Boeing had previously said that when fully up and running, the Zhoushan facility will install interiors and paint liveries, employ 300, as well as complete and deliver 100 737 Max aircraft annually to Chinese customers.

The 405,000sq m (4,400,000sq ft) centre is adjacent to the Zhoushan Putuoshan International airport, and was first announced in September 2015 during China president Xi Jinping's visit to the USA. Relations between the two countries have soured in recent years, however.

Cirium fleets data shows that Chinese operators have 208 737 Max aircraft on order, with around 75 of them stored at Washington's Grant County International airport, and small numbers of other aircraft stored at additional locations.

President and chief executive Francisco Gomes Neto discusses how the Brazilian company has ridden out the crisis across its three main business groups, prospects for disruptive air transportation, and how E2 E-Jets can help Asia-Pacific airlines grow their networks efficiently

Embraer's e-volution



Embraer

Q How has the last two years been for Embraer in terms of responding to the Covid-19 crisis? What actions did you have to take to keep the business trading successfully?

A Our team was able to respond to the crisis quickly and effectively. Firstly, we focused on a series of initiatives focused on ensuring the health of our employees and cash preservation. We also embarked on a strategic plan called Fit for Growth which focuses on growing profitably, based on three lines of action: efficiency gains, increased sales and strategic partnerships, innovation and ESG [environmental, social, and governance].

We believe this plan will make Embraer a stronger and larger company and our results so far have shown that our strategic planning and focus are reaping tangible positive results for the company.

After managing the impact of the pandemic and setting the track for recovery we are now very well positioned to grow: we maintain the leadership of the regional jet market, we have the best executive jets in the light and medium segments – the ones that grew the most during the pandemic – in addition to innovative products and complete solutions for Defense & Security and Services & Support. We have also invested in disruptive businesses – such as Eve [unmanned air mobility developer] – that will contribute to Embraer's sustainable growth.

Q Can you share some highlights about your civilian aviation business in Southeast Asia since the 2020 Singapore show?

A Asia Pacific is a key market for us to deepen our presence and the region is part of our Fit for Growth strategy. Since 2020, 45 E-Jets have entered into the Asia Pacific region and we have increased our footprint of operators, including two from Southeast Asia: Bamboo Airways and Myanmar Airways International.

Regional aviation has gained prominence globally even in countries that historically relied on large capacity aircraft in search of the lowest seat cost. Smaller aircraft like the E-Jets have played a crucial role in enabling airlines to maintain or strategically grow their networks while keeping a close eye on operating costs and cash flow.

Q Vietnam's Bamboo Airways has opened some unique domestic routes with its E190s. Can you share a bit about this experience?

A Vietnam is a very dynamic market and I'm glad that Embraer is part of this action. In 2020, airlines in Vietnam operated more domestic flights than in 2019 and this underscores the trend we see globally – that domestic and regional travel will lead the recovery, ahead of international long-haul travel.

The E-Jets started operating with Bamboo Airways in Q3 of 2020, in the midst of the Covid challenges, and they have since played an important role in unlocking new routes within Vietnam and in the region. The E190 provides the necessary capacity and economics for new routes to flourish.

Q Embraer has made much about the need for airlines to "right-size" aircraft in Southeast Asia. Have events of the last two years added credibility to this perspective?

A The last two years have seen an influx of E-Jets into the region and we see more opportunities in the years ahead to add value to airlines as they grow their domestic and intra-regional networks. The unpredictability to travel demand has cast a spotlight on the versatility of regional jets like the E-Jets to enable airlines to maintain or strategically grow their networks while keeping a close eye on operating costs and cash flow. A multi-fleet strategy with the E-Jets provides airlines the flexibility to adjust capacity to the fluctuations in market demand.

Q Embraer has said many times that regional aircraft will be crucial to the wider aviation industry achieving its sustainability goals. Can you expand on that?

A Our view is that regional aviation will lead the change towards a sustainable industry, piloting new technologies to maturity before application to larger aircraft becomes feasible. In August last year, we announced our aims to be carbon neutral by 2040 and achieve carbon neutral growth from 2022. We plan to be sourced by 100% renewable energy by 2030 and develop technologies and products to contribute to the industry achieve net zero emissions goal by 2050.

As part of Embraer's efforts to achieve net zero carbon emissions by 2050, we have rolled out several initiatives including the expansion of sustainable aviation fuel compatibility. We have embarked on the continuous improvement of our products, and the development of new technologies.

The low emissions eVTOL [electric vertical take-off and landing vehicle] developed by our spin-off company Eve, is poised to enter into service by 2026.

Last year we disclosed the "Energia Family", which comprises four concept aircraft of varying sizes that incorporate different propulsion technologies – hybrid-electric, electric, hydrogen fuel cell and dual fuel gas turbine is expected for next decade. We are also developing a next-generation turboprop that is designed to leapfrog a 40-year technological gap in the regional aviation segment.

The rear fuselage-mounted engines will provide a jet-like experience: for passengers, a quiet cabin, and for airlines – game-changing characteristics like faster turnaround times, faster climb speed, reduced fuel emissions and jet bridge compatibility. As we usher in a greener future, we are excited that these new technologies will offer people more options to determine the way they travel.

Q Moving to the defence side, the Super Tucano is well suited to operations in Southeast Asia. Can you share how this platform has done in the region the last two years? What about sales prospects?

A Six Super Tucano aircraft were delivered to the Philippines in October 2020 despite the challenges posed by the pandemic and the various border restrictions we faced through the ferry flights. This reflected our commitment to have the aircraft in the hands of the air force to fulfil their security missions.

The Super Tucano platform has been successfully integrated. We do not comment on ongoing sales campaigns, but I can assure you that there are nations interested in the Super Tucano all over the world.

Embraer

Six Super Tucano aircraft were delivered to the Philippines in October 2020

Embraer

The C-390 is able to perform a range of missions including maritime patrol

Q Southeast Asia has a number of legacy transports that will need to be retired. Given this, what is the outlook for the C-390 regionally?

A In addition to the need to replace ageing transport aircraft, governments are also facing budget constraints, made even worse with the Covid-19 crisis. Therefore, they are looking for aircraft that can perform multiple roles such as transport operations, maritime patrol, search & rescue, special missions and more, all using the same aircraft.

The C-390 Millennium is the most modern multi-mission aircraft in its class, encompassing full fly-by-wire technology. The versatility of the C-390 Millennium makes it highly capable of undertaking a range of missions across different terrains with a high reliability rate.

Furthermore, the C-390 has already demonstrated its capability of successful take-offs and landings on unpaved runway. As proven by the Brazilian Air Force, the modern features of the C-390 and its impressive mission completion rate means that the aircraft can be part of a quick response team to respond to emergency situations and humanitarian relief missions, triggered by floods, forest fires, earthquakes or Covid-like situations.

Another trend we see is that countries are looking to develop their sovereign industrial capability. We are open to strategic partnerships that will bring mutual benefits to Embraer and partner countries.

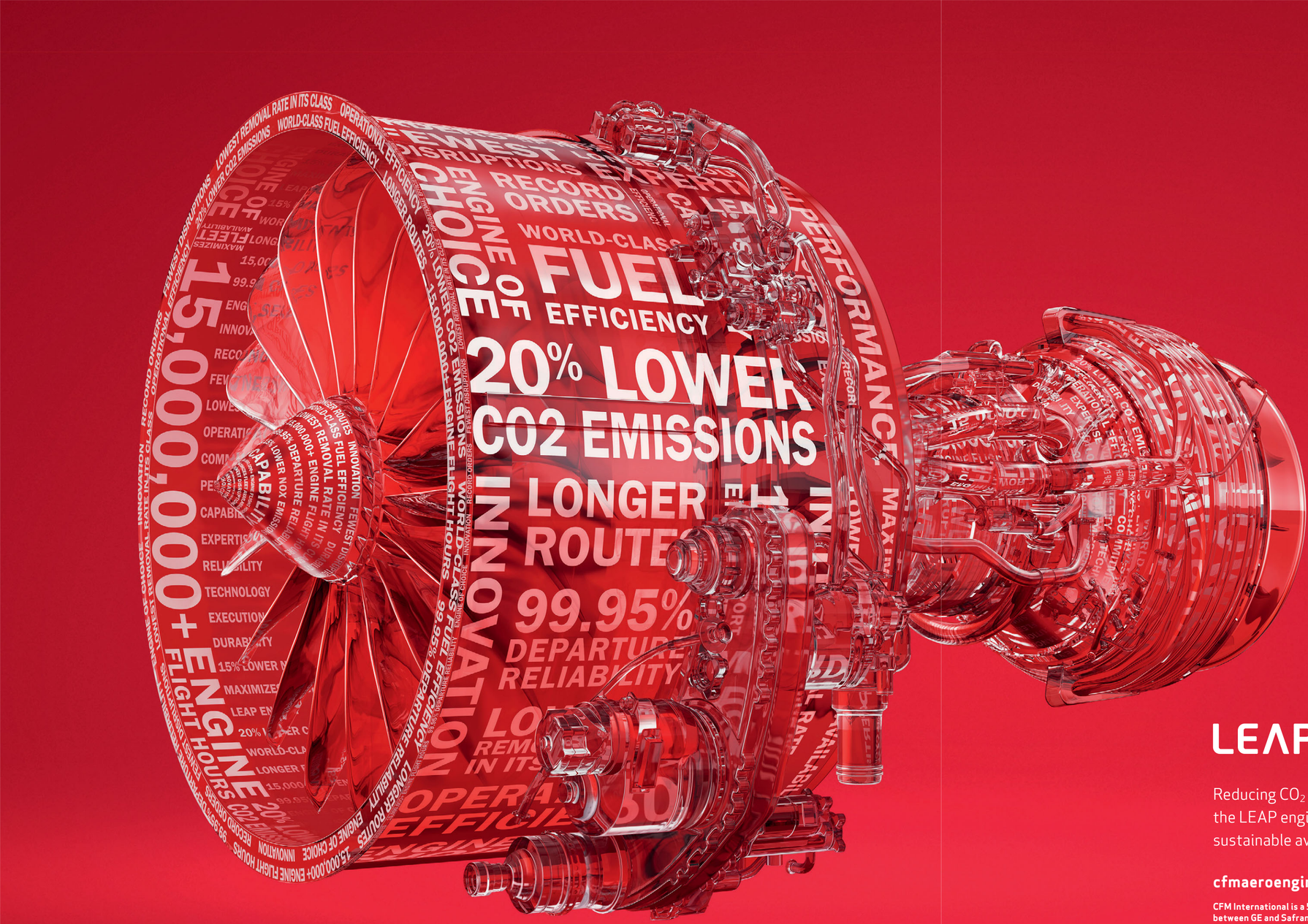
Q You recently spun-off your technology start-up Eve, which is focused on the emerging urban air mobility market. What progress is Eve making and what are its goals?

A Eve was established as an independent company in October 2020 to accelerate the development of the urban air mobility ecosystem and we are very proud of the achievements this Embraer spin-off has made since then. Eve has the largest order book in the industry, a pipeline of approximately $5.2 billion, comprised of 1,735 vehicle orders from 17 launch customers, including airlines like SkyWest and Republic Airways, fixed wing and helicopter operators, aircraft lessors and ride sharing platform partners.

Eve foresees its eVTOL vehicles being certified in 2025 and an entry into service in 2026. More than 50 years of Embraer's aerospace expertise in developing and certifying 20 different aircraft over the last 21 years will give Eve's eVTOL vehicles an edge over others in the field. Eve takes a comprehensive approach to the UAM industry by providing a holistic ecosystem. That means that as well as its advanced eVTOL vehicle, the company is also developing comprehensive global services and support network, and a unique urban air traffic management solution.

Bamboo Airways

Bamboo Airways is a new Embraer Commercial customer in the region



LEAP | The clear advantage

Reducing CO_2 emissions by 20%* compared to the previous generation, the LEAP engine family is realizing today our clear ambition for a more sustainable aviation industry tomorrow. Extraordinary together.

cfmaeroengines.com/leap

CFM International is a 50/50 joint company between GE and Safran Aircraft Engines

*Based on customer feedback

Talel Kamel is vice-president, international business development at Collins Aerospace. He outlines what the diversified group – now part of Raytheon Technologies – will be focusing on at the show

Sustainability and seamlessness

Q What are the key technologies that Collins will promote at this year's airshow?

A This year, Collins Aerospace will be promoting our advancements in sustainable aviation solutions and how we are collaborating with the industry to drive these changes. Visitors will be able to learn more about how Collins is creating more sustainable flight through more connected solutions, alternative power sources, advanced structures and integrated solutions.

We will also be demonstrating our latest in commercial aviation and defence, namely the solutions that can help create a more seamless and safe travel experience for passengers, and how military forces can connect, collaborate and rapidly innovate for the modern battlefield. These include our Enhanced Vision System and Head-up Guidance System, the TruNet networked communications airborne radio, intelligence, surveillance and reconnaissance solutions, and the ACES-5 next-generation ejection seat.

Collins Aerospace

Q In the past two years, how have customer requirements changed in the region?

A The last two years have been particularly challenging for the industry, and we've seen fleet rationalisation, deferring of new aircraft deliveries and shifting of priorities due to the effects of the pandemic. These have affected or delayed some of our projects with our customers.

Our customers are also practising financial prudence and having a closer look at projects that will help with business resilience and profitability rather than those that they would like to do. Thus, it is a very important time for us to be both flexible and responsive to our customers' shifting priorities by understanding their business plans and forecasts so we can work with our supplier base to ensure minimum disruptions to their operations. We're also looking at new technologies such as aerospace digitalisation and how it can help provide better business value to airlines and improve resilience and facilitate business growth and recovery.

Q Collins has promoted several systems that improve cabin hygiene. How have these been received in the Asia-Pacific?

A Like many parts of the world, there is a real interest from our customers in the region in improving the on-board passenger experience as it relates to cleanliness and hygiene. Our close relationships and collaboration with our customers help guide our thinking and approach to new product development. That has certainly been the case here with Asia-Pacific carriers as we collectively innovate a future air travel experience that's more hygienic than before. So yes, there has been a lot of interest in the technology that Collins and its partners are developing that reduces passenger touchpoints, helps inactivate pathogens on-board and improves cabin air purity.

For example, we introduced a high-efficiency particulate air (HEPA) filter installation kit for cabin air recirculation that traps at least 99.97% of the harmful airborne particles that have a diameter of 0.3 micron. These include bacteria, viruses, pollen, dust, mites and other microscopic airborne contaminants in aircraft environmental control systems.

Q Collins recently expanded its propellor MRO capability in Malaysia for ATR turboprops. Can you share some insights on this decision?

A This decision was primarily driven by the significant growth the ATR fleet is expected to experience in the Asia Pacific region in the coming years. In fact, the region is already home to the world's largest ATR operator, Lion Air. We want to ensure that we're well-positioned to support our customers ahead of this growth, so we're ramping up our local 568F MRO capabilities to provide them with faster exchanges and reduced transportation costs.

Q Can you share progress with the Collins Dispatch flight hour programme in the region? What exactly does it cover? Why is it relevant to airlines in the current tough environment?

A Asia-Pacific, like the rest of the world, is still adjusting to the challenges caused by the prolonged pandemic. Now more than ever airlines are interested in flexible maintenance solutions that reduce capital expenditures and minimize spares. For these reasons, Collins Aerospace Dispatch asset management programmes continue to appeal to customers around the world. Dispatch asset management programmes cover the full breadth of Collins Aerospace avionics products, while offering a guaranteed, flexible service solution at a predictable cost.

Q Collins last year acquired FlightAware. How does this acquisition fit in with the broader Collins strategy?

A With the addition of FlightAware, Collins Aerospace can unlock the power of data and analytics for airlines, airports and business aircraft operators. When combined with Collins' networking hardware, sensors, cloud computing and applications, it's able to accelerate the next generation of intelligent digital solutions, helping customers turn data into value to enhance the passenger experience, optimize operations and help reduce the reliance of fossil fuels.

Q On the military side, can you discuss your Lockheed Martin C-130 cockpit upgrade capabilities? How do you assess the market for this in the Asia-Pacific?

A The Asia Pacific C-130 market is evolving. Some countries like Singapore and Thailand have already completed avionics upgrades, while Indonesia is in the process of upgrading its C-130s. Some countries are not only upgrading their existing C-130s but are also acquiring US Air Force Excess Defense Articles (EDA) C-130Hs or new C-130Js to replace some of their older aircraft or to expand their existing fleet size. Several C130 operators in the region are in the process of defining requirements, setting budgets and planning for future avionics upgrades.

For the third year running, FlightGlobal and recruitment agency Goose polled airline pilots on their employment status and thoughts about the future. The findings reflect a profession still feeling the pressure

Crisis in the cockpit

Despite the downbeat mood, there is still optimism among pilots

Thiago B. Trevisan/Shutterstock

Murdo Morrison

More than a third of commercial pilots are not flying for a living – and one in five remains unemployed – as the pandemic continues to take its toll on the profession.

That is according to the latest Pilot Survey, carried out by FlightGlobal and specialist aviation recruitment agency Goose. It questioned 1,743 professional pilots about their work status and attitudes to their career, almost two years into the deepest crisis in the industry's history.

The results show that, although, in general, job prospects and optimism are much higher than at the height of the crisis in 2020, for many the situation remains bleak.

The situation is a slight improvement on the previous year's survey, carried out around six months into the crisis, which found that well over half of all flight crew were out of work or furloughed, or had taken jobs in another industry.

The poll, which took place in the final quarter of 2021, just before the emergence of the Omicron variant, also paints a picture of a profession in which job insecurity is rife and confidence low, and which most pilots would not recommend to young people.

According to the annual survey, 62% of pilots are "employed and currently flying", up from just 43% a year ago. The proportion of "unemployed" has fallen from 30% to 20%, while 6% are on furlough, compared with 17% in the previous survey.

However, there are large regional differences. The number of pilots who are employed and flying in Europe matches the global figure. However, in Asia-Pacific (excluding China) – where many countries remain effectively shut to foreign travel – it is just 53%.

In North America, meanwhile, a domestic sector that has remained robust throughout the crisis, 81% of pilots are flying. In the USA in particular, the flightcrew shortage which plagued the industry in 2019 has again reared its head, with accelerated retirements of senior captains feeding through to a shortage of new-entrant first officers, especially among regional carriers.

Although 2021 did not see the prolonged lockdowns in much of the world that grounded the industry in mid-2020, ongoing border closures, quarantine rules, and other measures to stop the spread of Covid-19 continued to hinder aviation's recovery.

For some out-of-work pilots, the prospect of going back to the cockpit comes with concerns. Almost a quarter of unemployed pilots – 24% – are "not at all confident" about returning to flying, with this rising to 40% in North America and 28% in Europe. For those who had been unemployed but were now back flying, 44% had taken more than nine months to find a new job. Among first officers that rises to 55%, with 33% of captains taking this long to secure a new position.

Mandatory vaccinations are a controversial issue. The survey found that 68% think double vaccinations should be compulsory for all pilots, although this figure varies considerably by region. In North America, just 57% believe in it being mandatory, and 20% of pilots there remain not fully vaccinated, despite several airlines making this a condition of employment. For the industry as a whole, 90% of pilots say they have had both jabs.

Despite optimism about industry recovery, 61% of pilots state they are "concerned" about job security. However, this is a vast improvement on last year, when 82% said they were worried. Even two years ago, when demand for flight crew was leading to a skills shortage, 52% of pilots reported that job security was a concern.

More pilots than last year – 56% compared with 54% – are considering changing jobs in the next 12 months, although this could be a sign of an improving jobs market as well as dissatisfaction with current employers.

There is some cynicism and despondency about the profession itself. Thirty-seven percent of pilots say that, given their time again, they would not have become pilots – slightly up on the 36% who gave this answer a year ago.

And a majority – 55% – say they would not recommend their career to young people. This has fallen from just 29% responding this way two years ago, before the pandemic.

However, there is some positivity, with 60% of pilots believing the sector will make a full recovery to pre-pandemic levels within one or two years, and a further 23% saying it will take a further 12 months. In the last survey, the comparative figures were 44% and 28%. In both polls, 6% of respondents gave the answer: "It will never be the same again."

Pilots were also asked their views on the future pilot employment market. A total of 57% believe there will be a shortage of experienced pilots again within five years, up from 43% in 2021. And 28% think there will be a dearth of all pilots within that timescale, compared with 23% last time.

"With 85% of pilots believing the sector will be facing a shortage of pilots in five years, despite the difficult time it has faced through the pandemic, airlines must look to acting now," says Mark Charman, founder and chief executive of Goose. "We must factor in the pilots we have lost to retirement, those who have taken early retirement as well as those who have left the profession for other occupations."

He adds: "Despite the downbeat mood of this latest survey, it is clear that pilots do look forward to aviation returning to the sort of activity we saw in 2019, sooner rather than later. Pilots have remained resilient throughout a crisis that has made them adapt to new economic realities and re-evaluate what is important to them in their careers."

Singapore's region-leading MRO and aerospace technology sector took a hammering in the pandemic, but 2022 could see a return to strength. Firms expect to find new opportunities post-Covid

Repowered

Singapore's international air hub status feeds into the strengths of its aerospace sector

Shutterstock

Alfred Chua

Almost two years into the coronavirus pandemic, the worst could be over for Singapore's aerospace industry, which sees itself as a market leader in the region.

In October, the city-state's manpower ministry said the industry was planning to hire about 1,000 people over the next two years. Companies looking to hire included big beasts such as Pratt & Whitney, which has a number of joint ventures in Singapore, as well as GE Aviation.

Singapore-based ST Engineering, meanwhile, was reported to be hiring 200 people by this year.

Manpower minister Tan See Leng, who is also Singapore's second minister for trade and industry, said then that the outlook for the industry was "positive". Tan also expressed optimism that the industry would rebound after taking a severe hit.

While the minister's comments reflect the buoyant sentiment in the industry, they also highlight the stark difference in fortunes from more than a year ago, when aerospace companies were turned on their heads amid a collapse in travel demand.

Big shift

At the beginning of the pandemic, a number of aerospace players – including P&W and Rolls-Royce – made some of their employees redundant, among other cost-cutting measures.

Indeed, the number of new hires disclosed might seem small, but they represent a marked shift in the industry's performance, especially when compared with the onset of the pandemic.

They also underscore the importance that Singapore's government has placed on the aerospace sector, which, pre-pandemic, contributed about 10% of global MRO output.

There is optimism among Singapore-based aerospace companies that the industry has turned the corner, after a tough two years.

Industry body the Association of Aerospace Industries Singapore (AAIS) says that the sector saw its fortunes reversed – sharply – as a consequence of the pandemic.

Association president Wong Yue Jeen tells FlightGlobal the sector saw double-digit growth in pre-pandemic 2019, but barely a year later the pandemic had led to "a corresponding sharp contraction" in earnings.

Data from the AAIS and Singapore's Economic Development Board indicate some member companies are seeing revenue declines of as much as 90% compared with pre-pandemic levels.

Still, developments in the latter half of 2021 – particularly a robust freighter market, as well as recovery in major domestic markets – have buoyed market sentiment.

Foo Kean Shuh, SIA Engineering (SIAEC) senior vice-president, corporate planning, fleet management and commercial, says the contracts it clinched in 2021 – including providing test services for CFM's Leap family of engines – were "positive signs of recovery".

Bilateral agreements

Foo adds: "We are encouraged by the various government strategies to stimulate air travel with the expansion of bilateral agreements for quarantine-free travel for fully vaccinated travellers."

ST Engineering president for commercial aerospace Jeffrey Lam, meanwhile, adds: "As we enter a new year, with more countries learning to manage Covid-19 as endemic, we are hopeful that we will not revert to the days of crippling border controls and measures."

AAIS's Wong adds: "The crisis has had its casualties among businesses but has also created new business opportunities, which the Singapore aerospace community is quickly adapting to.

"Aerospace companies here have really made full use of the time to be productive – by accelerating digital transformation, reskilling and upskilling their staff, and investing in capabilities for the future."

Indeed, as the pandemic upended the industry, Singapore-based aerospace companies quickly sought alternative revenue streams.

Wong notes that member companies exploited new business opportunities, including cabin reconfiguration, and aircraft parting-out services.

Rolls-Royce cut employee numbers at the start of the pandemic

Rolls-Royce

ST Engineering is one of several MRO players in the city-state

ST Engineering

He adds: "For businesses with cash reserves, exploring mergers and acquisitions is an option. Diversifying to other growth areas like health and safety related services, unmanned systems, and defence has been another strategy observed."

ST Engineering struck gold in freighter conversions, an activity it has called a "key growth area" in the near to medium term. While MRO-related work took a hit because of the pandemic, the company ramped up capacity in conversions in the USA and China.

While it focuses on Airbus A321 freighter conversions, the Singapore company has begun working to convert A320s and A330s into freighters.

As early as last May, the company pointed out that there was "strong market demand" for dedicated freighters, as passenger travel remained in the doldrums. In the same month, it incorporated its freighter leasing joint venture – named Juniper Aviation Investments – which it set up to "address the growing demand for freighter aircraft as e-commerce and air cargo volumes expand across the globe".

The unit aims to build a portfolio valued at about $600 million within five years, investing in passenger aircraft to be converted as highly efficient freighters.

ST Engineering's Lam says one key lesson amid the boom from freighter conversions was the importance of supply chain diversification and management.

He tells FlightGlobal: "The supply chain for conversion kits for our P2F [passenger-to-freighter] business had come under stress. This had been exacerbated by the huge surge in demand for freighter conversion.

"While the impact of border control was not unexpected, Covid-19 underscored the importance of supply chain diversification and management, and demonstrated how pandemic control measures can cause severe disruption – not only for the movement of goods, but also for everyday operations."

As for SIAEC, it used the lull at the onset of the pandemic to "press ahead" with its multi-year business transformation programme. Foo says the MRO unit is "accelerating the pace of transformation by investing in digitalisation, automation and adoption of lean methodology to enhance and create value for customers".

The company also made "necessary investments and adjustments" to its portfolio. For instance, it divested its shareholding in line maintenance firm Aviation Partnership (Philippines) to joint venture partner Cebu Pacific, while acquiring the remaining 35% in SIA Engineering Philippines from the low-cost carrier.

The shift in shareholdings in the Philippines reflects its MRO strategy. Foo says SIA Engineering Philippines will "serve as a lower cost base for SIAEC to compete for more narrowbody work", especially when near-term recovery is expected first with narrowbodies.

It also acquired from Airbus Services Asia-Pacific the remaining 35% shareholding in Heavy Maintenance Singapore Services, which it subsequently integrated into its base maintenance unit.

It also had been a key player in the first local disassembly of two A380s and one Boeing 777 formerly operating with parent company SIA.

The disassembly works took place at Changi Exhibition Centre, where the biennial Singapore Airshow is held.

SIAEC's role dealt mainly with "the removal, preservation and certification of valuable components for continued service".

Key strengths

Foo says that disassembly "is an area of interest to us that we are exploring".

He adds: "We will continue in our pursuit to emerge stronger through investments in new capabilities, technologies and services to expand our market growth and reach."

Aerospace companies point out that the city-state holds a number of advantages, which has been helpful in the recovery.

ST Engineering's Lam says: "Singapore's aerospace industry draws its strength from a multitude of factors, which include its air hub status, credibility and quality of workforce."

He believes that the "bedrock" is the country's "strong innovation ecosystem".

"ST Engineering is an active participant in this respect, having collaborated with research and learning institutes in a broad range of areas, from the development of aviation talent pipeline to R&D in additive manufacturing for applications in MRO," he adds.

AAIS's Wong says Singapore's aerospace industry has "kept abreast of" new technologies, both in terms of manufacturing and repair techniques, as well as using digitalisation and productivity improvements.

He adds: "The industry is also well supported by up-to-date infrastructure, a strong talent pipeline, IP [intellectual property] protection and policies that help businesses.

"Singapore aerospace companies may also have to look at opportunities to invest beyond Singapore, in geographical locations that facilitate better proximity and access to select customers and resources, while strengthening and transforming the Singapore base and hub."

Wong also makes the point that government support in the form of wage subsidies "[blunted] the impact of the crisis, and helped companies buy time to re-strategise, pursue alternative business models and opportunities, and implement transformation plans".

Despite the optimism, Singapore's aerospace industry maintains a cautious outlook.

As SIAEC's Foo puts it: "There remain uncertainties to a sustained global recovery. The risks of new variants, spikes in infection rates or tightening of restrictions are reminders of the uncertain and uneven impact of the pandemic on the trajectory, timeline and levels of recovery in air travel across the world."

Lam concurs, noting that 2021's recovery trajectory was "on an uneven footing", given the waves of coronavirus infections. Still, ST Engineering reported about two-thirds of pre-pandemic MRO capacity through the year.

He also points out that as markets recover, competition will intensify, "with many market participants gearing up to ride the wave of recovery".

"To stay ahead of the pack, we have been building on the breadth and depth of our capabilities in nose-to-tail life cycle solutions. At the same time, we continue our focus on enhancing productivity by making our processes more digitised and automated, and on developing sustainable solutions to be in line with the industry's growing emphasis on environmental protection," says Lam.

AAIS's Wong agrees that competition will heat up in a post-pandemic future.

He says: "We are anticipating the restructuring, consolidation, innovation and transformation of airlines, OEMs and major suppliers, and other trends like the re-shoring and continued re-evaluation of supply chains.

"Singapore will have to compete with smarter products and services, deployed via a combination of a skilled workforce, and technology solutions such as digitalisation, automation, blockchain, additive manufacturing and artificial intelligence."

Singapore Airlines and Qantas are the two Asia-Pacific carriers still committed to the Airbus A380, as the out-of-production, ultra-large type returns to limited service post-pandemic

Superjumbo swansongs

Singapore Airlines

Singapore Airlines flew the A380's first revenue flight

Alfred Chua

Although it is not the biggest customer of the world's largest airliner, Singapore Airlines (SIA) was the Airbus A380's launch operator, flying the superjumbo's first revenue flight from Changi Airport to Sydney on 25 October 2007.

Back then, there were still high hopes in Toulouse that the A380 would become a disruptor in world aviation, allowing airlines to transport over 500 passengers from hub to hub, and the room on board to trial innovative cabin concepts, not possible on smaller airliners.

However, after disappointing sales and huge losses, Airbus took the decision in early 2019 to axe its most ambitious programme after struggling to sell more than a handful of examples to any airline except Dubai's Emirates, the only carrier to embrace the A380 in significant numbers.

Almost exactly 14 years after that first flight, on 4 November 2021 a SIA A380 was back in the air again, following a hiatus for the by now-out-production type lasting from the start of the pandemic.

The double-deck airliner flew the world's shortest A380 route to date – the roughly 162nm (300km) from Singapore to Kuala Lumpur – just undercutting the 184nm service operated by Emirates between Dubai and Muscat in Oman.

It was a short-lived return on that particular route, with the connection to the Malaysian capital lasting just a month. However, it was significant in that it represented the start of the A380's swansong with SIA, which later reintroduced the airliner to its London service, amid a spike in demand for the city-state's quarantine-free Vaccinated Travel Lane flights. This was followed by flights to Sydney, as Australia reopened its borders.

SIA was not the only carrier in the region to bring its A380s out of storage for a last hurrah that could last another decade or more. Around the time of the Singapore Airlines flights to Kuala Lumpur, Australian flag carrier Qantas was preparing to fly its first A380 to Sydney after spending nearly 600 days parked overseas.

The aircraft, which is named after one of Qantas's founders, Hudson Fysh, landed in the city on 9 November. It is one of the two A380s to return to service in April 2022 on two key routes to Los Angeles and London.

Like SIA, Qantas says it has seen strong demand for international flights as travel restrictions ease. It disclosed that it was accelerating the return of the superjumbos, with six to resume flying by end-2022, and a remaining four jets by 2024.

The A380s, says the airline, will have their cabin products refreshed, indicating that the aircraft could operate for some more years to come.

Before the global pandemic, SIA, too, upgraded the cabin products on a number of A380s.

Yet, Qantas and SIA are likely to be the exceptions in their optimism about their A380 fleets, at least among Asia-Pacific operators.

The A380, once the flagship of several fleets in the region, is facing diverging realities in the Asia-Pacific, as airlines begin their long-drawn-out path to recovery.

Amid the coronavirus pandemic, when capacity-cutting was the norm, these superjumbos sat idle for months on end. As the hopes for a quick recovery dimmed further, industry watchers questioned the fate of these aircraft and wondered if – and when – they would ever return to the skies.

For many other operators, the answer was clear: the type offered way too much capacity. As Malaysia Airlines chief Izham Ismail told FlightGlobal: "The aircraft were good at the time the decision was made."

The airline is in the middle of a tender process to sell its six superjumbos. Likewise, Thai Airways, which is undergoing a business rehabilitation process, is hoping to dispose of its fleet of A380s.

Korean Air, meanwhile, intends to retire its 10 A380s "within five years", airline chief Walter Cho told FlightGlobal. Compatriot Asiana Airlines, which will soon merge with Korean, has six A380s in storage, and these aircraft are also likely to be retired early.

The sole Chinese operator of the A380, China Southern Airlines, has been coy about the future of its five examples. However, media reports last April indicate the airline – the only carrier to fly the A380 during the pandemic – was "reviewing" its A380s' future, though the prospects are far from bright.

Even SIA, which has brought back a number of A380s into service, most recently scrapped two examples in Singapore.

As fleet rationalisation becomes the norm in the new year, expect the already-rare A380 to be an even rarer breed. A cautious approach to capacity management, coupled with concerns about new coronavirus variants killing travel demand, means the A380's glory days are a thing of the past.

Airbus: Keeping A380 would have made things worse

In November, Airbus chief executive Guillaume Faury said the airframer's pandemic-related predicament over the last 18 months would have been far worse had it not independently opted to terminate the A380 programme.

Late last year, Emirates became the latest to scrap early-delivery aircraft, after tying up with a recycling firm to assist with dismantling its first A380. The jet was only delivered in July 2008. Initial aircraft for Singapore Airlines and Air France have also been broken up.

Airbus halted the A380 programme in February 2019, one of the final acts of Faury's predecessor Tom Enders, after Emirates – which was single-handedly keeping the programme afloat – slashed its backlog for the type.

"Honestly, with the benefit of hindsight – and it's always easier to be smart afterwards – we stopped it ahead of Covid, and it was really the right thing to do," Faury said. "We'd have been in a much more difficult spot with the A380 still in full swing in the midst of Covid."

The French-Italian manufacturer maintains its versatile regional turboprops can play an even bigger role in connecting often remote Asia-Pacific communities to the rest of the world

Landing new opportunities

Murdo Morrison & **Dominic Perry**

ATR is back at Singapore with a familiar message – its turboprop aircraft offer a lifeline to remote and under-served communities throughout Asia-Pacific by providing operators with a rugged, cost-effective, and versatile alternative to jets. "Our mission is to provide regional connectivity in what for us is a key market," says senior vice-president of commercial Fabrice Vautier, who, speaking just ahead of the show, hints at order announcements this week.

ATR's appearance here comes a week after the Toulouse-based airframer insisted that it was emerging from the deepest crisis in its 40-year history. After delivering an historically low 10 aircraft in 2020, the Airbus-Leonardo joint venture last year shipped 31 examples and took 35 orders. It will also ramp up production of its two twin-turboprop models this year, with a deliveries expectation in the "mid-to-high 30s", rising to 50 annual deliveries by 2024.

Despite the battering to its business, ATR has continued to invest in new product development during the pandemic. A new Pratt & Whitney Canada PW127XT engine, with a promised 3% reduction in fuel burn, has been introduced as standard on the 42-600 and 72-600 this year. ATR announced the new variant at November's Dubai air show, with a five-aircraft commitment from long-term customer Air Corsica.

Meanwhile, work continues on the 42-600S, a short take-off and landing (STOL) adaptation of the smaller of ATR's two aircraft. ATR has secured orders for 20 aircraft, including from Air Tahiti, and is targeting first flight in the second quarter, with delivery in late 2024. The 42-600S can take off from and land on 800m runways with 40 passengers – a regular 42-600 will typically require 1,000m. This, says Vautier, opens access to small airfields previously inaccessible with that category of turboprop.

Bangkok Air is among ATR's customers in the region

ATR

At its annual results presentation last week, ATR forecast a 20-year replacement market for 1,200 passenger turboprops in the 30- to 70-seat segment that the company serves. In addition, it sees a requirement for 460 freighters with a payload of up to nine tonnes over that some timescale. Vautier says there are 140 ATR freighters in service. Most are passenger-to-freighter conversions, with 17 P2Fs delivered in 2021.

Work continues on the ATR 42-600S STOL variant

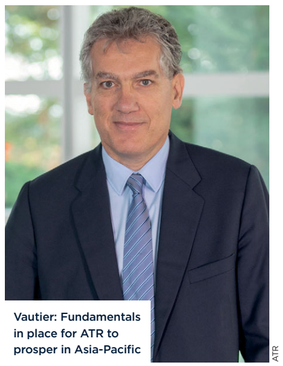
ATR

However, ATR has also developed its first new-build freighter, shipping six 72-600 new build freighters to launch, and so far only, customer FedEx since the first delivery in late 2020. It handed over a further five in 2021, as part of an overall order from the logistics giant for 30 72-600Fs, plus 20 options, placed in 2017. The aircraft features a Class E cargo cabin for bulk cargo and container transport, able to accommodate up to seven LD3 containers or nine pallets.

Vautier says he still believes "there is room in the market" for a "combi" 42-600. PNG Air of Papua New Guinea and Air St-Pierre, based in the French territory of the same name off Canada, operate, respectively, a 72-600 and 42-600 in a flexible configuration, with seats removed and a section of the cabin devoted to cargo. However, the combi would be a more sophisticated solution, with a permanent area set aside for freight and a larger cargo door at the front.

ATR's enthusiasm about the freight sector is based on an assumption that the e-commerce market will continue to grow, especially in Asia-Pacific, where consumer wealth is rising, but a combination of poor road infrastructure and challenging geography – much of the region's population lives on islands – mean air transport is the only logical way of delivering goods to within driving distance of a customer's house.

Vautier says ATR's return to the air show circuit – it had a busy Dubai three months ago with a number of product and order announcements



Vautier: Fundamentals in place for ATR to prosper in Asia-Pacific

ATR

– is an opportunity to "reinstate the fundamentals of our market" after "a significant crisis for our industry". He says the company must now "stop spending our time talking about how deep the crisis has been, but instead look to the future, where there is very significant hope for recovery".

All the "fundamentals are in place" in Asia-Pacific for ATR to prosper again after two years during which much of aviation – even the domestic routes the company's aircraft specialise in – has been shut down, says Vautier. "We will continue to see economic growth and an emerging middle class, but also that need for an essential air service," he notes. "Our product is all about good economics and being able to land almost anywhere."

After a series of false starts, Singapore's plans to reopen its borders – and reclaim its status as a global air hub – are well well underway, though full recovery remains an elusive goal

Sing Studio/Shutterstock

Back in the fast lane

Singapore is determined to press ahead with border opening

Alfred Chua

Singapore's Vaccinated Travel Lane (VTL) scheme has grown to 24 countries and regions across North America, Europe and Asia-Pacific since its rollout in September 2021.

While Singapore paused the scheme amid a spike in infections caused by the Omicron variant, the city-state has reiterated its commitment to press on with border reopening.

Speaking in Parliament on 10 January, transport minister S Iswaran said the city-state remains confident "of the long-term potential of air travel", with further recovery expected in 2022.

The VTL scheme forms part of Singapore's long-drawn efforts to reclaim its air hub status, after being battered by the coronavirus pandemic.

With no domestic market to fall back on, and a heavy reliance on international and transit traffic, border closures during the onset of the pandemic meant Singapore's status as a world-leading air hub was in jeopardy.

The VTL scheme is not the city-state's first attempt at reopening borders amid the pandemic. As early as October 2020, the Southeast Asian city-state was exploring ways to safely reopen borders with cities or countries with low incidence rates of the coronavirus.

Singapore and Hong Kong – another city with a low infection rate that was also reeling from a collapse in travel demand – announced that they would be establishing a travel bubble.

The arrangement, which allows for leisure travel without the need for mandatory quarantine on arrival, was to commence on 22 November 2020, and was the first of such an arrangement for both cities.

At the time, the move – hailed as a "milestone arrangement between two aviation hubs" – was seen as a promising sign of what a travel restart could look like: onerous quarantine stays replaced by regular testing, with a calibrated arrival limit put in place.

However, a day before the travel bubble was due to commence, Singapore and Hong Kong scuppered launch plans, after the latter reported a spike in coronavirus infections.

Subsequent attempts at restarting the travel bubble were thwarted by a rise in infections in either Singapore or Hong Kong.

By July 2021, any remaining hope that the travel bubble could be revived were dashed, when it became evident that Singapore and Hong Kong were drifting further apart in terms of their approaches.

For a brief few months in the middle of 2021, Singapore's plans to restart international travel and revive its air hub status lay dormant.

Then came 19 August 2021, a date seen by many as a turning point in Singapore's border reopening strategy.

Singapore authorities announced the rollout of the VTL arrangement to Germany and Brunei, in the first step of a "cautious" easing of travel restrictions.

Speaking as part of a pandemic task force press conference, where plans to gradually treat the coronavirus as endemic were outlined, Iswaran said it was critical that the city-state's borders remained open and "connected to the world".

He added: "[Singapore is] reopening in a careful and calibrated manner, striking a balance that will protect lives and livelihoods. And that is the same approach we will adopt to the re-opening of our borders and resumption of air travel – careful, calibrated, step-by-step."

On 8 September, the first flight of 100 passengers under the VTL scheme landed in Singapore, kickstarting the city-state's reopening plans.

A month later, Singapore would take another significant step, this time announcing its largest reopening to date – it announced that it would expand quarantine-free travel lane arrangements to several countries in Europe, South Korea, as well as Canada and the USA.

It later added more Asia-Pacific countries, including Australia, Thailand and Cambodia, to the growing list of countries under the scheme.

While there has been "good take-up" of the VTL arrangement, the nature of the scheme, where a fixed number of travel passes are issued to short-term visitors into the country, means that arrival numbers are still largely managed.

Consequently, any semblance of a pre-pandemic recovery would seem some way off – for now at least.

Still, the scheme is seen to be improving what would have been a dire situation for flag carrier Singapore Airlines and Changi Airport, with both companies reporting significant increases in passenger numbers towards the end of 2021.

Changi Airport's passenger numbers were about 15% pre-pandemic levels as at end-December, a marked increase from the start of the year when it was just 3% pre-pandemic numbers.

And while Singapore has seen a spike in infections, there has been doubt over the country's reopening plans, but the authorities appear to want to stick to their guns.

In his 10 January parliamentary speech, Iswaran defended the scheme, stating: "The VTL scheme is a useful pathfinder for us to establish, test and build confidence in safe reopening to vaccinated travellers. Ultimately, we want to work towards quarantine-free travel for all vaccinated travellers."

Jeffrey Lam is commercial aerospace president at ST Engineering, Singapore's technology and industrial powerhouse. He discusses the business's vision across its three areas of activity: specialist MRO, aerostructures, and asset management

Maintaining an edge

Q What is your outlook for the sector and what are the near-term opportunities for ST Engineering in commercial aerospace?

A Despite the start-stop characteristics of the pandemic, the world is learning to live with Covid-19 and managing it as an endemic. We hence believe that the market has bottomed and are hopeful that the aviation industry will be on a steady recovery trajectory in the new year as vaccination rates go up and more borders open up.

As for the ST Engineering businesses in aerospace, passenger-to-freighter (P2F) conversion has been, and will continue to be, an important opportunity and key growth area for us. Air freight has been a bright spot for the airline industry during the pandemic, and we believe it will continue to be so in the near to mid-term seeing how strong the growth trajectory of e-commerce is. Our Airbus A330 and A320/A321 P2F programmes, which we have developed together with Airbus and our joint venture, Elbe Flugzeugwerke or EFW, are experiencing very robust demand. To meet this demand, we have been racing to ramp up capacity by setting up new conversion lines across our global facilities in locations such as China and the USA.

In addition to P2F conversion, the leasing marketing is one we are focusing on given that many operators are turning to asset-light solutions in managing their fleet. We aim to double our assets under management, which comprise passenger aircraft, freighter aircraft and engines, to about S$2 billion ($1.49 billion) by 2026. As part of our growth plans, we set up a freighter leasing joint venture with Temasek in August 2021, and we have been aggressively building up its portfolio with highly efficient converted freighters. Through this new venture, we will address the growing demand for freighter aircraft, while at the same time leverage our deep technical expertise to provide end-to-end solutions including entry to service, deployment and maintenance.

Q What do you see as your main challenges and threats?

A As we leave the worst of the pandemic behind, we are likely to find ourselves in an even more competitive landscape than the pre-pandemic days, as many MRO solutions providers are now hungry for jobs. This is where productivity and value-adding services will set one apart from the rest. Airlines will also want to turn to trusted service providers which have the track record in providing strong and reliable support as they embark on recovery.

In this regard, we believe we have a competitive edge given our over 45 years of experience in the industry, and continuous investments in smart technologies to build up our capabilities. At the same time, we have a very broad customer base, which is mostly made up of longstanding customers. We had supported these customers through the most challenging period when flying activities were at their lowest with flexible maintenance and even payment schedules, and we stand ready to support them in their recovery journey.

Passenger-to-freighter conversions remains a growth business

ST Engineering

Q What role will technology play in the MRO business?

A We believe digital technologies will become ubiquitous and widely adopted in the years to come to help improve MRO efficiencies in a big way. The aerospace industry has been adapting and innovating to survive and thrive amid the pandemic, and this includes MRO providers which have to adapt to business process changes and adopt digital technologies to keep themselves agile.

As an example, we recently introduced our very own on-wing component health and reliability management programme to Japan Airlines, which is among our first few customers to adopt it. We have been working on leveraging digital technologies to derive valuable insights for MRO work even before the pandemic started, and the programme is the product of that and our effort to develop more customised and value-adding MRO solutions.

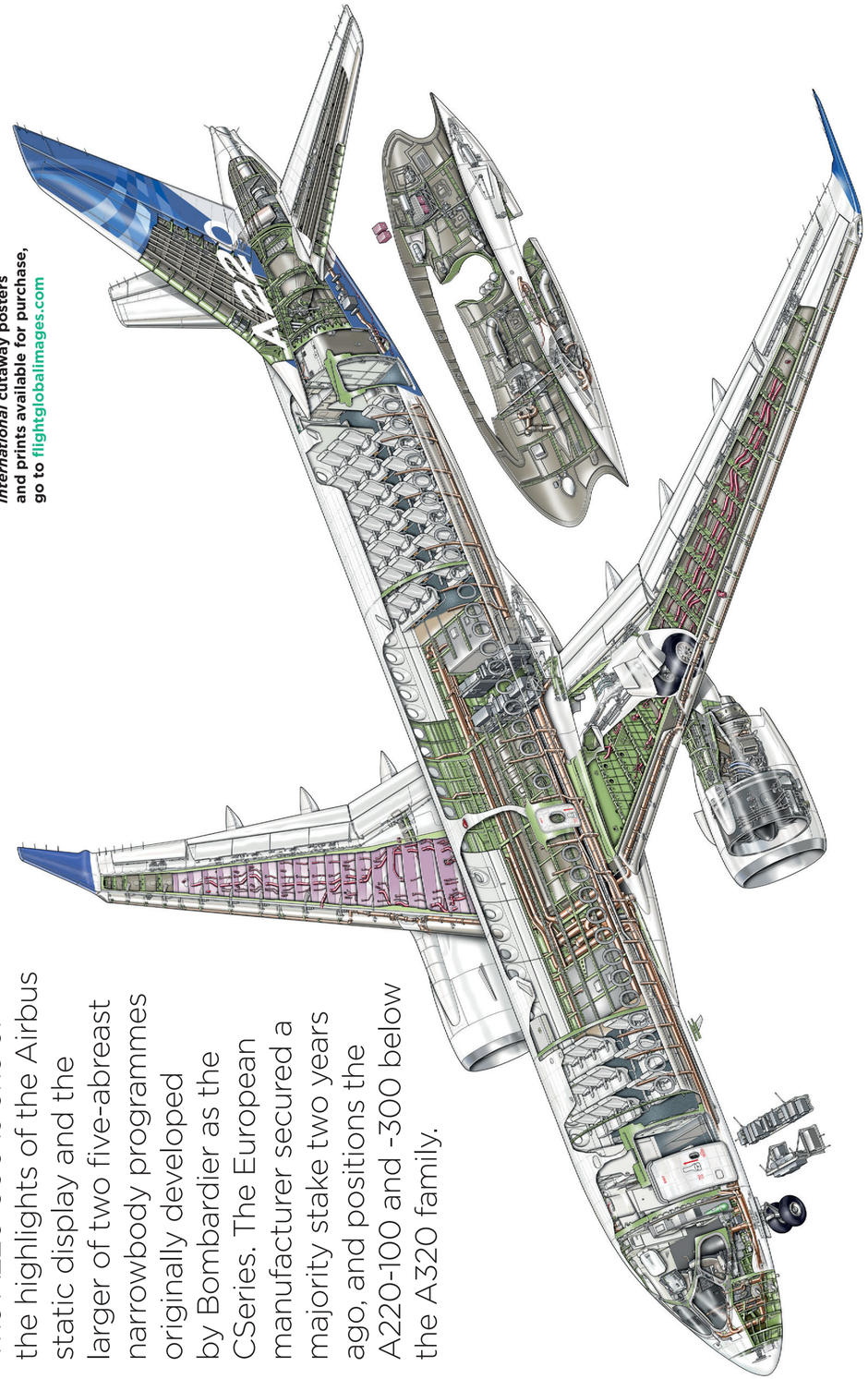
We are currently trying to expand the programme to more customers, and have plans to also use it in our engine MRO programmes. As more airlines and operators get onboard and participate in the programme, its analytics model will only get better and more robust, and in turn drive greater efficiencies in maintenance work scheduling and costs.

Q What about the importance of sustainability initiatives?

A We are stepping up our sustainability efforts and reducing our carbon footprint by continuing to make our solutions and operations more green. For instance, we are collaborating with engine OEMs in the development of engine nacelles for increasingly integrated propulsion systems, with the result being lower overall weight and better performance to help in less fuel consumption.

In our daily operations, we are using more solar energy to help reduce our carbon footprint. In 2021, we installed more solar panels at our aerospace facilities in Singapore to generate enough clean energy to meet about 30% of our electricity needs, up from 10% the year before. Our other global facilities in China and the USA are similarly stepping up efforts to adopt the use of solar energy.

Airbus A220-300



The A220-300 is one of the highlights of the Airbus static display and the larger of two five-abreast narrowbody programmes originally developed by Bombardier as the CSeries. The European manufacturer secured a majority stake two years ago, and positions the A220-100 and -300 below the A320 family.

Join us at the Singapore Airshow, booth A-V01.

WE HAVE OUR SIGHTS ON AN ENVIRONMENTALLY SUSTAINABLE FUTURE.

AND WE'RE ON OUR WAY THERE.

At Collins Aerospace, we bring an elevated perspective to the industry and our world. And today, we're using our unique position to drive innovations that will sustainably grow aerospace – from lighter materials and more efficient, electric systems to technologies that optimize flight paths and fuel burn. Because the way we see it, with the right commitment and collaboration, the global challenges we face today can drive opportunities to create a better tomorrow.

collinsaerospace.com

Collins Aerospace

AEROSPACE REDEFINED