

Orient aviation

Vol. 30 No. 5
October-November 2023
orientaviation.com



DEMAND OVERDRIVE

Region's airlines to hit
new traffic peaks in 2024



e-commerce
boosts sluggish
air cargo business

Unruly onboard
behavior worsens
post pandemic

Industry safety
audit evolves to
risk-based model

LEAP-1B

ENGINES AVAILABLE NOW

Available for short- or long-term lease and
“pooling-like” preferred access.



WILLIS LEASE FINANCE CORPORATION

Power to Spare – Worldwide®

leasing@willislease.com | [+1 561.349.8950](tel:+15613498950) | www.wlfc.global

ORIENT AVIATION MEDIA GROUP
17/F Hang Wai Commercial Building,
231-233 Queen's Road East,
Wanchai, Hong Kong
Editorial: +852 2865 1013
Website: www.orientaviation.com

Publisher & Editor-in-Chief
Christine McGee
E-mail: christine@orientaviation.com
M: +852 6438 3379

Associate Editor & Chief Correspondent
Tom Ballantyne
Tel: +61 2 8854 1458
M: +61 4 1463 8689
E-mail: tomball@ozemail.com.au

North Asia Correspondent
Geoffrey Tudor
Tel: +81 3 3373 8368
E-mail: tudorgeoffrey47@gmail.com

Photographers
Rob Finlayson, Graham Uden,
Ryan Peters

Chief Designer
Chan Ping Kwan
E-mail: production@orientaviation.com

ADVERTISING

Asia-Pacific, Europe & Middle East
Defne Alpay
Tel: +44 771 282 9859
E-mail: defne.alpay@alpayassociates.com

The Americas / Canada
Barnes Media Associates
Ray Barnes
Tel: +1 434 770 4108
E-mail: ray@orientaviation.com

Download our 2023 media planner at:
orientaviation.com/advertising

COVER STORY

16



COMMENT

5 Improve air safety with data and dialogue

ADDENDUM

- 6 Bad on board behaviour worsens post pandemic
- 7 Rumble Down Under fades at Qantas Group
- 7 Recent Air New Zealand CEO, Christopher Luxon, is nation's new prime minister

MAIN STORY

9 Airline safety never compromised by supply chain disruptions



12 Safety Issue Hub to improve aviation safety transparency

14 International Air Transport Association's IOSA evolves to risk-based model



INDUSTRY INSIGHT REPORT

Greater China air cargo update

22 e-Commerce and fluid borders to define region's air freight growth



23 China accelerates investment in "smart" cargo airport



23 Cathay Cargo expanding footprint across China's Greater Bay Area

24 Semiconductor industry life blood of Taiwan's freight sector





GO BEYOND

INTELLIGENT. GLOBAL. GROWING.

PRATT & WHITNEY GTF™ MRO NETWORK

As the GTF fleet grows, we're expanding MRO capacity around the world – in our shops and across a network of industry leaders. With 13 active locations worldwide and another six expected by 2025, we're sharing best practices, optimizing worksopes and driving innovation throughout the network — with automation, digital tools and advanced inspections and repairs. Together, we're redefining what's possible to support our customers.

LEARN MORE AT [PRATTWHITNEY.COM/MRO-MAP](https://prattwhitney.com/mro-map)

PRATT & WHITNEY

GTF

MRO NETWORK

Improve air safety with data and dialogue

Achieving a 100% safety record for commercial aviation may seem a pipedream. Whatever measures are put in place to make flying safer, the ever present possibilities of human error in the cockpit, in the maintenance hangar or elsewhere across the supply and service chains of the industry remain.

But the oft repeated mantra that safety is aviation's number one priority has never changed. The industry's 2022 fatality risk rate reveals that on average, an individual would have to fly every day for 25,214 years to die from an aircraft accident. The figures are testimony to what the industry has achieved.

So it was not surprising that when more than 550 aviation safety professionals from around the world gathered in Hanoi in September for IATA's inaugural World Safety and Operations Conference (WSOC), delegates displayed a steely determination to improve air safety, that is to make the world's safest form of transport even safer.

It can be achieved with a refocus on safety leadership, IATA said, fostering a culture of safety from top to bottom. Every person in aviation must be safety aware, but also feel free to voice their concerns, no matter how lowly their positions in the aviation chain, about possible threats to flight safety.

As IATA director general, Willie Walsh, put it: "Ensuring we have the right culture where people can be open about safety issues, feel free to discuss them, share their concerns and share their experiences, is very important in progressing to high levels of safety in the industry."

Perhaps the most promising contribution to safe flying are emerging technologies such as Artificial Intelligence (AI).

Airlines are improving their data collection and analyses, enabling better decision-making and organizational structures as well as increasing automation as these new technologies are integrated into their operations.

These transformative technological capabilities have enormous safety implications. For example, automation combined with AI can provide pilots with better situational awareness and focus on necessary actions. In maintenance, it can predict when components on an aircraft need to be replaced.

It also can help identify risks and advise on necessary action.

Most importantly, these technological advances can take aviation closer to a 100% safety record. ■

TOM BALLANTYNE

*Associate editor and chief correspondent
Orient Aviation Media Group*

A trusted source of Asia-Pacific commercial aviation news and analysis

ORIENT AVIATION



Bad on board behavior worsens post-pandemic

Inflight unruly passenger incidents hit an all-time high in 2021 and 2022 was worse. This year, physical assaults and anti-social behavior on board have are continuing to increase in frequency.

Recently, a Malaysia Airlines flight from Sydney to Kuala Lumpur turned back two hours into the journey after an Islamic extremist caused uproar in the cabin, claiming he had a bomb, yelling “My name is Mohammed, slave of Allah”. He didn’t have a bomb and after the flight touched back down in Sydney the Australian Federal Police arrested the 45-year-old.

In September, a Jetstar service from Perth to Sydney was forced to return to the West Australian capital after a passenger allegedly became unruly during the flight. The 33-year old was arrested and charged with disorderly behaviour and failing to comply with safety instructions.

These are just two of an increasing number of incidents involving unruly passengers and the statistics show the problem is worsening. The latest International Air Transport Association data reveals an unruly onboard incident occurred every 568 flights in 2022, up from one per 835 flights in 2021. Incidents of physical aggression increased 60% year-on-year.

“Physical abuse incidents remain very rare, but these had an alarming increase of 61% over 2021, occurring once every 17,200 flights,” IATA said. Although non-compliance incidents initially declined after the pandemic mask mandates were removed for most flights, the frequency began to rise again throughout 2022 and ended the year some 37% up on 2021, the global airline

association said.

The most common incidents involve non-compliance: smoking, failure to fasten seatbelts, exceeding the carry-on baggage allowance, failing to store baggage when required, consumption of own alcohol on board, verbal abuse and intoxication.

IATA and the International Civil Aviation Organisation (ICAO) play crucial roles in implementing global changes to address unruly passengers. An example is the Montreal Protocol P14 Protocol, which gives the state of scheduled landing the jurisdiction to deal with unruly passengers and covers third party countries in case a flight is rerouted.

Strategies to reduce unruly passenger incidents revolve around regulations and guidance, each of which has several elements. It is important governments and airlines have the necessary legal authority to prosecute unruly passengers, IATA said, regardless of the state of an aircraft’s registration, and the enforcement measures that reflect the severity of the incident. For this to happen, jurisdictional gaps must be eradicated.

To June 30, 2023, 45 nations, 33% of international passenger traffic, have ratified MP14.

“The ratification rate is accelerating and there is a strong pipeline with countries in an advanced stage toward ratification,” IATA’s Assistant Director of External Affairs, Tim Colehan, said, but it is not a silver bullet. Enforcement action needs to be taken against those who disrupt flights.”

Collaboration among various industry stake holders, improved incident reporting and enhanced training for crew members are important strategies to deal with

unruly passengers.

France has extended the use of civil and administrative penalties to cover unruly incidents on board flights, which are more effective against less serious infractions.

The U.S. has adopted a zero-tolerance approach. If a crew member or a passenger is threatened or assaulted, action will be taken against the offender. In 2022, around US\$8.4 million in fines were issued to unruly passengers with the most serious cases referred to the FBI for possible criminal prosecution.

China and India are among countries with national bans and government-controlled lists of unruly passengers. The main problem with bans is data protection laws make it difficult for airlines to share information and individual bans can be circumvented with name changes and new passports.

Preventing or de-escalating

incidents obviously are the preferred option. Airports and civil authorities do take the unruly passenger problem seriously and there are examples of collaboration and awareness campaigns throughout the world.

IATA’s Senior Manager for Cabin Safety, Jonathan Jasper, said it was encouraging that all stakeholders are collaborating to ensure that nobody is unnecessarily contributing to the unruly passenger problem.

Sharing best practices for de-escalating incidents through manuals and training is equally vital.

IATA issued a new guidance document at the beginning of 2022 containing advice for airline crews and several practical solutions for governments for closing jurisdictional gaps.

Training, meanwhile, has taken on increased importance following the disruption caused by the pandemic. “There are a lot of new crews that don’t have the experience or life skills to deal with some incidents,” Jasper said.

“Even experienced crew missed a lot of flight time and then had mask mandates to handle. Training is constantly being reevaluated to give all crew the best possible skills to deal with post-pandemic unruly passengers, including spotting behaviors before they escalate.”

Also there is far better support for crew following incidents. Mental health and wellbeing are increasingly important and Jasper said airlines are investing in this critical area.

“There is no excuse for unruly behavior,” Jasper said. “It is not just about respect for passengers and crew. It is about safety, always the industry’s top priority.”

By associate editor and chief correspondent, Tom Ballantyne. ■



“The increasing trend of physical abuse is particularly worrying and governments must enforce the law and penalize offenders. Passengers and crew are entitled to a safe and hassle-free experience on board”

Jonathan Jasper
IATA senior manager cabin safety

Rumble “Down Under” fades

October was shake out month at the Qantas Group as two board directors, Maxine Brenner and Jacqueline Hey, said they will depart the airline board next February and Richard Goyder announced he will resign as the board’s chair within the next 12 months, that is before the 2024 annual general meeting.

The decisions were formally announced within days of the news the head of loyalty at Qantas, Olivia Wirth, had resigned and will depart the



group, also in February, after 14 years and a stellar rise to the head of the most profitable division of the Qantas Group. A

little less than a week earlier, she was nominated for the board of leading Australian retailer Myer, a nomination approved by Myer shareholders.

Are there more resignations to come following the premature departure and then immediate embarkation on a cruise to the Antarctic, by former group CEO, Alan Joyce? Probably.

In the meantime, new CEO, Vanessa Hudson, has embarked on a brand reload. She has a tough job ahead convincing

customers to remain loyal to customers especially as she was CFO when the decisions that have damaged the Australian flag carrier’s brand were implemented.

In mid-October, she took to social media and said: “There have been times when we have let the wider Australian public down and we understand why people are frustrated and also why some have lost faith in us.

“As the new CEO, I am determined to fix that.” ■

Qatar Airways group CEO makes surprise exit from Gulf carrier

Extremely vocal and possessed of an acerbic wit, Qatar Airways Group CEO, Akbar al Baker, did not seem the quitting type.

But once again he surprised the industry with the news, announced on October 23, that he would step away, after

27 years, from the airline on November 5.

Bahr Mohammed Al Meer, COO of Doha Hamad airport,

was named as his successor.

Qatar Airways gave no reason for Al Baker’s sudden resignation. ■

Simplifying Payments in Complex Industries

UATP®

The World’s Trusted Payment Platform

UATP.com



Ameco

TO PROVIDE YOU WITH A VARIETY OF MODELS OF
ENGINE COMPREHENSIVE MAINTENANCE SERVICE

V2500/RB211/PW1100/PW4000

Years of experience in engine overhaul strongly
guarantees customers' stable operation
and cost effectiveness.



each &
every One

Web: www.ameco.com.cn

Tel: +86-10-87494100



AIRLINE SAFETY NEVER COMPROMISED BY SUPPLY CHAIN DISRUPTION

When more than 550 safety professionals from around 100 airlines gathered in Vietnam last month for the International Air Transport Association's inaugural World Safety and Operations Conference (WSOC), one challenge was uppermost in their minds: making the world's safest form of transport safer? Associate editor and chief correspondent, Tom Ballantyne, reports from Hanoi.

Frustrating gaps in the aviation supply chain and manpower shortages are exerting relentless pressure on airlines as the industry recovers from the pandemic of 2020 to early 2023. Critically, no airline is rushing back capacity by flouting safety rules. International Air Transport Association (IATA) director general, Willie Walsh, told delegates at the association's first safety and operations conference.

"There always is pressure on airlines, but safety is never compromised. I don't think this [time] is any different," Walsh said in his speech to conference delegates last month.

It is clear from the operational component of airlines in recent months that on-time performance is not as good as

would be liked because of supply chain issues, but the industry remains very much focused on safety, he said.

"I certainly see no evidence of that being the case. In fact, because we have data, we monitor trends in the industry. We are not seeing any evidence of a change in behavior," Walsh said.

WSOC covered all aspects of aviation safety from the cockpit and cabin to ground operations, aircraft recovery after incidents and safety culture, but leadership was high on the agenda. "Leadership in Action: Driving Safer and More Efficient Operations" was the theme of the Vietnam Airlines sponsored gathering.

The IATA Safety Leadership Charter was unveiled when





20 airlines signed the charter at a ceremony at the Hanoi gathering. Asia-Pacific airline signatories to it were All Nippon Airways, Japan Airlines, Philippine Airlines, Cathay Pacific, EVA Airways, Garuda Indonesia, Hainan Airlines, Qantas Group, Vietnam Airlines and Xiamen Airlines.

The Safety Leadership Charter aims to strengthen organizational safety culture through a commitment to eight key safety leadership guiding principles. Developed in consultation with IATA members and the wider aviation community, it will support industry executives in evolving a positive safety culture in their organizations.

“Leadership matters. It is the strongest factor affecting safety behavior. By signing up to the IATA Safety Leadership Charter, these industry leaders are demonstrating their commitment to the criticality of safety culture within their own airlines and the need to continuously build on the work that has gone before,” Walsh said.

“The Safety Leadership Charter is a toolbox to support industry leaders and ensure every employee, within their circle of influence, knows the role to play in safety,” IATA’s Global Director, Safety, Mark Searle, said. “Whatever the job, safety must be in the DNA of everybody.”

IATA’s Senior Vice President Operations, Safety and Security, Nick Careen, said “commercial aviation has benefited from more than 100 years of safety advances that inspire the industry to raise the bar ever higher. The commitment and drive by aviation’s leaders for continuous improvement in safety is a longstanding pillar of commercial aviation that has made flying the safest form of long-distance travel. Signing this charter honors the achievements that should give everyone the highest confidence when flying and sets a powerful and timely reminder we can never be complacent on safety.”

In 2022, there were five fatal accidents involving loss of life to all onboard out of more than 32 million flights, Careen said. The 2022 fatality risk of 0.11 per million flights means, on average, a person would need to take a flight every day for 25,214 years to experience a 100% fatal accident.

“The industry knows every fatality is a tragedy. Our common goal is for each flight to take off and land safely. We will not be satisfied with our current level of achievement as the safest form of long distance transport the world has known until this vision has been delivered.”

“Safety is the responsibility of everyone at an airline. Indeed everybody in the industry, but the culture is set from the top,” Walsh said.

“Ensuring we have the right culture where people can be open about safety issues and feel free to discuss them, can share their concerns, can share their experience is very important to progress the high levels of industry safety.

“As a former pilot and a former CEO, I understand how important it is that airline leaders and leaders throughout the industry be focused and open about the safety culture that we have.”

It is a view shared by Vietnam Airlines (VNA) president and chief executive, Le Hong Ha. Speaking at a CEO panel at the conference, he said: “I would like to add the



Aviation is a major contributor to Vietnam’s economy. Based on 2019 (pre-pandemic) data, aviation grew the country’s GDP by US\$11.7 billion as a result of foreign tourists arriving by air into the country. The income was 5.5% of GDP. In total, 2.5 million jobs, including tourism related employment, were supported by aviation according to Aviation Benefits Beyond Borders.

Its importance was underscored by speakers at the opening of the conference, including Tran Luu Quang, Vietnam’s Deputy Prime Minister, Nguyen Van Thang, Vietnam Ministry of Transport, and Dang Ngoc Hoa, Chairman of Vietnam Airlines.

development of safety culture also is the corporate culture. It is why the role of leadership is very important to develop trust and value so everyone will act to ensure safety. We provide an open environment so staff can share ideas about safety.”

On the same panel, Philippine Airlines president and chief operating officer, Captain Stanley Ng, said supply chain disruptions, particularly the availability of spare parts, was an ongoing issue in maintaining high levels of operational air safety.

He called for additional manufacturing facilities to address shortfalls in component supply to facilitate the safe growth of aviation. VNA’s Le Hong Ha added: “There has to be collaboration between airlines, suppliers and service providers.”

“From an industry point of view, the problem became most pronounced in 2022 as the post-pandemic recovery gathered pace. Unfortunately, the problem is not getting any better,” Walsh said.

“The situation has become even worse for airlines as we go through the rest of this year and into 2024. What we see at the moment is continuing strong demand for travel but supply is being constrained as a result of the supply chain problems.

“There is a need for manufacturers to recognize the scale of the problem, admit openly the challenges they face and be more realistic. It is causing a lot of frustration within the industry. It has been a consistent theme with every airline CEO.”

It became clear during the conference that data sharing is crucial to improving safety. Le Hong Ha said part of the solution is good data, which allows airlines to understand what might need replacing and when.

“This is part of a bigger transformation of the business.



EXCEPTIONAL DEVICES. SUPERIOR RESULTS.

Our commitment to aviation safety drives us to build and support the full spectrum of simulation training devices. This includes our newest FTD and FFS for Airbus A220, A320, and Boeing 737 MAX.



To explore our innovative solutions, visit [FlightSafety.com](https://www.flight-safety.com)

FlightSafety
INTERNATIONAL

Airlines are improving their data collection and analyses, enabling better decision-making and organizational structures and more automation,” he said.

“This has enormous safety implications. Automation combined with artificial intelligence, for example, can provide pilots with better situational awareness and allow them to focus on necessary actions.”

IATA’s Caren highlighted the industry’s resilience during COVID and believes existing hurdles to a full recovery will be overcome. Flexibility and better use of data will be vital to success. The differing responses to the pandemic globally also emphasized the necessity for even greater collaboration, he said.

“We develop playbooks, but they sit on the shelf gathering dust,” he said. He stressed the need for more active industry planning so crises never again have the catastrophic effect of COVID-19 and the importance of sharing safety data in a secure and confidential manner to keep raising the safety bar.

WSOC, held over three days, explored safety and operational efficiency across four session tracks: Safety, Cabin Operations, Flight Operations and Emergency Response Planning and Aircraft Recovery. The Operations track addressed topics such as safely integrating new entrants and procedures, potential opportunities and boundaries of AI (Artificial Intelligence), digital transformation of flight and technical operations and performance-based training.

Cabin Operations discussions included unruly passengers; addressing risks associated with lithium batteries; cabin crew mental health and reducing cabin crew injuries. Case studies of accidents and incidents were presented. The Emergency Response Planning and Aircraft Recovery track examined aircraft recovery; effective communications, family briefings and assistance and risk and insurance management.

Safety Leadership Guiding Principles

- **Leading** the obligation to safety with actions as well as words.
- **Fostering** safety awareness among employees, the leadership team and the board.
- **Creating** an atmosphere of trust, where all employees feel responsible for safety and are encouraged and expected to report safety-related information.
- **Guiding** the integration of safety into business strategies, processes and performance measures and creating the internal capacity to manage and achieve organizational safety goals.
- **Regularly** assessing and improving organizational safety culture.



Another issue for delegates was the critical role played by state accident investigation reports in improving safety. Notably, only 96 of the 214 accident investigations conducted between 2018 and 2022 conformed with the Convention of International Civil Aviation (the Chicago Convention). ■

Safety Issue Hub to improve aviation safety transparency

The International Air Transport Association (IATA) has revamped its self-service digital platform, the Safety Issue Hub, a resource for airline members to access information about global aviation safety issues, risk assessments and mitigation guidance material.

The update will address the effectiveness of the hub as an internationally recognized repository of aviation hazards, the global airline association said.

Mark Vincent, IATA Head of Safety Risk and Quality Assurance, Mark Vincent, said the Hub has long provided value as a risk register. “A world map highlights particular

safety challenges according to location. For each challenge, there is a description of the risk and the links to guidance material and other information that will help manage that risk,” he said.

The safety challenges are not related to specific airlines. All such details are anonymous. The information comes from various audits and programs, including the data sets controlled and analyzed by IATA.

Benefits of the IATA Safety Issue Hub include:

- **Access** to a comprehensive knowledge repository that promotes well-informed decisions regarding safety. The ability to prioritize safety improvement programs according



to operational scope, including targeted mitigation strategies.

• **Collaboration** among IATA members, industry organizations, and regulators.

Following the upgrades, users are able to filter by key risk areas, such as controlled flight into terrain, to help research safety programs. Filtering by domain — airworthiness or maintenance, for example — is also possible.

“The purpose is to support airlines in maturing and supplementing their safety management systems and to provide an overview of global risk,” Vincent said.

“The IATA Safety Issue Hub will become a one-stop-shop for industry safety information and initiatives.”

More input into the hub will determine its level of success. Vincent said. “We can take the information we have and provide the big picture. But we need all industry partners, including airports and air navigation service providers, to help complete the picture,” he said.

“An issue at an airport might be more easily identified and we could then influence the necessary changes. We



receive some input, but there is an opportunity to do so much more. We can dig deep into particular issues and identify notable trends in the ICAO Standards and Recommended Practices.”

To support the call for greater input into the Safety Issue Hub, the web-based platform will remain publicly accessible and free of charge for the foreseeable future. Potential improvements to safety should never be placed out of reach financially or otherwise, especially for those airlines still maturing their safety management systems, Vincent said. Everything on the

platform is completely transparent to encourage the sharing of safety data.

The longer term aim is to transform the hub into a safety community where real-time conversations can take place and all airlines can take advantage of the expertise on offer.

“Risk is often identified and managed in silos. The upgrades to the hub will change this and allow the industry to collectively design safety improvement programs to mitigate operational risks,” predicts Vincent. ■



Boston / Shannon / London / Singapore / Hong Kong

Going Further Together

elfc is the world's leading independent spare engine financing and leasing company, specialising in the provision of flexible short, medium and long-term spare engine support packages for the airline industry.

Our creative and adaptive ideas are limitless

- Sales & Lease Back
- Short, Medium & Long- Term Leasing
- Short Term Engine SV Cover
- AOG Engine Support
- Portfolio Acquisitions & Dispositions
- Engine & Portfolio Management Services



Contact Yajie Li

M: +86 139 0103 2555 / E: yajie.li@elfc.com
www.elfc.com

WORLD SAFETY & OPERATIONS CONFERENCE

Hanoi, Vietnam 19-21 September



Proven track record

The International Air Transport Association (IATA) marked the first 20 years of its Operational Safety Audit (IOSA) at the World Safety and Operations Conference in Hanoi. “Over two decades, IOSA has made a major contribution to improving safety, while reducing the number of redundant audits. While it is a condition of IATA membership, more than 100 non-IATA member airlines see the value of participating and we welcome others. Likewise, while more than 40 governments use or are intending to use IOSA in their safety oversight programs, many more do not,” the airline body’s senior vice president Operations, Safety and Security, Nick Careen.

On aggregate, data confirms airlines on the IOSA registry have a lower accident rate than airlines not on the registry. Since 2005, the all-accident rate for airlines with IOSA verification is 1.40 per million sectors compared with 3.49 per million sectors for non-IOSA airlines.

In 2022, IOSA registered carriers outperformed those not on the registry by a factor of four (0.70 accidents per million sectors vs. 2.82 accidents per million sectors).

Reflecting the strong safety performance of airlines on the IOSA registry, IATA has entered into IOSA’s third decade with a call for:

- **Regulators to recognize the significant contribution to safety IOSA makes as the global standard for airline operational safety and to incorporate IOSA into their own safety regulatory oversight programs.**
- **Airlines not yet on the IOSA registry to join. At press time, 417 airlines are on the IOSA registry, of which 107 are non-IATA members.**

IOSA was launched in September 2003 with Qatar Airways as the first airline to be audited and join the Registry. It has been a requirement for IATA membership since 2006 and is a condition of membership of the three global airline alliances, as well as a number of regional airline associations. It is used by regulators in numerous countries to complement their safety regulatory oversight

programs, and as the primary means to verify operational safety for many airline codeshare arrangements.

The audit assesses an airline’s conformity with IOSA standards and recommended practices (ISARPs). These are based on the internationally agreed standards and recommended practices set down and maintained through the International Civil Aviation Organization (ICAO).

IOSA was developed in cooperation with aviation regulatory bodies, including Australia’s Civil Aviation Safety Authority (CASA), the European Union Aviation Safety Agency (EASA), US Federal Aviation Administration (FAA) and Transport Canada.

Last year, IATA began evolving IOSA to a risk-based model which tailors an audit to the airline’s profile and focuses on high-risk areas. The new approach also introduces a maturity assessment of the airline’s safety-critical systems and programs.

“IOSA is the globally recognized standard for airline operational safety auditing. Now we are taking it to the next level by tailoring the audit activity to the operator’s profile and focusing on high-risk areas. As IOSA evolves to deliver greater value for the operator and the industry, we hope additional airlines will see the value of this important safety program and strongly urge more governments to make it a formal part of their safety oversight,” Careen said. ■



A close-up, profile view of a female pilot in a cockpit, wearing a Bose A30 Aviation Headset. The headset is black with a microphone boom and the Bose logo on the earcup. The pilot is looking forward with a focused expression. In the background, another pilot is visible, also wearing a headset. The cockpit environment is dimly lit, with light coming from the windows.

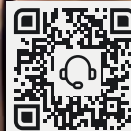
BOSE

Quiet the noise.
Amplify the
experience.

NEW

BOSE A30 AVIATION HEADSET

Less distraction. Less noise. Less pulling you away from the joys of flight. With unparalleled comfort and three selectable modes of active noise cancellation, the Bose A30 Aviation Headset enables flight the way it was intended.



**JOIN THE
EXPERIENCE**

BoseAviation-APAC.aero

ASIA-PACIFIC AIRLINES TO HIT DEMAND OVERDRIVE IN 2024

When airline leaders from across the region gather at the 67th Assembly of Presidents of the Association of Asia Pacific Airlines (AAPA) they will be far happier than they have been for the past three years.

Most of them are back in the money. But there are more challenges ahead. Associate editor and chief correspondent, Tom Ballantyne, previews the Singapore gathering.

As Singapore Airlines (SIA) CEO, Goh Choon Phong, prepares to welcome airline and industry leaders to the Association of Asia Pacific Airlines Assembly of Presidents in November, he has an optimistic message for delegates. “The Asia-Pacific airline industry is back on track after three debilitating years of the Covid-19 pandemic,” he declared.

Goh is right. All in all, the industry has made a remarkable recovery from the worst crisis in its history. Planes are full as the thirst for travel – both business and leisure – has returned to above 2019 levels and massive annual losses are disappearing from airline balance sheets.

SIA itself reported a record net profit of US\$1.62 billion in its latest fiscal year. Korean Air (KAL) booked a \$594.2

million operating profit in its fourth quarter. In August, Cathay Pacific announced an interim operating profit of US\$550.22 million to June 30, 2023.

Japan Airlines (JAL) has booked a fiscal year \$250 million profit and the latest published results from All Nippon Airways (ANA) revealed the airline was in the black to the tune of \$646 million. Qantas Group recorded a \$1.13 billion



AAPA
SINGAPORE 2023
67TH ASSEMBLY OF PRESIDENTS





annual profit to June 30 and a reviving Philippine Airlines (PAL) unveiled a net profit of \$196.9 million in its latest set of results. In China, the last country to remove closed border pandemic restrictions, airlines are returning to profit as 2024 approaches.

There is another indication of renewed confidence at the region's airlines. While airlines are still working to return grounded planes to flying and restore full capacity, they also are ordering new aircraft to meet forecast demand.

Among them is Cathay Pacific, which recently ordered another 32 A320neo to expand and modernize its fleet. Malaysia Airlines has booked commitments for 20 A330neo. JAL has secured a deal worth at least \$2.5 billion at list prices for 21 737 MAXs. Now in the black, Philippine Airlines has finalized a purchase agreement with Airbus for nine long range A350-1000s.

Then there is the unprecedented volume of orders from India mid-year. Firstly, Air India signed for 470 new Airbus and Boeing airplanes at an estimated value of \$70 billion. Not long afterwards, India's largest airline, LCC IndiGo, announced an even bigger order – for 500 A320 family aircraft.

The AAPA's latest data, for August, charts how rapidly the recovery is progressing. Asia-Pacific airlines carried 25.7 million international passengers for the month, a 129.7% year-on-year improvement compared with the same month in 2022. At August 31, air traffic was averaging 76.5% of pre-pandemic levels. In revenue passenger kilometres (RPK), demand rose by 102.0% year-on-year. Capacity - available seat kilometres - expanded by 88.7%, leading to a 5.4 percentage point increase in international passenger load factor to 82.8%. It underscores the prediction the region's international national and domestic air traffic will certainly be at pre-crisis levels in 2024.

Recently, AAPA director general, Subhas Menon, said despite a moderation in global economic data, demand has continued to grow in the services sectors, including travel and tourism. "Against this background, Asia-Pacific airlines saw a healthy 232% increase in international passengers carried, reaching 171 million global air travellers in the first eight months of the year," he said.

He did, however, add a cautionary note to the positive results. "Looking ahead, forward booking trends indicate resilient travel demand in coming months. While this augurs well for the passenger business segment, airlines are facing higher costs, driven by inflation and the recent rise in jet fuel prices, which threaten to squeeze margins," he said.

"Delays in aircraft deliveries and parts shortages may affect airline fleet deployment plans. And competition globally is intensifying in tandem with the increase in capacity. Asia's airlines remain focused on efforts to increase productivity as the industry strives to return to profitability following three consecutive years of heavy losses."



Several issues continue to concern airline chiefs and they will certainly be central to discussions at the Singapore Assembly.

Manpower shortages, a hangover from the industry's staff exodus after the onset of the pandemic, continue to be a problem.

Also, ongoing supply chain issues, causing aircraft delivery delays and difficulty in securing components are not yet resolved.

But these are relatively short-term challenges that will ease as 2023 comes to an end and the industry enters 2024, Menon forecasts.

An emerging challenge is that the Israel-Gaza conflict will push up the oil price, although airlines can counter the impact of higher oil prices by adding fuel surcharges to the price of airline tickets.

There also has been disquiet at some airlines about the impact of China's slowing economy on the region as it is a critical market for Asia-Pacific carriers. Domestic flying in China is back at pre-pandemic levels, but international operations have been slow to recover, especially since the country did not open its international border until early this year - months after most nations.

But as 2023 draws to a close, airlines are slowly increasing their services into China and Chinese airlines are reviving their international networks.

It is forecast the Mainland's international market will return to pre-pandemic performance in the next six months.

In a welcome trend, recent data out of China indicates the country's economy has begun to recover from its slowdown. In September, exports declined by 6.2%, a slight improvement from August's 8.8% drop, and bettering expectations of a 7.6% fall off.

This positive trend aligns with increased export orders driven by the global electronics sector, and suggests a potentially brighter trade outlook for 2024.

Asia-Pacific airline cargo business, which has been declining in the past year, also is predicting an uplift in the sector.

Like all airline industry gatherings, there are perennial



Delegates will be interested to know if the AAPA has attracted former members to the association such as Qantas Airways, Air New Zealand, Vietnam Airlines and Korean Air.

On the positive side of the membership ledger, Air India joined the association after the Assembly met in Bangkok in November 2022.

"We are always – I would not say on the prowl – but we are always looking for opportunities to extend our membership. We have been very active on this front in the last few months. We have been talking to different airlines, including the ones that have left. We are trying to bring them back," Menon said.

"We are open to no-frills airlines. We are trying to expand our membership to all business models. We want to be an association that represents the airline industry, irrespective of size, location and business model."

Subhas Menon
AAPA director general

issues which must be addressed and updated.

They will include reducing the volume of onerous regulations imposed on the air transport industry during the pandemic. AAPA airline leaders believe it is critical for governments to adopt a more coordinated approach to the rules of flying to sustain the industry's recovery.

The burden, from an airline perspective, of government taxes and charges by service providers, airports and air navigation services, will have an airing as will a report card on industry efforts to reach net zero emissions by 2050.

In his message to Assembly delegates heading for Singapore, Goh points out that despite the pandemic the fundamental importance of air travel is unchanged.

"Airlines have been critical in supporting economic growth as borders reopened, facilitating a wide range of sectors from agriculture and banking to tourism and e-commerce," he said.

"Face-to-face interactions are an essential part of doing business in our region and aviation enables that."

Goh added deeper collaboration within the aviation industry, as well as with key stakeholders such as governments, regulators and airports, will be more important in coming years.

"Only by working together can we facilitate smoother international travel, meet our long-term sustainability and decarbonization targets and overcome the challenges that will come our way."

Menon said it is remarkable the industry is intact considering the long time it was shuttered. "Rather than recede, the aviation sector is growing, with new airlines emerging in the region. This is testimony to the shared commitment of the industry as a whole to surviving the pandemic as well as contributing to the essential recovery of international air travel," he said. ■

Robust domestic traffic buoys earnings at China's largest airlines

The Mainland's three state-owned airline companies, Air China, China Eastern Airlines and China Southern Airlines, surged into the black in the quarter to September 30 on the back of robust domestic demand. At press time, Beijing-based Air China had bested the two other "Big Three" carriers when it reported a net profit of 4.24 billion yuan (US\$580 million) for the latest three months. Guangzhou's China Southern was runner up with a bottom line profit for the period of 4.2 billion yuan (US\$570 million) and Shanghai's China Eastern was third, announcing a 3.6 billion yuan (US\$494 million) quarterly profit.

China's domestic air travel demand has overtaken pre-pandemic performance, but demand recovery on international networks is lagging its peers elsewhere across the region.

Factors hampering faster international demand uptake centre around the country's faltering economy impeded by rising interest and unemployment rates and a volatile geopolitical environment. ■



A220.
GREATER
VALUE
IN
A
CLEAN
SHEET
DESIGN



At Airbus, we're committed to our journey towards decarbonisation. That's why the A220 benefits from a brand-new lighter design with innovative materials and efficient aerodynamics. Enhanced to give airlines class-leading operating costs, optimal route profitability, and a quieter cabin, together we can help to keep the world a beautiful place.

AIRBUS

E-commerce and fluid borders to define region's airfreight growth

Is there a flicker of light at the end of the air freight tunnel? The sector has been depressed for months, but the latest data points to a turnaround driven by e-commerce. Associate editor and chief correspondent, Tom Ballantyne, reports.

It was not exactly a surge in the sector, but when the International Air Transport Association (IATA) released its latest cargo statistics they contained good news. Global air cargo demand increased for the first time in 19 months in August, up 1.5% overall, with international air cargo higher by 1.2%.

Asia-Pacific airline cargo volumes increased year-on-year by 4.9% for the month, a significant improvement over July at around 2.3%, IATA reported. Additionally, the within-Asia trade lane's performance improved with international FTKs (Freight Tonne Kms) contracting by 4.7% compared with a 9.7% annual decline in July.

It was welcome news, said IATA director general, Willie Walsh, although he noted the results were off a low 2022 base and that market signals are mixed.

"While many uncertainties remain, we can take some optimism from PMI (Purchasing Managers Index) data moving towards positive territory. This is particularly significant as we head into air cargo's traditional peak year-end season," he said.

Data from the Association of Asia Pacific Airlines (AAPA) for the same month was a little more pessimistic with the regional



airline body warning declines in export orders prolonged the decline in air cargo markets for August.

Demand measured in FTKs showed a 1.8% year-on-year fall for the month compared with the subdued volumes recorded in the same 31 days in 2022. International freight load factor remained under pressure, recording a 6.6 percentage point decline, to average 58.8%, after taking into account a 9.2% year-on-year expansion in offered freight capacity.

AAPA director general, Subhas Menon, said Asia-Pacific airlines reported a healthy 232% increase in international passengers carried, to 171 million air travelers, in the first

eight months of the year yet the region's airlines recorded a 7.6% decline in international air cargo demand in the same period. It reflected a prevailing weakness in international trade flows, the AAPA said. "In addition, the normalization of container shipping rates affected demand for air shipments of non-time sensitive goods," he said.

Overall, demand has been strengthening since February. This trend, as it evolves in coming months, will be watched carefully, Walsh said. "Many fundamental drivers of air cargo demand, such as trade volumes and export orders, remain weak or are deteriorating," he said.

"And there are increasing concerns about China's economy.

At the same time, we are seeing shorter delivery times, normally a sign of increasing economic activity. Amid these mixed signals, strengthening demand gives us good reason to be cautiously optimistic."

Despite the sector being in the doldrums at present, longer-term projections for its recovery are optimistic. A report by ResearchAndMarkets.com forecasts the Asia-Pacific air cargo market will grow from US\$38.4 billion in 2022 to \$59.3 billion by 2028 at an annual rate of 7.3%.

E-commerce will be a primary driver of this growth. "Online retailing attracts more prospective customers than bricks and mortar-based competitors because the internet has global reach. In addition, e-commerce market players can choose various logistics options such as surface transport and air transport, to deliver packages to their customers. Therefore, as the e-commerce market is growing, varying buying patterns and trends have been observed in multiple countries across the Asia-Pacific," it said.

Online supply chain publication, The Loadstar, added: "E-commerce activity is still strong although markets worry about a slowdown in China as well as in the West," it said. "Despite the



LEAP

LEAP turns heads in the boardroom.

LEAP-powered aircraft are achieving the highest days flown ratio* for their thrust class. That means fewer spare aircraft and more flights, which helps profitability climb. Another reason to say **LEAP. By example.**

*Compared to 83% for competition, per third-party data.

cfmaeroengines.com

92% asset availability

LEADERS AREN'T BORN. THEY'RE ENGINEERED.

flat-to-weakish tone overall, some sources foresee a rise in rates, given the significant product launches coming up that started in September and hence some sort of peak season this year.

“That would be a welcome improvement on last year, when the traditional peak in rates ahead of the Thanksgiving and New Year holiday season failed to happen.

“Others remain nervous about persistently weak demand and continuing overcapacity, despite carriers’ recent cutbacks in services. So, for the time being, cargo rates have continued bouncing along the bottom. With jet fuel prices spiking again, by more than 26% in the month to August 25, according to Platt’s data, there appears to be a renewed squeeze on profits for air cargo carriers, especially operators of dedicated freighters with older, less fuel-efficient aircraft.”

In its 2022 outlook, the International Air Cargo Association (TIACA) said the industry is subject to a multitude of influences and the downturn in demand is a logical consequence

The majority of purchases are influenced by a nation’s demographics: the percentage of young people indulging in e-commerce activity, the economy of the country, the age group interested in e-commerce and the level of awareness of Asia-Pacific citizens.

E-commerce is expected to fuel the air cargo industry as online shopping boosts demand for parcel delivery services, delivering goods with speed, efficiency and reliability. The fast-growing cross-border e-commerce market and rising domestic volumes sent by large and small e-retailers are driving Asia-Pacific air cargo market growth.

of high inflation, high interest rates, high energy costs and concerns about job security. All these factors create a pattern of defensive consumer spending when discretionary spending is being pulled back, the association said.

The current situation will pass, forecasts TIACA. “The hope central banks will start reducing interest rates appears to be occurring. Air cargo is structurally in a good place with quality performance in moving perishables, high tech, pharmaceutical and ecommerce commodities.”

Another indicator of an eventual strong recovery of air

freight is the growing appetite for new freighters and passenger-to-freighter conversions (P2F). Boeing’s 2022 World Air Cargo Forecast predicts the global freighter fleet will increase more than 60% by 2041 with the Asia-Pacific taking over a third of deliveries. The global P2F market size, valued at \$2.14 billion in 2021, is projected to grow to \$5.19 billion by 2029.

Analyses by the Centre for Aviation (CAPA) and AeroDynamic Advisory forecasts annual P2F conversions will more than double from 70 between 2010 and 2020 to 163 from 2021 to 2030. The peak of conversions is likely to be 2023-2025 followed by

a decline in the next five years. But the more than double rate will remain, with manufacturers introducing more aircraft types for certification as converted freighters, the authors forecast.

Cirium’s Q3 2022 analysis reports almost 200 P2F conversions were completed in 2022 compared with 120 in 2021. “We have noted record numbers of conversion order announcements. This is driven by e-commerce growth, availability of feedstock during and post the pandemic, lessors converting surplus passenger aircraft from their portfolios and some customers securing slots in the mid-2020s,” Cirium said.

The aviation analytics company said there is a concern a bubble might be forming in the P2F market with around 220 conversions completed in 2023, but longer term it forecasts the industry will need 1,600 to 2,000 converted freighters in the next 20 years. “The growth of e-commerce is a key driver for the conversions market,” Cirium said. ■

China accelerates investment in “smart” cargo airports

Opened in July last year, it is Asia’s first and the world’s fourth dedicated cargo airport. In the last two months, China’s Ezhou Huahu Airport has marked two important milestones in its development.

In August, it welcomed its first international customer when Etihad Cargo operated its inaugural cargo flight, with a 777-200 freighter, from its home hub in Abu Dhabi to Ezhou Huahu.

A few weeks later, Chinese

cargo operator, SF Airlines, fully relocated its sorting centre to the facility, designating the airport

as its primary national hub for transfers of freight from across China that will be received,

sorted and subsequently dispatched to their destinations.

Located in Hubei province, the airport is planning to open 10 international cargo routes and 50 domestic routes by 2025 with an annual cargo and mail throughput of 2.45 million tonnes.

Etihad Cargo’s commitment to Ezhou Huahu follows the news it has expanded its reciprocal block space agreement with SF Airlines to increase cargo capacity from China to overseas destinations via Abu



Dhabi. Etihad Cargo Head of Revenue Management, Fleet and Network, Leonard Rodrigues, said: "Offering connectivity to China's five national level city clusters via railway, waterway, expressway and air transportation infrastructure, Ezhou Huahu Airport is the region's first dedicated professional cargo airport. Introduction of a weekly Abu Dhabi-Ezhou freighter network opens interline opportunities with Etihad Cargo's partner, SF Airlines, and will facilitate its reach into the Chinese market, a key region for the airline and Etihad Cargo's customers and partners."

The state-of-the-art facilities and smart technology available at the airport represent the future of air cargo, said Rodrigues. Etihad Cargo is fully committed to achieving mutual growth and strengthening ties between the UAE and China, building on the success of this new route, he said.

The Doha-headquartered carrier is not the only Gulf cargo airline to increase capacity into China. Emirates SkyCargo recently has added four freighter flights a week to serve China, with six direct cargo flights to Shanghai, two to Beijing and four to Guangzhou, adding more than 400 tonnes of cargo capacity into and from the country.

The SF transfer centre at Ezhou Huahu Airport has seven sorting lines that span 210 kilometers in length when fully extended. With an operating speed of 70 kilometers per hour, it can handle a staggering peak volume of 500,000 items every 60 minutes.

SF Airlines is steadily increasing its domestic cargo flights at the airport. Starting with six flights, building to 13 and now at 30 flights, the network includes 42 domestic



Mainland airlines are expanding cargo capacity. Beijing-based Air China Cargo will accept a minimum of 12 more wide-body freighters by year-end 2025, potentially doubling its fleet. It expects to fly its first A330-200P2F by December and become the first Chinese operator of the type.

In addition, it intends to send all eight of the A330-200 passenger aircraft it will acquire to its joint venture MRO shop, Ameco, for conversion to freighters.

cargo routes. The rapid growth has propelled the airport's overall passenger and cargo flight count past the 100 mark, solidifying its position as a thriving cargo hub.

Equipped with a 23,000 square meters cargo centre, a freight transit center of nearly 700,000 square meters, 124 parking stands and two runways, the airport is planned to improve the transport efficiency of air freight and promote China's opening up.

It is benchmarked against Memphis International Airport in the U.S., one of the world's busiest cargo airports and home to FedEx.

SF Airlines is owned by SF Express, China's leading logistics service provider. It is a 46% investor in Hubei International Logistics Airport Co. Ltd, the operator of Ezhou Huahu Airport.

The airport's developers applied for more than 70 patents and copyrights for new technology at Ezhou, including 5G, Big Data, cloud computing and Artificial Intelligence (AI), to build a safer, greener and smarter airport precinct. An example is the more than 50,000 sensors installed beneath the runways to capture vibration wave forms generated by aircraft taxiing and also to monitor

runway incursions.

The intelligent cargo sorting system has enhanced work efficiency in the logistics transfer center. The transfer centre's production capacity stands at 280,000 parcels an hour short-term, but could reach 1.16 million pieces every hour longer term.

Despite concerns about China's slowing economy, there is plenty of evidence of confidence in the Mainland air cargo sector. The country's third largest cargo airport, Shenzhen Bao'an International, is building more cargo terminals for faster processing of e-commerce air freight.

It handled 776,000 tons of international air freight in 2022, a near 20% increase annually for the third consecutive year. It typically outperforms other Chinese airports in attracting international traffic and ranks in the top 20 airports globally for cargo volumes.

Twenty eight airlines operate freighters into the airport, in a city that borders Hong Kong.

Bao'an's cross border e-commerce volumes doubled in the first seven months of this year, handling 93,000 tonnes of cross-border e-commerce traffic from January to July, up 101% year-on-year.

Since the start of the year, five new international freighter routes have been operating from the airport and the frequency of five existing services has been increased. Seven of these flights are cross-border e-commerce routes: Shenzhen to Paris, Liege, Sao Paulo, London, Davao, Tel Aviv and Riyadh.

The airport has attracted 35 international and regional freighter routes to its air freight network with electronic products accounting for the transport of approximately 40% of Shenzhen's international e-commerce goods. ■

Cathay Cargo expanding footprint across Greater Bay Area

Cathay Cargo has celebrated its 10-year anniversary of full operations at Hong Kong International Airport (HKIA) with a function at its Terminal at the airport. "It was great to be able to celebrate our special day with so many of our customers and special friends of the terminal," Cathay director for cargo and Cathay Cargo Terminal chair, Tom Owen, said. "While it is important to look back and celebrate our success, we are incredibly focused on the future, and in particular we will be looking to build on and expand our success in our three key areas of digital leadership; sustainability leadership; and further expanding our footprint into the Greater Bay Area of southern China."

Semiconductor industry linchpin of Taiwan's cargo sector

Tomasz Sniedziewski in Taiwan

When Morris Chang founded the Taiwan Semiconductor Manufacturing Company (TSMC) in 1987, he decided the future of the business and a chance for Taiwan was a horizontal integration model that differed from the then dominant vertical production integration by a single institution.

"We win together with our customers in long-term relationships that last," is TSMC's motto. The trust-based winning formula has elevated TSMC and Taiwan into the industry's stratosphere. "In the case of the semiconductor industry, the global supply chain that enables the aforementioned technological progress is remarkably complex. Some companies play a diverse set of roles and others are highly specialized, but no single company, indeed no single country is capable of internally performing all roles in the supply chain for all the types of semiconductors required for a modern economy," Center for Strategic & International Studies (CSIS) reports.

We tend to look the semiconductor industry through the lens of its final products: the



high value and compact computer chips that are best transported by air, but the reality is air freight is not the dominant transport mode in the semiconductor supply chain.

"Both air freight and sea freight play vital roles in TSMC's global supply chain. As a result of the synergy of these two modes, we achieve the optimal balance between cost and efficiency," TSMC told Orient Aviation.

In the semiconductor value chain, from the design, fabrication, assembly test and packaging (ATP) stages - Taiwan has a prominent role in fabrication with 25.4% of global wafer fabrication materials market share. In 2022, it led all rivals in the sector, ATP Materials Market Data Subscription (MMDS) reports.

At the same time, with only a 0.4% share in the semiconductor manufacturing equipment (SME) market in 2021, TechInsights 2023 data shows Taiwan is one of the biggest buyers of production equipment.

"China Airlines plays a pivotal role in the transportation of semiconductor machinery across the world due to the maturity of the Taiwanese industry, an exceptional geographic location

and the reach of our network," the airline said. "Contracts for the transportation of semiconductor machinery and associated details are handled by vendors and forwarders with China Airlines (CAL) acting as the provider of professional transportation services," CAL, the operator of the Taiwan's biggest cargo airline, told Orient Aviation.

Being based in Taiwan allows local carriers, including CAL rival, EVA Airways, to build expertise in dealing with the semiconductor supply chains.

"From our early days, EVA Air has served the major global semiconductor companies through logistics service providers. Goods we have carried have included wafers and equipment, parts, products from accessory suppliers and more," EVA Air told Orient Aviation.

"China Airlines operates scheduled freighter services to all key equipment exporters around the world, including Singapore, Japan, Europe and the U.S. The 777F is assigned to the U.S. to take advantage of fuel efficiency and the 747-400F operates short-haul routes in Asia and Europe. Priority is given to the 747-400F on routes favored for

semiconductor equipment with higher demand," CAL said.

"Operating both aircraft types concurrently gives us more flexibility in dispatching cargo and helps maintain a competitive edge."

The flag carrier also flies charter services for long-term customers. "The charter business is an important contributor to the airline's overall cargo revenue," CAL said.

"For us to fulfill our customer's needs as they work to meet soaring global demands for their latest-generation chip or device, we regularly adjust our flight network and frequency. We do not limit EVA's services to the boundaries of our published schedule, especially not our freighters," EVA said.

"We make every effort to design cargo services, especially for the leading semi-conductor and tech companies. The greatest demand for transport of semi-conductors and related manufacturing industry products is on trans-Pacific North America-Asia routes.

"We operate 25 freighter flights and 84 passenger flights from Taiwan to North America every week. Expediting airfreight transfers through Taipei, we efficiently and reliably transport equipment with odd dimensions to major cities in Southeast Asia, Japan, China and all 10 of our gateways in North America: Los Angeles, San Francisco, Seattle and Vancouver on the west coast; Atlanta in the south, Chicago in the Midwest, Toronto in central Canada, Dallas and Houston in the southwest and

also to New York.”

CAL is changing the modus operandi of its air freight division because of a decline in air cargo demand to the U.S. and an increase in passenger aircraft belly cargo capacity as commercial air traffic recovers from the pandemic.

“As a result, supply and demand in the air transportation market has shifted. We have reduced U.S. routes, strengthened import/export services in Southeast Asia and expanded our sources for cargo from Asia to Europe,” CAL said.

Both CAL and EVA Air point out the transport contracted by the semiconductor and other high tech industries often has operational challenges. “Semiconductor equipment is larger in size and requires more hold space. China Airlines takes into account market supply and demand and the distribution of cargo is adjusted accordingly,” the airline said.

“Special measures, including load placement and temperature control are implemented by the aircraft to ensure safe transportation.

“Semiconductor capital equipment can only be accommodated by a 747 freighter. They run on four engines with expensive fuel burn instead of advanced, state-of-art twin-engine freighters that have the benefits of energy savings and carbon reduction.”

“The greatest challenge a carrier faces is choosing the right type of freighter to give its operations optimal balance and benefits,” EVA Air said.

Clearly, the semiconductor supply chain is critical to the bottom lines of Taiwan’s airlines. Yet measuring the precise share of this market in the overall business of an airline can be challenging to calculate.

“Taiwan’s semiconductor industry is of global significance.

Considering the global footprint of TSMC, we expect airlines to refine their cargo hub functions based on the characteristics and current situations of various regions

Taiwan Semiconductor Manufacturing Company

But industry development and equipment upgrades are cyclical, so deliveries in the semiconductor industry can vary depending on the size of particular regional markets and market share. Japan, Singapore, Europe, and the U.S. all vary in their shares of cargo revenue,” CAL said.

“It’s difficult to pinpoint the volume of all the air cargo we manage specifically for the semiconductor industry.

“There also are many, many related shipments for products with complicated functions vital to the latest electrical components: highly sensitive machinery, chemical materials, other parts, gears, and more.”

Published Taiwan airport data calculates these products exceeded 45% of total air freight volume in the first half of 2023, EVA said.

TSMC does not identify its biggest air cargo partners. “Our primary consideration depends on airlines being available at the location of the cargo to meet our global supply chain needs,” it said.

“Selection of partnerships is based on cargo safety, delivery times, pricing and other influences provided by the

airlines,” TSMC said.

When asked what improvements TSMC wanted from airlines, overwhelmingly the answer was digital transformation.

“Digital transformation is a critical imperative for survival. The aviation industry should embrace the application of new technologies, such as smart warehouse facilities, real-time cargo information platforms and efforts to bridge with customer systems,” TSMC said.

“This enables customers to accurately track the location and status of their goods without temporal or spatial limitations and quickly adapt and seize opportunities in the ever-changing global trade landscape.”

The Taiwanese semiconductor giant also expects airlines to improve international air rights and route planning:

TSMC said potential airline partners must sharpen operational safety measures. “This includes stricter operational safety checks, theft prevention equipment and safety training to safeguard aviation logistics infrastructure,” it said.

“Additionally, cargo crisis management plans must be

upgraded to respond swiftly to unforeseeable scenarios.”

TSMC’s requirements are challenging, but it believes they are necessary given the volatility of the market:

“The global supply chain can be affected by many factors from natural disasters to international trade disputes. To mitigate the risk of supply chain disruption, industries may need to consider more diversified supply chain strategies to ensure stable capacity, flexibility, innovation and sustainability and be able to adapt to rapid changes in technology and the market. This is essential to ensure the stability and reliability of the supply chain,” TSMC told Orient Aviation.

Global supply chain trends are supply chain digitalization, enhancing supply chain visibility, transparency and efficiency, multi-sourcing and mitigation of risk.

Green supply chains taking into account sustainability are becoming a crucial consideration in supply chain management. while collaborative partnerships will strengthen supply chain partners by sharing information, joint research and development and risk-sharing to address common challenges, TSMC said.

China Airlines is adopting the iCargo solution from IBS Software to promote greater digitization. “The existing cargo transportation system will be replaced by an all-new one-stop platform for hold space sales, import/export processes, air mail handling, and revenue settlement,” CAL said.

“Taiwan is at the heart of the global semiconductor manufacturing industry. The country has grown and developed with the release of every new technology and we have efficiently and professionally tailored effective shipping solutions for these innovations” EVA Air said. ■



Orient
aviation
30 YEARS