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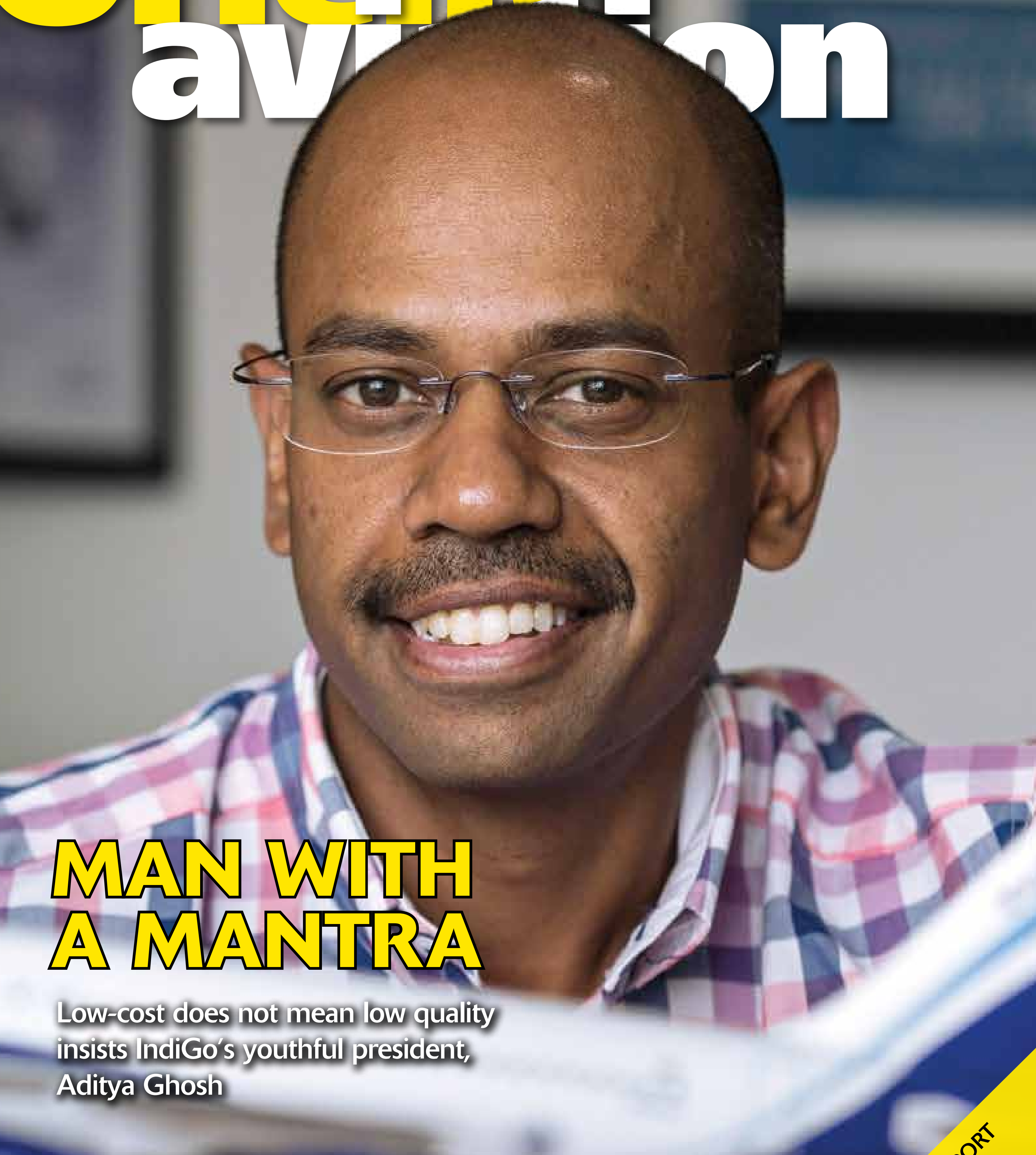

MAN WITH A MANTRA

Low-cost does not mean low quality insists IndiGo's youthful president, Aditya Ghosh

Orient aviation 21 YEARS

Aer Lingus boss new MAS CEO?

Asia-Pacific leads cargo renaissance

Oil glut clouds fuel hedging strategy

SPECIAL REPORT
Asia-Pacific MRO innovation: an update

Mobil Jet Oil™ 387: Reducing complexity for fleet maintenance

Since the dawn of powered flight, ExxonMobil Aviation has been at the heart of aviation history.

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With the recent introduction of its most advanced synthetic jet turbine engine lubricant—Mobil Jet Oil™ 387—ExxonMobil has once again set the benchmark for lubricant innovation.

To discuss some of the trends affecting the aviation industry, as well as the performance benefits of Mobil Jet Oil 387, we caught up with the former SAE E-34 Chairperson, Susan Ardito, ExxonMobil Aviation product deployment manager.

What are the main performance enhancements that ExxonMobil Aviation achieved with Mobil Jet Oil 387?

Mobil Jet Oil 387 is the most advanced synthetic jet turbine engine lubricant that we have ever created, delivering the combination of performance benefits that engine manufacturers need most—including exceptional engine cleanliness, outstanding seal compatibility and oxidative stability.

Mobil Jet Oil 387 has consistently performed very well in a range of engine technologies, exceeding our expectations with regard to oil consumption, pressure and condition—even after extensive hours in operation. In fact, we recently completed an inspection on an engine that logged more than 10,000 hours on wing, without a single shop visit. Not only was the engine in excellent condition, but the oil looked brand new.

What are some of the key industry trends propelling interest in Mobil Jet Oil 387?

The growing interest in Mobil Jet Oil 387 stems from two key factors: the need for advanced lubrication solutions that will deliver superb and consistent performance benefits and the desire to reduce operational complexity.

How will Mobil Jet Oil 387 help reduce complexity in fleet maintenance?

To streamline maintenance plans—as well as plans for lubricant storage—many airlines are looking for a single jet oil solution to manage their fleet needs. In addition, many operators are looking for opportunities to reduce risk associated with managing multiple oils.

With Mobil Jet Oil 387, we are pursuing oil certifications from all major engine manufacturers, as well as for use in a variety of accessory applications, facilitating the consolidation of lubrication needs to a single product. In so doing, ExxonMobil Aviation can help operators streamline their lubricant needs and reduce the potential risk of misapplication across mixed engine aircraft fleets.

What certifications and application approvals does Mobil Jet Oil 387 currently have?

Mobil Jet Oil 387 is approved against some of the most demanding industry specifications, including the SAE AS5780 High Performance Capability (HPC) and the MIL-PRF-23699-HTS. It is certified for use in a range of GE engine applications, as well as numerous Rolls-Royce engines, including the Trent 900 and the company's latest technology, the Trent XWB.

Mobil Jet Oil 387 has been gaining commercial flight experience for several years. Globally, many carriers have reported great success using Mobil Jet Oil 387 in their fleets, some of which have been using the oil on-wing for more than three years.

To learn more about Mobil Jet Oil 387 and how it may be able to help your fleet, visit MobilJetOil387.com or contact an ExxonMobil Aviation representative.

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ORIENT AVIATION MEDIA GROUP
Mailing address:
GPO Box 11435 Hong Kong
Office:
17/F Hang Wai Commercial Building,
231-233 Queen's Road East,
Wanchai, Hong Kong
Tel: Editorial (852) 2865 1013
Fax: Editorial (852) 2865 3966
E-mail: info@orientaviation.com
Website: www.orientaviation.com

Publisher & Editor-in-Chief
Christine McGee
E-mail: cmcgee@netvigator.com

Chief Correspondent
Tom Ballantyne
Tel: (612) 9638 6895
Fax: (612) 9684 2776
E-mail: tomball@ozemail.com.au

Greater China Correspondent
Dominic Lalk
Tel: (852) 2865 1013
Fax: (852) 2865 3966
E-mail: dominic@orientaviation.com

North Asia Correspondent
Geoffrey Tudor
Tel: (813) 3373 8368
E-mail: tudorgeoffrey47@gmail.com

India Correspondent
R. Thomas
Tel: (852) 2865 1013
E-mail: info@orientaviation.com

Photographers
Rob Finlayson, Colin Parker,
Graham Uden

Design & Production
Chan Ping Kwan

Printing
Printing Station(2008)

ADMINISTRATION

General Manager
Shirley Ho
E-mail: shirley@orientaviation.com

ADVERTISING

South East Asia and Pacific
Tan Kay Hui
Tel: (65) 9790 6090
E-mail: tankayhui@tankayhuimedia.com

The Americas / Canada
Barnes Media Associates
Ray Barnes
Tel: (1 434) 770 4108
Fax: (1 434) 927 5101
E-mail: barnesrv@gmail.com

Europe & the Middle East
REM International
Stephane de Rémusat
Tel: (33 5) 34 27 01 30
Fax: (33 5) 34 27 01 31
E-mail: sremusat@rem-intl.com

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CONTENTS

Volume 21, Issue 9

COVER STORY

24

COVER PHOTO: BLOOMBERG

COMMENT
5 Cargo revival on the way?

NEWS
8 Asia-Pacific carriers lead cargo growth
8 Government changing the rules to favour Jetstar Hong Kong?
8 India's IndiGo sets Airbus record for A320neo
9 THAI president wants 6,000 staff to go

9 Qantas signs wage freeze with engineers
9 Pratt & Whitney to test Exxonmobil synthetic fuel
9 Flight Safety and Abu Dhabi Aviation announce flight school
9 Pan Am plans joint venture Bangkok training academy

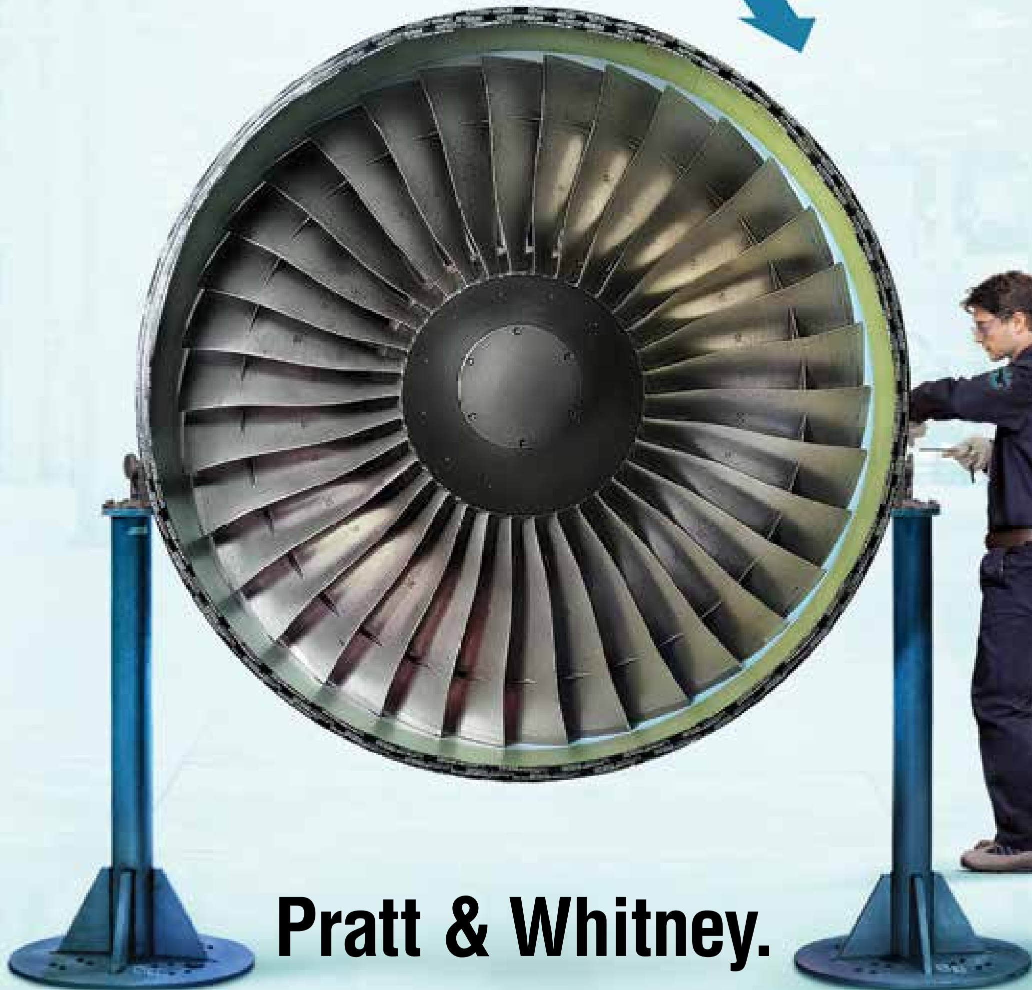
BUSINESS ROUND UP
10 Dreamliner costs drag on Boeing's positive news
10 Tigerair Singapore subleases surplus jets
10 Spring Airlines' IPO application approved
10 Bangkok Airways IPO heavily oversubscribed
10 Virgin Australia ownership boosts Tigerair Australia
12 SHORTTAKES includes: Cathay Pacific Airways updates Brushwing logo; All Nippon Airways will code share with South America's Avianca to the U.S. and with Ethiopian Airways to Europe via Kenya and Addis Ababa; Korean Air and Lan Peru have extended their partnership from Seoul to Lima via Los Angeles; Boeing and China's COMAC in biofuel project; China Aviation Supplies has signed a General Terms Agreement for 70 A320s; Garuda Indonesia has confirmed its order for 50 B737 MAX family aircraft; Kunming Airlines has ordered four B737-700NG and six B737MAX; EVA Airways has leased two B777-300ER from BOC Aviation; Mitsubishi has unveiled its first 92-seat MRJ test aircraft;
14 Aer Lingus boss tipped for MAS?
14 Etihad unveils new alliance model
16 Oil glut clouds fuel hedging strategy

MAIN STORY
20 Asia-Pacific leads air cargo revival

NEWS BACKGROUNDERS
23 Scoot eyes Greater Japan
32 Support for global tracking system falters
34 Australian aerospace on the hunt for Asian business

SPECIAL REPORT
Asia-Pacific MRO Innovation: an update
28 Less still means more for Asia-Pacific MROs
29 European MRO breaks ground in Indonesia
30 Smart phones drive MRO innovation

THE SHORTEST DISTANCE BETWEEN YOU AND LOWER COSTS?



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Asia-Pacific leads cargo renaissance

Last month, the International Air Transport Association (IATA) released its latest five year industry forecast. It projected international freight volumes should increase at an annual compound rate of 4.1% to 2018, and that the fastest growing routes would be between the Middle East and Asia, at 6.2%.

In five years, six of the ten largest international air cargo markets will be in Asia. They will be China (2), UAE (3), Hong Kong (5), Republic of Korea (6), Japan (7), Taiwan (9) and India (10).

For those in the industry this good news has been a long time coming. Air freight business in the Asia-Pacific has been stagnating since the Global Financial Crisis in 2008 – except for a brief fillip in 2010. Dozens of big freighters were parked in the desert and several airlines closed their air freight divisions.

So it is a relief that air freight is showing strong signs of a turnaround, particularly in this region which is the source of nearly 40% of all cargo carried by air.

IATA statistics show that globally freight tonne kilometers (FTKs) rose 6.1% year-on-year in July and 5.1% in August. But the Asia-Pacific was ahead of the game with growth of 6.3%. The world's largest air freight hub, Hong Kong International Airport, increased volumes by 8.6% in August. September, based on preliminary figures, has performed just as well. Even better, capacity expanded at the slower pace of 3.4%, which signaled easing yield pressure.

And airlines have begun reintroducing the parked freighters to their fleets. The air cargo market is growing in line with long-term rates. What comes as even better news is that despite a slowing economy China, responsible for 45% of the region's air freight and a key to full long-term recovery, is performing well.

As Wang Zhiqing, deputy administrator of the Civil Aviation Administration of China (CAAC) told an International Civil Aviation Organization (ICAO) Air Cargo Development Forum in Zhengzhou in September (the first time the Mainland has hosted the gathering), that following a decline in cargo in 2011 and 2013 "we have finally come out of that in the first half of this year as domestic freight increased 5.7% and international 6.6%".

Of course, nothing should be taken for granted given the volatile nature of the economies of the world, and cargo is no exception. The cargo industry is moving at two speeds. There may be strong growth in the Asia-Pacific, but the same isn't true of Europe, where recovery is anemic. As IATA director general and CEO, Tony Tyler, pointed out, there may be more business confidence around, but there also is a long list of political and economic risks with the potential to affect business and consumer confidence.

But for now, at least in the Asia-Pacific, the future of air cargo is brighter.

TOM BALLANTYNE
Chief Correspondent
Orient Aviation Media Group

The voice of Asia-Pacific aviation

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1

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Asia-Pacific carriers lead global cargo growth

*In the next five years, the fastest growing air cargo routes will be between the Asia and the Middle East, at 6.2% per year, said the **International Air Transport Association (IATA)** in its new industry forecast to 2018. Projected international freight volumes should increase at a compound annual growth rate (CAGR) of 4.1% to 2018, said IATA. By 2018, six of the ten largest cargo markets will be in the Asia-Pacific. The U.S. will be the largest market, at 10,054,000 tonnes, followed by China (5,639,000), the United Arab Emirates (4,974,000), Germany (4,763,000), Hong Kong (4,648,000), Republic of Korea (3,487,000), Japan (3,480,000), Britain (2,808,000), Taiwan (2,350,000) and India (2,223,000). IATA said China, the UAE and the U.S. will each add more than 1 million tonnes of freight to the market by 2018 compared with today and the UAE will replace Germany as the world's third largest air cargo market in five years (See Cargo revival gains regional traction, page 20).* ■

India's Indigo sets A320neo order record

At press time, Indian low-cost carrier, **IndiGo** was expected to have firmed up its record-breaking $26 billion Memorandum of Understanding for (MoU) 250 A320neo jets, a senior executive familiar with the deal told **Orient Aviation**.

"We're still working on some minor additions and revisions to the deal, but we're pretty much set. We're aiming at final closing by the end of the month," he said. The IndiGo commitment is the biggest single A320 family order in Airbus' history, and is in addition to purchases of 180 of the A320 family made by the Indian low-cost carrier (LCC). "This new order reaffirms IndiGo's commitment to the long-term development of affordable air transportation in India and overseas," said **Aditya Ghosh, IndiGo's president**.

Speaking to **Reuters**, the 39-year-old said India was a "highly underpenetrated market" and that the majority of the Airbus narrow-body planes on order would be for growth rather than replacement. The LCC has been India's only profitable carrier in the past two years, and reported a six-fold rise in net profit, to 7.87 billion rupees ($128 million), in the 2012-13 financial year. Gurgaon-based IndiGo has become the country's largest airline by market share. In September, it carried 32.8% of domestic passengers, almost double Jet Airways' 16.7% and Air India's 16.6%. Rival LCC, **SpiceJet** also outperformed both full-service carriers and came in second with a market share of 18.6%.

And additional competition is on the way. **AirAsia India** launched in June, bringing to the table an airline group which manages to operate with one of the lowest unit costs per kilometre flown in the industry.

The Singapore Airlines – TATA Group start-up **Vistara** is awaiting regulatory approval for operations. Once cleared, Vistara plans to 'redefine' India's domestic market with 'a brand that aims to set new standards' by offering a full-service luxury experience' at low cost. "The biggest risk for IndiGo is how the competition behaves, that is, whether AirAsia and others respond more aggressively now," **Stairair's** Vardhan said.

In other news, the **Directorate General of Civil Aviation (DGCA)** has commenced the recertification of all Indian carriers before a scheduled **Federal Aviation Administration (FAA)** audit next month. India was downgraded to Category 2 in January, barring its airlines from adding new flights to the U.S. or entering new codeshare agreements with U.S. airlines. (See Man with a mantra, page 24). ■

Government changing rules to favour JetStar Hong Kong?

Cathay Pacific Airways (CX) will not change its opposition to the establishment **Jetstar Hong Kong** said a senior executive last month. Cathay believes the proposed low-cost carrier (LCC) remains a "branch office of Qantas" and fails to meet the legal definition of a local entity needed to obtain an Air Operator's Certificate (AOC).

Speaking at a recent Sydney conference, the airline's **head of corporate development, James Barrington**, said Hong Kong's constitution clearly spells out that an airline had to have its principal place of business in Hong Kong in order to operate flights from there. "It looks to us that Jetstar doesn't have its principal place of business in Hong Kong. It is a branch office of an Australian airline. All the legal advice taken has said it just doesn't meet the requirements of the Basic Law," Barrington said.

"A franchise operation of McDonald's in Hong Kong with a 51% local partner is still McDonald's based in North America," he said. "A franchise operation of Qantas in Hong Kong, albeit with a majority local partner, is still a franchise operation."

In October, **Hong Kong's Transport and Housing Bureau**, which is in charge of designating local carrier status, issued a statement that said it had "fine-tuned" the framework of designation by spelling out the factors it now takes into account to also include "public interests".

China Eastern Airlines (CEA), Qantas Airways and **Shun Tak Holdings** – a Hong Kong-based casino conglomerate – hold equal 33.33% equity in Jetstar Hong Kong, although Shun Tak's voting rights have been increased to 51%. This change allows it to appoint four of the seven board members of the proposed LCC, thereby meeting the government's requirement to be a "Hong Kong-controlled carrier".

A source close to Jetstar told Hong Kong's **South China Morning Post** it is unlikely it will be in business for the upcoming peak travel season. ■

New THAI president says 6,000 job must go

Thai Airways International's (THAI) third president since last December, **Siwakiat Jayema**, is seeking approval for a four billion baht (US$126 million) cost cutting program that includes eliminating 6,000 jobs by 2018 from the flag carrier's bloated payroll. Struggling THAI's efforts to stay afloat were highlighted by the airline's decision to cancel its only remaining destination to Africa, Bangkok to Johannesburg, from January next year. THAI, along with all Thai airlines, has suffered from the prolonged political protests of 2103 that culminated in a military coup in May. International visitors fell off dramatically during the unrest and have yet to return to pre-protest numbers. Airlines and hotels are reporting that the impact of the political uncertainty, coupled with the conflicts in the Ukraine, have produced very low pre-high season bookings in the resorts of southern Thailand, particularly Phuket and Koh Samui. THAI reported a loss of 7.7 billion baht for its second quarter to September 30. ■

Qantas signs wage freeze with engineers

Qantas Airways has reached a four-year pay deal with its aircraft engineers, which includes an 18-month wage freeze, followed by annual increases of 3%. The settlement is a major step towards achieving the goal of **Qantas chief executive, Alan Joyce** – freezing pay across the company, in a strategy to strip A$2 billion ($1.76 billion) in costs from the business within three years. Joyce announced a "confronting" A$2.8 billion net loss in its last financial year, to June 30. Qantas wants to strike similar deals with its short-haul pilots and ground staff, but the latest talks have shown no signs of an early resolution.

Meanwhile, Qantas has unveiled a new fully-flat business class seat for its A330 fleet, the first ever to allow for a partial recline and mattress installation during take-off and landing. The new seat will be progressively rolled out from December to the end of 2016. Rival carrier, **Virgin Australia** has announced plans to outfit its A330 and B777 fleets with new premium cabins. Its first installation will not be completed until March. ■

Pratt & Whitney to test ExxonMobil's synthetic fuel

ExxonMobil and **Pratt and Whitney** have signed a commercial agreement to test the energy provider's new synthetic jet engine oil, **Mobil Jet Oil 387**, on the engine manufacturer's **PurePower** engines. The multi-year testing program will begin next year and will include all the variants of the PurePower engine. In commercial aviation, PurePower engines power the recently launched Mitsubishi regional jet, Embraer's second generation E-Jets, and are offered as options for the A320neo family. Mobil Jet Oil 387 is the most advanced jet oil ExxonMobil has produced, said **Frans Horjus, global aviation lubricant sales manager at ExxonMobil**. "The outstanding turbine component protection that Mobil Jet Oil 387 offers a wide range of engine technologies is generating significant interest," he said. ■

TRAINING

Pan Am joint venture opens Bangkok training centre

All Nippon Airways and low-cost Thai airline, **Nok Air**, have announced the establishment of a flight training school in partnership with the **Pan Am International Flight Academy** and a local university.

Pan Am Flight Training Academy Centre will operate at the Suvarnabhumi campus of Assumption University, where the facilities will include an A320 Level-D full Motion Flight Simulator, an A320 Multi-Functional Training Device as well as conference areas and classrooms. In early 2015, a B737-NG Level-D Simulator will be added to the training equipment and two more full motion simulators are scheduiled to be operating at the complex in 2016, said **CEO, Gary Anderson**. ■

Flight Safety and Abu Dhabi plan flight school

Global leader in flight training, **Flight Safety International**, has signed a Memorandum of Understanding with **Abu Dhabi Aviation** to set up a learning centre in the Middle East, said President and CEO, Bruce Whitman. The first stage of the facility will open in September next year, equipped with eight full flight FS1000 simulators and advanced technology training systems to instruct cockpit crew for commercial, military and helicopter flying. Abu Dhabi Aviation was established in 1976 and is the largest helicopter operator and Maintenance and Repair facility in the Middle East. ■

Dreamliner costs drag on Boeing's positive news

Boeing has reported third-quarter net income of $1.36 billion, up 18% or $200 million, compared with a year ago, with the manufacturer's commercial airplanes unit performing strongly. Its revenue increased 15% year-on-year, to $16.11 billion. Deliveries rose 9%, to 186 commercial aircraft, in the reported three months. The company booked 553 orders in the quarter, which brought the total backlog to 5,500 aircraft valued at $490 billion, with more than half of the commitments from the Asia-Pacific. However, Boeing shares still fell almost 4% following the profit announcement, as investors fear another hike in **Dreamliner B787** production costs. According to analysts, the groundbreaking airline's deferred production cost has risen 4%, to above $25 billion, which exceeds the $25 billion cap Boeing had forecast and will put a critical drag on cash flow.

Earlier this month, Boeing settled with **Air India** for losses the carrier suffered from repeated B787 groundings in 2013 that included battery fires, loss of revenue due to recurrent technical issues and the resultant adverse publicity the carrier endured because of the flight cancellations and service failures. Fears of a potential onslaught of similar compensation claims continue to weigh on Boeing's share price, analysts explained. Asia-Pacific"s **All Nippon Airways** was the B787 launch customer. The region's carriers form a very large portion of the aircraft type's order book. ■

Tigerair steps up Jetstar war with Virgin Australia backing

Virgin Australia said in October its hitherto domestic-only subsidiary, **Tigerair Australia**, may fly on international routes to better compete with **Jetstar** in the low-cost market - subject to regulatory approval. But **chief executive, John Borghetti**, said the growth plans of the Tigerair domestic fleet are "likely to be reduced", given the "ongoing subdued consumer demand" in the Australian market. When Virgin first bought its Tigerair share in 2013, it indicated the fleet could be expanded by up to 35 aircraft, from its present 13 A320s. Virgin wants to acquire the remaining 40% stake in loss-making Tigerair Australia held by Tiger Airways Holdings Singapore, for one Australia dollar. The transaction is expected to be completed before the end of this year.

Brisbane-based Virgin Australia has reported an A$59.1 million ($52 million) net loss for the first quarter of the 2015 financial year, ended September 30, an 18.3% improvement over the prior-year period, despite the first quarter being traditionally a weaker period for the airline. ■

Singapore's struggling Tigerair leases A320s to IndiGo

Tigerair Singapore will sublease 12 of its A320s to Indian low-cost carrier, **IndiGo**, as part of the process of "right sizing" its operation, said the Singapore based budget carrier. Tigerair needed to dispose of the surplus aircraft, which it was left to manage after the airline closed down its LCC subsidiary, **Tigerair Mandala**, and disposed of its interest in fellow budget carrier, **Tigerair Philippines**. "Tigerair said in a statement last month the aircraft will be leased to IndiGo at a discount to their original lease rates. However, compared with the idling of these aircraft, this sublease agreement will considerably reduce the group's cash flow burden by about US$128 million over the sublease period." Tigerair may launch an Initial Public Offering (IPO) as it seeks to balance its books after a long to period of losses. ■

Shanghai's Spring Airlines IPO approved

Privately-run mainland low-cost carrier, **Spring Airlines,** has received regulatory blessing to launch an initial public offering (IPO) to fund its rapid fleet expansion. By year end, the profitable Shanghai-based carrier plans to trade one billion shares on the city's stock exchange to collect about 2.5 billion yuan ($41 million) for the purchase of nine A320s and three A320s.

After a listing freeze and a revised application, the China Securities Regulatory Commission approved the IPO application, which made it the first non-state owned carrier to launch an IPO. Founded in 2004, the carrier has a network of 86 domestic and 24 regional destinations, serviced by 48 A320s, a fleet that will increase to 58 in 2015. **Wang Zhenghua**, who also owns the Spring International Travel Agency, has used the custom created by his travel agency to build a load factor at the airline that averages 95%. Spring reported a net profit of US$11.88 million for the 2013 financial year, but it also received government subsidies of US$8.143 million in the same 12-month period, said Hong Kong's **South China Morning Post**. China's other listed airlines are **Air China, China Eastern Airlines, China Southern Airlines and Hainan Airlines.** ■

Bangkok Airways offering heavily oversubscribed

Full service carrier, **Bangkok Airways**, had its US$400 million initial public offering (IPO) enthusiastically oversubscribed by institutional and retail investors when it offered 520 million new shares to the market in late October. The result made it Thailand's most successful IPO to date this year. The Bangkok Airways parent company, which owns three Thai airports, will use the funds to replenish its fleet, engines and components as well as renovate some of its aircraft. ■

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SHORTTAKES

BRANDING: **Cathay Pacific Airways** has updated its logo, the brushwing. It will no longer sit constrained inside a box and has been gently harmonized and set free, the Hong Kong carrier.

CODE SHARES: **AEROFLOT** has commenced adding its 'SU' code on four of **Bangkok Airways**' Thai domestic services. Subject to regulatory approval, from October 26, **All Nippon Airways (ANA)** plans to put its 'NH' code on eleven **Avianca** routes out of the U.S. Simultaneously, the South American carrier has applied to place its code on five of ANA's Tokyo – U.S. services. ANA also has signed a code share agreement with **Ethiopian Airways** that will connect flights between **Addis Ababa** and **Bangkok** and **Hong Kong** as well as **Mombasa, Nairobi, London, Frankfurt and Paris. Korean Air and LAN Peru** have extended their partnership with a new codeshare agreement for the Seoul–Los Angeles–Lima route from October 21. The two airlines have been codesharing on the Seoul–Los Angeles–Santiago route since 2005.

ENVIRONMENT: **Boeing** and **China's COMAC** have opened a demonstration facility for turning waste cooking oil, commonly referred to as gutter oil in China, into sustainable aviation biofuel. Experts in the field estimate that China generates enough gutter oil to produce 500 million gallons of biofuel annually. **Hong Hong's global bank, HSBC**, has joined **Virgin Atlantic and Chicago-based biofuel producer, Lanza Tech**, as a partner in the venture's plans to get biofuel on board the Virgin Atlantic fleet in 2015. The biofuel company was set up in New Zealand in 2005, but moved to Chicago where it is developing biofuel that is converted from waste gases of industrial steel production.

FLEETS: **China Aviation Supplies** has signed a General Terms Agreement with **Airbus for 70 A320s. Garuda has ordered** 46 **B737 MAXs** and converted four **B737-800s** from Boeing. Subject to approval by the Chinese government, **Kunming Airlines** has ordered four B737-700NG and six B737 MAX, valued at a list price of $897 million.

INFLIGHT: **Boeing Shanghai** has completed the installation of high speed Wi-Fi on the first of three Nok Air B737-800s. **Nok Air** is the first airline in Asia to offer free Wi-Fi to its passengers

LEASING: Taiwan's **EVA Airways** will lease two B777-300ER airliners from Singapore-based **BOC Aviation** with deliveries scheduled for 2017.

MANUFACTURERS: **Airbus president and CEO, Fabrice Bregier, Tianjin Free Trade Zone (TJFTZ) president, Feng Zhijiang and the Aviation Industry Corporation of China (AVIC)president, Lin Zuoming**, signed a Letter of Intent to establish an A330 Completion and Delivery Centre in the TJFTZ. The joint venture complex is planned to offer cabin installation, engine runs, aircraft painting and aircraft delivery services. **Mitsubishi** has unveiled its first 92-seat MRJ flight-test aircraft that will undergo about six months of ground evaluations before taking to the air in the second quarter of 2015. **Engine Alliance's GP7200** engines entered service on **Qatar Airways's** first A380, when the Doha-based carrier commenced revenue flights on the airliner between Hamad International Airport and London Heathrow. **GE Aviation** has delivered its 1,000th engine to Shanghai-based **China Eastern Airlines**, including engines manufactured by GE's joint venture, **CFM International**. CFM is an equal partner joint venture between GE and Snecma. **Rolls-Royce** has flown its new generation, lighter weight composite carbon/Titanium (CTi) fan blades on a Trent 1000 engine tested on a B747 in Arizona in the U.S.

ROUTES: **All Nippon Airways** will operate a second flight from **Tokyo Haneda to Hong Kong**, mainly at weekends, from December 20, to provide better onward connections to ANA's domestic and regional network. **Etihad Airways** will introduce services from **Abu Dhabi to Dallas Fort Worth, Phuket and San Francisco** by year end. **Beijing Capital Airlines** will launch a twice-weekly **Hangzhou – Okinawa** A320 service from October 29, its first international route. **BIMAN** has cancelled service resumption on the Dhaka – Hong Kong route, originally scheduled to reopen from November 11. From October 26, **China Eastern Airlines** resumed service on the Beijing – Osaka route with four weekly A320 rotations. Moreover, it will start a thrice-weekly A330-200 Kunming – Paris service from December 18, the first long-haul operation for the carrier's Yunnan branch. **China Southern Airlines** will add a new four-weekly B787 Guangzhou – San Francisco non-stop service from June 22, in addition to the thrice-weekly Wuhan – Guangzhou – San Francisco route to be launched on December 16. South Korea's **Eastarjet**, from October 26, is adding three new B737-800 routes from **Cheongju** to Northeastern parts of China, with two-weekly flights to **Dalian** and **Harbin** and three-weekly services to **Yanji**. **Ethiopian Airlines** will reduce frequency on the Addis Ababa – Seoul route from four- to twice-weekly from October 26. **Etihad Airways** will increase B777-200LR Abu Dhabi – Dallas Fort Worth service from thrice-weekly to daily from April 16. Further, the carrier will not proceed with the planned B787-9 operations on the Abu Dhabi – Doha route from December 27. **Gulf Air** will resume five-weekly A320 Bahrain – Hyderabad services after almost six years of absence. **Hainan Airlines** will increase frequency on the B787-8 Beijing – Chicago route to daily from June 25. **Philippines Airlines** will add three more weekly frequencies on the Manila – San Francisco route from December 12 through to January 16, using A340-300 aircraft. **Qatar Airways** will introduce a daily A380 service on the Doha – Bangkok route from January 5, with three additional daily services operated by B777-300ER aircraft. Thai start-up **Siam Air Transport (Siam Air)**, has launched a daily Bangkok (Don Mueang) – Hong Kong service on B737-300 aircraft. **Singapore Airlines** will increase frequency on the Singapore – Ho Chi Minh City route from 14 to 17 weekly flights from December 19. **Skymark Airlines** from January 29 to March 28 is introducing a seasonal Sapporo – Okinawa service on B737-800 aircraft. The new service will initially operate four times a week, before being increased to daily from March 1. **SriLankan Airlines** has revised its planned operation on the Colombo – Kunming route, due to start from December 1. Initially service will be four-weekly as planned, however, from January 1, this will be reduced to thrice-weekly. ■

240

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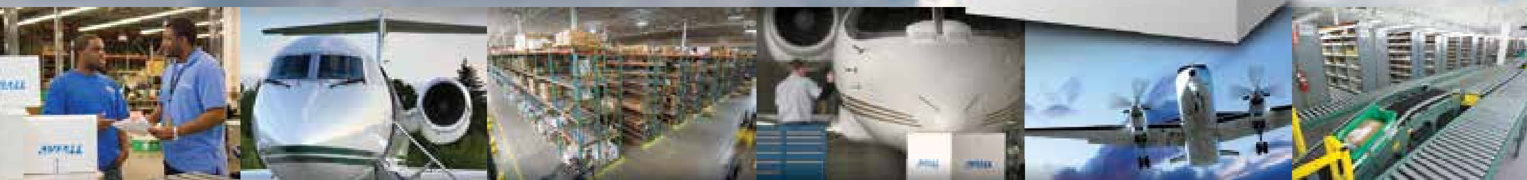

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Aer Lingus CEO tapped for MAS?

By Tom Ballantyne

To Kuala Lumpur from Germany by way of the Emerald Isle. Is Aer Lingus chief executive, Christoph Mueller, the man who will resurrect Malaysia Airlines? That is certainly the word from several reliable sources in the Malaysian capital as the airline moves closer to becoming fully owned by state sovereign fund, Khazanah Nasional.

Khazanah said the reports were speculative and premature and issued a statement that said "at this point in time, no person has been appointed as the new CEO of MAS and the search is still ongoing".

However, insiders insisted Mueller "is the man they want for the job". He has a proven track record in aviation and travel and has been credited with turning around Aer Lingus, which was in deep financial trouble when he took charge in 2009.

The company recently reported its fourth successive year of profitability.

The timing could hardly be better. Mueller announced in July he will be leaving the Irish operator in May next year. This would fit perfectly with MAS' plans. The contract of the current chief executive, Ahmad Jauhari Yahya expires next September, which would allow a decent handover period for the new CEO.

Local sources said approval has been given for a non-Malaysian to get the job and that Mueller was among three candidates with aviation industry experience on the short list. German-born, he had a senior role at Daimler Benz Aerospace, was an executive vice president at Lufthansa and was chief executive of Belgium's Sabena airline group. He also served as chief financial officer of DHL Worldwide from 2002 to 2004 and became a member of the Executive Committee of Deutsche Post in 2004 when Deutsche Post acquired DHL. He joined Aer Lingus after several years as executive aviation director at TUI Travel.

If he is confirmed, Mueller has a challenge ahead of him. MAS is still reeling from the shock of two aviation disasters – MH370 and MH17 – as the search continues for MH370 in Indian Ocean. The new CEO will spearhead a 12-point recovery plan being put in place by Khazanah. ■

Etihad unveils new alliance model

Etihad Airways continues to the surprise the industry. Its latest development is Etihad Airways Partners, which aims to save members money through joint procurement and equipping while offering its member passengers improved networks, schedules and enhanced frequent flyer benefits.

The founder members are all airlines in which Etihad holds equity: airberlin, Air Serbia, Air Seychelles, India's Jet Airways and Swiss-based regional carrier, Darwin Airline (now Etihad regional). The other carriers in which the Abu Dhabi-based operator has an investment, Virgin Australia and Alitalia, have not signed up.

Etihad chief executive, James Hogan, said the new group differs from legacy airline alliances such as oneworld, Star Alliance and SkyTeam by offering benefits beyond commercial cooperation.

"We're aiming to deliver a consistent experience for frequent flyers when they travel, as well as a consistent framework for earning and using their miles." That will include standardized mileage and tier benefits across all partners with no blackout periods.

"The Etihad Airways Partners logo is a seal of excellence and global cooperation. It will be displayed on aircraft and on branded materials by a group of airlines working together to connect travellers around the world, and increasingly to harmonize standards in the air and on the ground," he said.

Hogan said Etihad Airways Partners is open to any airline, even if it is a member of an existing alliance. For example, airberlin is a member of oneworld. Analysts said that invitation may attract airlines to its fold. Even existing global alliance members are pragmatic about partnerships and co-operation with carriers outside their grouping if it suits them.

Etihad and its equity-linked group offer an impressive global network, particularly across Europe, India and Asia. If other carriers see benefits in tapping into that network or gaining economies of scale and cost savings from joint procurement Hogan's invitation may be hard to ignore.

Air France executive, Bruno Matheu, has joined the airline as chief operating officer, equity partners, to run the new division. He will spearhead efforts to optimize business performance, revenue and cost synergies between Etihad and its partner airlines. Etihad, which has more than 200 jets on order, has signed aircraft order deals that allow its partners to take part. ■

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Oil glut clouds fuel hedging strategy

Oil prices have dropped to their lowest level in almost four years, holding out the promise of lower jet fuel prices and a big reduction in airline operating costs. But in the Asia-Pacific, as elsewhere, airlines are wary that after the drop, there will be a price spike.

By Tom Ballantyne

On the face of it, the dramatically lower oil prices of the last three months look good for Asia-Pacific carriers as they battle tough times on the profitability front. Until the demand fall off began in June, the average price of jet fuel was around $123 a barrel for the region's airlines.

By October 3, prices per barrel were $107, some 13% less than a year ago, 7.4% lower than the same day in September and 3.2% under the price of a week earlier. Seven days later, it was down to $105.10 and in the Asia-Pacific, it was even lower at $102.10. Yet airline managements aren't jumping with joy about news.

Whichever way you look at it, said Tony Tyler, director general and CEO of the International Air Transport Association (IATA), fuel is still a major component of airline costs, at around 30% of expenses.

"The industry has done extremely well to adapt to rapidly rising fuel prices. A little over a decade ago, oil was less than $30 a barrel. Today, it floats around the $100 mark (last month the price of Brent crude temporarily dipped close to $80, its lowest level since 2010). There is little sign it will significantly decline and every chance, given the instability we see in some of the major oil-producing nations, that it could spike again," Tyler said.

IATA's regular airline financial review, covering September, said concerns about several geopolitical threats to crude oil supplies have been offset by increases in the oil supply in other regions, including the U.S. Some pessimism still exists about the demand outlook, with key regions like Europe forecasting slowing economic growth.

Oil prices have dropped dramatically, said commodity analysts, because faltering global growth had curbed demand for fuel in a period of heavy oversupply. In October, oil saw its biggest daily fall in more than three years. Since June the price of a barrel of oil has dropped by 26%. That, said the experts, was trigged by three events: a downgrade in global oil consumption forecasts; projections for another big boost in shale oil and reluctance by OPEC (Organization of the Petroleum Exporting Countries) members to cut output.

This time, Saudi Arabia made it clear it was focused on maintaining market share, not supporting prices with unilateral production cuts. Other countries, including Iran, Libya and the U.S. are following suit.

As a result some industry insiders believed the cost of a barrel of crude could drop to $70, although few believed it would dip below that level.

If the price remains low for a lengthy period it could impact seriously on the fuel hedging many airlines have in place. Carriers have stepped up their jet fuel hedge volumes, with some airlines locking in fuel purchases as far out as 2016. Those long-term positions, said analysts, suggested airlines see oil prices bottoming.

A recent Reuters survey revealed that Asia-Pacific carriers are hedging substantial portions of their fuel burn in expectation that prices will be firm, which will put pressure on profitability as competition from low-cost carriers intensifies.

Fuel traders at several regional banks, Reuters said, have noted a widespread pick-up in hedge interest as oil prices have dropped, and volumes rise as the fuel price keeps falling. However, if they are wrong, some airlines could have to pay more for fuel than the market value.

Japan Airlines is hedging about 40% of its fuel consumption in the 2014 financial year, which is similar to the volumes in 2013. All Nippon Airways' ratio for its 2014 financial year is 45%, similar to the 2013 and 2012 fiscal years.

Korean Air generally keeps its hedging volumes around at 30% of its annual fuel consumption. Cathay Pacific Airways is hedging 25% for 2014 and the first half of 2015 at more than $94 to $95 a barrel, and about 11% for the second half of 2015 and the first half of 2016.

Qantas Airways is hedging as much as 94% of its fuel needs for the first half of next year, and Singapore Airlines is hedging around 52% for its 2014-2015 financial year. ■

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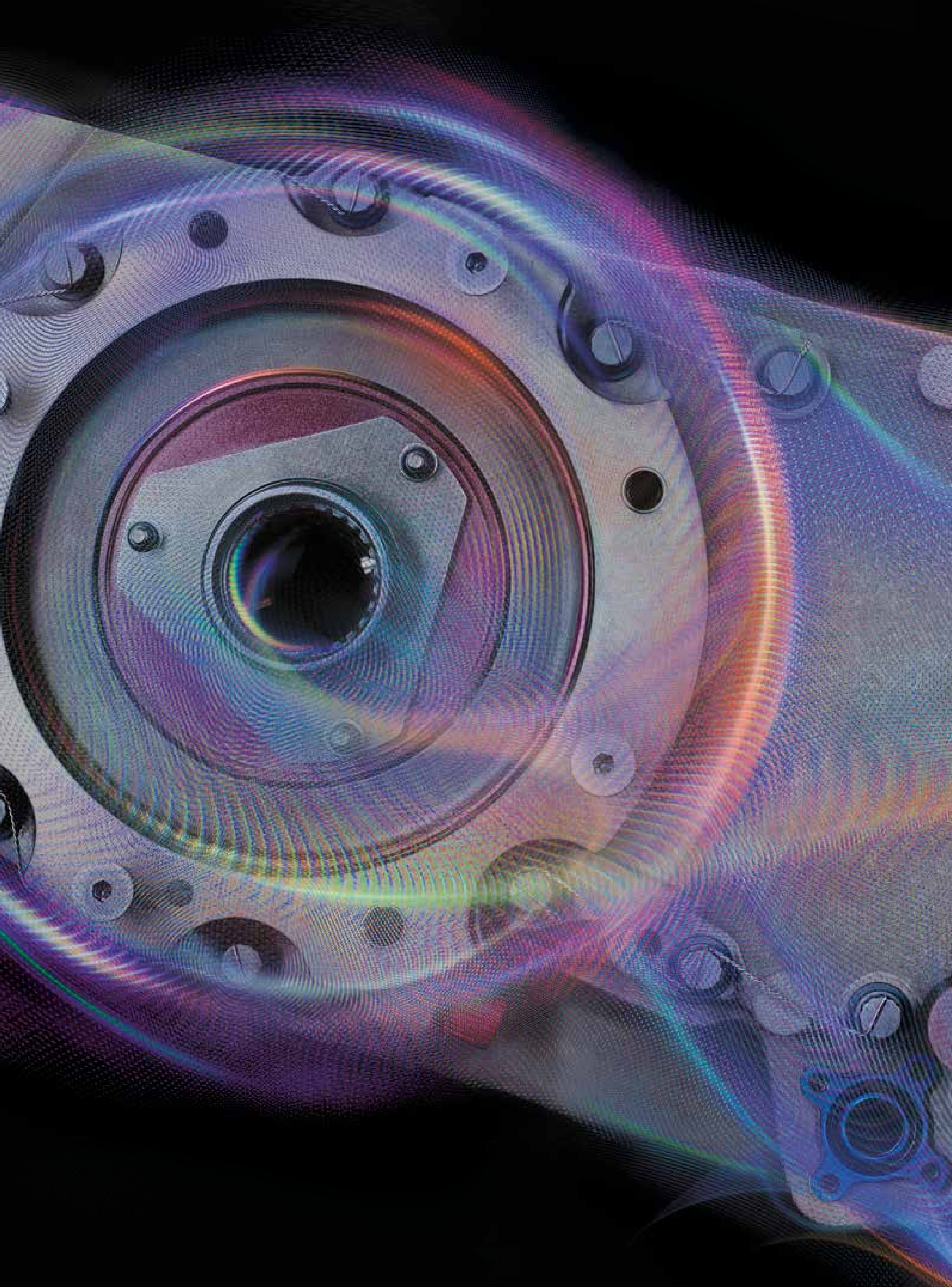

CARGO REVIVAL GAINS REGIONAL TRACTION

Air cargo has been stagnating since the 2008 global financial crisis, with the Asia-Pacific hit hardest of all. But recent forecasts, and early high season figures, indicate the business is experiencing a renaissance – and Asia is leading the way back to profit.

TOM BALLANTYNE reports

Finally, the air freight business has some good news. The International Air Transport Association (IATA)'s latest five-year forecast, issued in October, said international air cargo is expected to increase at a Compound Annual Growth Rate (CAGR) of 4.1% to 2018, with the Middle East-Asia route recording the highest annual growth rate of 6.2%.

IATA added performance in August recorded robust growth in air cargo volumes, with freight tonne kilometers (FTKs) rising 5.1%, compared with a year earlier. It was the second consecutive month for strong cargo volumes, following a 6.1% year-on-year rise in July. Even better, capacity grew at a slower pace of 3.4%, easing pressure on freight yields.

In August, Asia-Pacific carriers' freight volume beat the global average, at 6.3%, continuing a solid acceleration that had been in evidence for more than two months. Cargo capacity in the region grew at only 4.4% and, according to IATA, a notable rise in Chinese export orders bodes well for future demand growth.

Cathay Pacific Airways and Dragonair, airlines that operate out of the regional cargo behemoth, Hong Kong International Airport, reported a 14.5% increase in cargo in September, helped by shipments of new products such as the iPhone 6, which produced a load factor improvement of 2.9 percentage points, to 62.2%.

Nevertheless, IATA director general and CEO, Tony Tyler, remained typically cautious about the recovery trend. "The outlook for air cargo is clearly getting better. However, there are some limiting factors on the extent of potential gains," he said.

"Demand for air cargo is growing more slowly than global economic activity. Businesses are reported to have more confidence, but the list of political and economic risks continues to moderate how that confidence translates into actual activity."

Tyler said the air cargo industry is moving at two speeds, with a sharp divide in regional performance. European carriers are reporting anemic growth, while all other regions are making solid gains. The growth in the Asia-Pacific is encouraging because it demonstrates a recovery in trade and a positive response to China's economic stimulus, he said.

The association's forecast said that by 2018, six of the ten largest international freight markets would be in the Asia-Pacific. The U. S. will still be the No.1 market, at 10,054,000 tonnes, followed by China (5,639,000), the United Arab Emirates (4,974,000), Germany (4,763,000), Hong Kong (4,648,000), Republic of Korea (3,487,000), Japan (3,480,000), the U.K. (2,808,000), Taiwan (2,350,000) and India (2,223,000).

Dubai World Central (DWC) Airport is poised to pass all other airports in terms of freight and passengers

The U.S., China and the UAE will each add more than 1 million tonnes of freight by 2018, compared with today, and the UAE would have replaced Germany as the third largest market.

"Air cargo remains as vital to the global economic system as ever. This year, more than $6.8 trillion worth of goods, equivalent to 35% of total world trade by value, will be transported around the world by air. So it is welcome that a forecast sees a return to growth for the sector after several years in the doldrums" he said.

"Nevertheless, trade protectionism is a constant danger. According to the World Trade Organization (WTO), between November 2013 and May 2014 alone, 112 new trade-restrictive measures were enacted by G20 governments. Geopolitical concerns, volatility of oil prices, and competition from rail and sea could also affect this forecast. The air cargo industry certainly cannot afford to be complacent."

The largest freight traffic shares in 2013 were Within Asia-Pacific (21.6%), Europe-Asia Pacific (12.3%), and North and Mid-Pacific (10.0%). Looking ahead to 2018, Within Asia-Pacific and Europe-Asia are expected to increase their shares very slightly to 21.8% and 12.4%, respectively, with the Middle East showing the largest gain, 0.8 percentage points, to 6.9%, of global freight activity.

At an international freight forum in Seoul, South Korea last month, Boeing Commercial Airplanes vice president marketing, Randy Tinseth, released the U.S. planemaker's biennial World Air Cargo Growth Forecast. For the first time in years he was able to echo the growing feeling among airlines that the cargo market, finally, is heading for better times.

"We see strong signs of a recovery as air freight traffic levels continue to strengthen after several years of stagnation. The air cargo market is now growing at nearly the long-term rates," he said.

Among airlines, a cautious reaction to marginal gains and tentative recovery in late 2013 and early 2014 is turning to a belief the freight graph is on the way up.

> To enhance air cargo competitiveness, the industry is aiming to cut average transit times by up to 48 hours by 2020
>
> **International Air Transport Association**

An indication of the air cargo revival is the return of parked freighters to airline fleets. When air freight traffic plummeted in late 2008, air cargo operators parked as many as 70 B747-400 and MD-11 freighters, the mainstay of long-haul cargo operations. From July this year, operators were returning the planes to service as traffic volume picked up.

Airports, too, are reporting a strong freight rebound. The latest figures from Airports Council International (ACI), also for August, said freight volumes handled during that month were up 5.8% year-on-year and well above the overall average of 3.6% for the past 12 months.

Some weakness remains in domestic air freight markets, ACI said, but the trans-border shipment of air freight posted robust gains and international freight volumes jumped by 7.5%, coinciding with an expansion in international trade activity and increasing business confidence. Asia-Pacific airports posted strong increases in volumes, some 8.2% in August. The world's largest air freight hub, Hong Kong International Airport, increased cargo volume by 8.6%.

"Although growth in domestic freight volumes in Europe and North America showed weakness in August, international freight volumes experienced robust growth in most regions, particularly at airports in the large exporting nations of the Asia-Pacific," said ACI World's economics director, Rafael Echevarne.

The Middle East is challenging the dominance of Asia-Pacific on the air freight front. Dubai World Central (DWC) is poised to surpass all other airports in terms of freight and passenger capacity and is now a major contributor to overall growth in freight volumes for the region, said ACI.

"Although it only recently commenced operations, in August alone air freight volumes at DWC quintupled to over 80,000 metric tonnes compared with 2013. Month after month, with increased operations, DWC is moving up the ranks to be among the busiest international freight airports in the

world," said ACI.

But the Gulf has a long way to go to catch up with the Asia-Pacific's air cargo might. The region processes 38.5% of all air cargo being moved compared with Europe (22.9%), North America (21.3%) and the Middle East (13.1). Europe and Latin America are lagging well behind the growth trend, seeing freight volume growth of 1%-1.5%, a result of Brazilian economic weakness and EU sanctions on business with Russia, respectively.

> By 2016, the value of e-Commerce in China in one day will reach $36 billion
>
> **Zhu Gaozhang**
> Director compliance and facilitation, World Customs Organisation Brussels

In Asia, the Chinese economy has slowed compared with the double-digit rates of expansion of previous years, but the government stimulus of earlier this year has helped manage the transition of the nation to a slower growth path.

Recent results of purchasing manager surveys indicated gains in business activity in the manufacturing sectors and a notable rise in export orders. This should help sustain positive trade momentum in the region, which in turn ought to continue driving demand for air freight services on local carriers, said IATA.

Whatever the economic circumstances that exist in different world markets, it is universally accepted that China holds the key to the continuing recovery of air cargo. This fact was recognized in September when the International Civil Aviation Organization (ICAO) held the first Air Cargo Development Forum in Zhengzhou. "China is a very important market and that is why we are here," ICAO's regional director Arun Mishra told the gathering, because its represents 45% of the region's air cargo market.

Xia Xinghua, the director general of the China Civil Airports Association said a third of Chinese rely on e-commerce. "The rise of e-commerce in China is so fast that it forces freight handlers and airlines to find ways to work together, which is a very good trend," he said. Wang Zhiqing, deputy administrator of the Civil Aviation Administration of China (CAAC) reported that air cargo had grown by 10% a year between 2002 and 2010, followed by a decline in 2011 to 2013. "We have finally come out of that, in the first half of this year, as domestic freight increased 5.7% and international 6.6%," he said.

"The industry must adapt itself to meet changing demands with the rise of the express market and become integrated logistics operators." China's express market has grown 43.5% a year since 2008 and become the world's second-largest after the U.S. This growth is underpinned by the rise in e-commerce, Wang said.

China's freight fleet stands at 101 aircraft, of which 80% are used for express cargo. By 2016, based on a European E-Commerce Association estimate, said Zhu Gaozhang, director of compliance and facilitation the World Customs Organisation in Brussels, the value of e-commerce in China could reach $36 billion a day.

Boeing's air cargo forecast should also cheer up operators for longer term prospects. It foresees freight traffic will grow at an annual rate of 4.7% over the next 20 years, more than doubling by 2033. Tinseth said world air cargo traffic began to improve in the second quarter of 2013, with growth reaching 4.4% for the first seven months of 2014, compared to the same period a year earlier.

If this trend continues, 2014 will be the highest growth year for the airline freight industry since 2010. "Much of the past weak air cargo growth can be attributed to two principal causes: an underperforming world economy and lackluster trade growth, particularly in those traditional commodities served by the air cargo industry," said Tinseth.

The new Boeing forecast said Asia-North America and Europe-Asia would continue to be the dominant world air cargo markets. While Intra-Asia, domestic China and Asia-North America markets are expected to have the fastest rates of growth over the next 20 years.

With increased cargo traffic, Boeing forecasts airlines will take deliveries of 840 new freighters over the next two decades: 590 large freighters worth $190 billion and 250 medium-sized freighters (40-80 tonnes) worth $50 billion. With some 70% of the new planes in the large category, the sector will be dominated by the B777F and B747-8F because Airbus does not offer a cargo version of its A380. ■

The belly cargo debate

Kostya Zolotusky, managing director of capital markets development and leasing at Boeing Capital, told Orient Aviation people used tidbits of anecdotal data to draw the wrong conclusions about air freight capacity.

"Every day, the Asia to North America market over the Pacific has 150 wide body passenger airplanes going back and forward. Every day, that same market has 70 dedicated freighters. If you took all that belly cargo capacity it would be equal to about 10 dedicated freighters. If the Asian market doubles its wide-body capacity, which it is not about to do, it would only consume about 10 dedicated freighters," said.

"I think people are making much ado about nothing about the belly cargo. Belly cargo is a very important market, but relative to freight carried by dedicated freighters, it is relatively modest. You would need a dramatic shift in belly cargo capacity to have any impact on dedicated freighter traffic, which is not going to be the case."

"The challenge is that belly cargo is much lower yielding cargo. You have the capacity so you sell it at whatever you can get for it, which does drive down some of the yields for the dedicated freighter. But overall capacity is rather limited. There's a lot of outsize cargo passenger aircraft can't carry. There are nuances in the analysis, but Boeing certainly doesn't see that belly cargo will have a meaningful impact on the overall cargo market. It's an important part of it, but it's not changing dramatically."

Singapore's Scoot sets sights on Greater Japan

By Geoffrey Tudor

Fleet expansion at Singapore's spunky regional budget airline, Scoot,has set the route planners looking north for more business into Japan. Scoot flies to 13 destinations across the Asia-Pacific, "but by March 2016, we will have 11 aircraft, said CEO, Campbell Wilson, "so we are considering new points in Australia, China and Japan. India is also in our plans."

Scoot serves Tokyo's Narita from Singapore, via Taipei. Wilson told *Orient Aviation* it would be logical to fly to Osaka's Kansai International airport in the second half of 2015. Other Japanese destinations include Nagoya's Chubu International airport.

The Singapore-Narita flight opened a year ago and has exceeded expectations, with an average load factor of 81% that climbed above 90% in July and August.

"Our assumption was that most of our passengers would be originating in Singapore, but now 55% are Japanese. That's surprising as our market profile is low, but clearly shows there's high potential demand in Japan need for a long-haul low-cost operator," Wilson said.

One of Scoot's missions is to create new business for its parent company, and there are signs it is achieving that. "Everybody said, when we started flying from Singapore to Sydney, that there was no room for a newcomer. There were seven flights a day, including A380 service," said Wilson.

Scoot will phase out its B777s as its new all-B787 fleet arrives at the airline

"In just six months, we increased Singapore-Sydney leisure traffic by 69%. Contributing to our success on this route are our low fares, plus the fact that Singaporeans like Sydney and Australians like Singapore."

Wilson also intends to increase transit passenger business by working closely with fellow Singapore Airlines Group subsidiary, budget carrier Tigerair. "Tiger is the ideal partner for us. They are a short haul, low-cost carrier and we are long-haul. About 34% of AirAsia X passengers are connecting to the airline from short haul parent, AirAsia. There's plenty of opportunity for us to do the same now we have anti-trust immunity."

Wilson said Scoot is adding to the Group's network by flying to destinations which are not viable for a full service carrier like SIA. Scoot's China routes are not economical for parent SIA. Typically, Scoot's costs are 50% of SIA so the budget subsidiary can serve destinations SIA cannot profitably reach in an important market.

As to performance Wilson said: "We haven't published any targets, but we are on plan. It takes years to go into the black. We're reasonably happy. This year has been difficult. There's been unrest in Thailand and the MH370 tragedy. Traffic between China and Malaysia had a problem.

"The Australian market has been a problem. We're exposed to China, Thailand and Australia – all of which have had issues. But that's life. Confidence in Australia is starting to return.

"As a long-haul LCC, we're keeping our routes within the four to nine hours range. There's plenty of opportunity in Asia for us. India and Japan and Korea are our limits. Long-haul flights beyond nine hours – to North America and Europe - are too costly.

Scoot's latest development is the establishment of NokScoot, with Thailand's low-cost carrier, Nok Air, to be based in Bangkok's defacto LCC terminal, Don Mueang airport. One of the first routes for the new airline will be from Bangkok to Narita Tokyo in early 2015, subject to regulatory approvals.

Wilson said: "We're reasonably satisfied. An airline has never been a finished product. As to where we are now, I think our team has done a great job.It's been a journey of three phases. First was building a network and a fleet, next was establishing a stable base and third will be building our fleet from the arrival of our first Boeing Dreamliner later this year.

"For a two and a half year old airline, we've made a good start." ■

Scoot: Singapore's first all B787 airline

In a first for the airline industry, Singapore-based long-haul budget airline, Scoot, will have an all-B787 fleet of 20 aircraft by 2018 after becoming the first "Dreamliner" airline to be based in Singapore. Cockpit crew preparation is now in full swing.

In Japan in October to attend a traditional Shinto blessing of a fuselage section of one of Scoot's B787s, the airline's CEO, Campbell Wilson, said the Singapore Airlines Group subsidiary will have replaced its six B777 jets by mid-2015.

Adyita Ghosh president of IndiGo Airlines: Low cost does not mean low quality

MAN WITH A MANTRA

At only eight years old, budget carrier, IndiGo, is the country's biggest airline by market share. Its mantra is low-cost does not mean low quality, Aditya Ghosh, the carrier's president is a man determined to deliver the Indian travel experience differently.

TOM BALLANTYNE reports

At 39, former corporate lawyer and IndiGo president, Aditya Ghosh, knows what he wants from his airline - operational discipline and staff with the right attitude.

Ghosh takes attitude so seriously that he personally interviews new employees, including drivers and mechanics. "I try to judge if there is a desire to chase the dream. People can't get motivated by a manual," said Ghosh, who prefers casual shirts to suits and knew very little about airlines when he was appointed president in late 2008, aged 32.

Under Ghosh and founding president, Bruce Ashby, IndiGo has built a reputation for cheery, no thrills service and 99% plus punctuality. The latter factor is particularly appreciated by the airline's corporate flyers, who work in affluent Gurgaon, IndiGo's home city 32 kilometres south of Delhi.

In a recent interview, Ghosh said keeping focused on the business of delivering quality service with good fares is IndiGo's mantra. And it has worked. Last March, Indigo became India's largest airline, with a market share of 32.6%. "I often marvel at what we achieve against all odds. But we want to deliver the Indian experience differently," he said. Principally, this means that low-cost does not equal low

quality at IndiGo. Passengers know what they will – and will not – get for their fare.

The carrier charges for food and passengers must pay extra for pre-assigned seats. There is no inflight entertainment, only distribution of an inflight shopping booklet. It offers web check-in and self-service ticket kiosks, express check-in for a fee and a unique service in India of a Braille Guide for visually, speech and sound impaired passengers.

Passengers also like the fact that IndiGo's fleet has an average age of 2.9 years and that it phases out aircraft after six years of flying.

Co-founded by the group managing director of InterGlobe Enterprises, billionaire Rahul Bhatia (52.1%) and a former CEO of U.S. Airways, Rakesh Gangwal (48%), IndiGo has defied its critics by setting new levels of growth as other Indian budget carriers have faltered, especially in the aftermath of the Global Financial Crisis.

Planning for the establishment of IndiGo began in 2004. By that time Ghosh, who had caught the corporate eye of Bhatia, was soon to become general counsel at InterGlobe. He came to be involved in the project because of his InterGlobe responsibilities. As an aviation novice, he said he benefited greatly from the knowledge of the startup team and Bhatia's experience in the sector.

IndiGo was always going to be a domestic airline with only one aircraft type. In June 2005 Airbus got the call and 12 months later IndiGo received its launch A320 aircraft and commenced operations on August 4. Its mantra of hassle free, low-cost travel, had the perfect start up market in Gurgaon, a corporate satellite city where more than half of the Fortune 500 companies have offices.

Its first flight was from Delhi to Imphal, in north western India, from its home hub at Indira Gandi International Airport outside Delhi. By the end of 2006, the fleet had expanded to six A320-20s. Nine more A320s arrived in 2007. In May that year, Ghosh joined the board of IndiGo. A little more than a year later, Ashby decided to accept an offer from SAMA Aviation to be its CEO and Ghosh become IndiGo's president-designate. He took control of IndiGo in December 2008.

In 2009, after only a few months in the job Ghosh could report the carrier was making money. The key to its success, analysts agreed, is Bhatia's almost fanatical cost-consciousness and Ghosh's persistence in maintaining that disciple.

The new president pared costs by significantly increasing aircraft utilization, implementing the fastest turnarounds of any Indian carrier – just 30 minutes – and holding to a lean staff to aircraft ratio. The learning curve steepened, said Ghosh, a notoriously media shy family man, who said his mother never expected him to amount to anything.

To the outside world, Ghosh and the airline was a perfect corporate match. By 2012, less than four years after its launch, IndiGo was India's third biggest airline. In the next 18 months it sailed past competitors to become India's largest airline by passengers.

It operates 534 daily flights to 36 domestic and five international destinations with a fleet of 83 A320 family aircraft. It was voted one of the top 50 companies for employees to work for and the best company for staff in the transport industry. It has won several global industry awards and has recorded double digit growth for most of its eight-year life.

Nevertheless, IndiGo has not been immune to India's sharp economic slowdown. In its latest year, ended March 31, net profit plunged by 60%, to $130 million. on revenues of $1.6 billion. But in a local industry that reported combined losses of $1.8 billion, the profit was a remarkable achievement. Rival SpiceJet lost a record $163 million and full-service airline, Jet Airways, was $670.8 million in the red, also a record deficit.

IndiGo has stayed financially aloft by "keeping costs structurally low", Ghosh explained. For example, the airline stocks no hot food on board and has no loyalty program. Every expense has to be justified. "We keep asking ourselves: What other cost can we remove without losing a single customer? This is our religion, and it serves us well," he said.

As for all these new planes, Ghosh says IndiGo will operate them wherever there is demand in the airline network. The carrier qualified to fly international services after completing a government requirement of operating for five years as a domestic carrier. It now flies to Bangkok, Singapore, Khatmandu, Dubai and Muscat, but it is cautious about longer haul routes.

Bhatia once said that "it might be sexy to see the IndiGo tail in Los Angeles, but we are doing well right here". "We believe there is a lot more to be done in India. Our primary focus is the domestic market and will continue to be," said Ghosh.

He holds to this view for the future of IndiGo because it is the world's second largest nation by population yet only a tiny minority is airline flyers. "IndiGo will continue to expand its network to meet the requirements of both business and leisure travelers wherever they demand it, both in India and abroad," he said in a recent interview.

"We have been blessed with many years of double digit growth – and once in a while there is a slow year. But India is a highly under-penetrated aircraft market with a burgeoning and productive population that needs to fly at affordable fares," he said.

"We see huge potential in the Indian domestic market and with our Gross National Product (GDP) growing at the rate of 6% to 7% for the next decades, the growth of aviation in India is just starting."

Growth projections and past successes aside, the news in mid-October that IndiGo had signed a Memorandum of Understanding (MoU) with Airbus for 250 A320neo family aircraft plus 100 options, impressed the market. If the MoU is converted to a purchase contract, it will be Airbus's single largest order by number of aircraft, at a list price of US$25.6 billion. Airbus said it expected the deal to be finalized in 30 days.

The order follows IndiGo's earlier commitments for 100 A320s and 180 A320neos. At the same time the latest fleet expansion was announced, IndiGo agreed to sublease 12 A320s from Singaporean LCC, Tigerair.

Analysts said the orders are a massive bet that India's often chaotic airline market is eventually going to sort itself out and its potential will be realized. "The deal is a strong indicator of the long-term potential of the Indian civil aviation market," said Amber Dubey, partner and India head of aerospace and defence at global consultancy KPMG.

Ghosh said at the MoU signing: "We have always maintained that air traffic penetration in the Indian market is lower than countries such as the Philippines and a lot more needs to be done to increase capacity."

"There are a lot of growth opportunities locally. The number of aircraft in India is lower than in Brazil, China or Indonesia," he said. Boeing forecasts India will require 1,290 aircraft by 2032 to cater for demand in the world's second largest country.

Before Ghosh and his owners signed the MoU in October, IndiGo had an order book of 280. Of its original 100-plane order, placed in 2005, it has received 99. The final aircraft is due to arrive at the carrier this month.

Ghosh said: "We will start receiving the A320neos we ordered in 2011 from next October. In the following three months we will receive six planes. We have converted 30 A320s from the 2011 order to A320neos so all 180 planes will be A320neos. We are also taking 12 A320 planes on lease from Tigerair with deliveries to begin this month.

"We finished our first 100-plane order two years early. According to the original plan, the deliveries were to continue until 2016. We might speed up induction, but it depends on market growth.

"Airplanes from the latest order will start in 2018. Those inductions will overlap with deliveries of the earlier order for 180 planes. Apart from the confirmed orders, we have rights to purchase another 100 planes from Airbus. Planning in advance allows us to plan better. We have always done business that way. We ordered 100 planes in 2005 and started operations a year later. Our profitability also allows us to plan for the next five years."

> IndiGo has the fastest turnaround of any Indian airline – 30 minutes
>
> **Adyita Ghosh**
> President IndiGo

There is speculation in India that IndiGo is preparing for an initial public offering (IPO) next year. Ghosh won't comment on the subject nor will he talk about valuations of the airline, which range from US$1.5 billion to US$3 billion.

He said there is no urgent need for IndiGo to raise cash because the airline recently secured a $2.6 billion loan from the Industrial & Commercial Bank of China for 30 planes – in a deal that was another first for India.

One thing is certain: making money in India's highly competitive market yet alone maintaining the sort of income record of IndiGo is not easy – and there are more tests of the market to come. AirAsia India, a joint venture with India's Tata Industries and Malaysia's AirAsia Group, is flying in India, but only has one aircraft in operation so far. Another newcomer, Air Costa launched earlier this year.

As well, the Tata joint venture with Singapore Airlines, full service carrier, Vistara, will soon commence operations. It is reported that other entry level airlines have received government approval to fly.

How many of them will survive long-term is anyone's guess. But IndiGo is determined to maintain its market leadership, despite its planned huge capacity increase. In October, in the details of Winter Schedules filed by all airlines with India's aviation regulator, the DGCA (Directorate General of Civil Aviation), only two carriers will be operating more flights during the season, IndiGo and another budget carrier, GoAir. IndiGo will increase its schedule by 25% and GoAir by 12.6%. Rivals cutting services include SpiceJet (16.2%), and Jet Airways (8.6%) and Air India (2.6%). ■

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Less still means more for Asia-Pacific MROs

World beating Asia-Pacific fleet expansion will keep MRO growth at close to 5% year even though airlines are investing in fuel efficient aircraft and keeping their fleets young.

Tom Ballantyne reports

Despite the increasing numbers of new generation, fuel efficient commercial jets entering airline fleets that need less maintenance less often, the business of Maintenance, Repair and Overhaul (MRO) continues to expand in the Asia-Pacific and the Middle East.

But the sector also is undergoing significant change as manufacturers win more after market business from their airline clients - including Asia-Pacific carriers – when the airlines sign on the dotted line for their planes.

Vistara owners took delivery of their first A320 in September

A recent example was the decision by India's newest airline, the Tata-Singapore Airlines joint venture Vistara, to sign a comprehensive maintenance agreement, a "Flight Hour Services Tailored Support Package" with the European planemaker, for its first A320 jet. The package included airframe maintenance, engineering, reliability and components supply chain management. It was the first such deal for an Indian airline.

While Vistara is hardly the only airline to give its MRO business to an Original Equipment Manufacturer (OEM), it is another example of the increasing inroads OEMs are making in the MRO market.

Independent MRO providers should be aware of OEM's growing importance in the aftermarket support business, said Turkish Airlines chief executive, Temel Kotil, when he delivered the keynote address at the MRO Europe conference in Madrid last month.

In the past, he said, a balance existed between OEMs, airline MROs and independent players in supporting the worldwide fleet. Now, he predicted, there will be a shift in market power in favor of OEMs, fueled by the latest generation of aircraft coming into service. "In the long term, the MRO market will be dominated by OEM monopolies," he forecast.

But this did not mean Kotil was happy with the shift to OEM dominance of the MRO sector. "Costs need to come down, while maintaining quality and safety levels, especially in emerging markets," he said.

With the worldwide fleet forecast to grow exponentially in the next two decades, led by Asia and Africa, he said that high-cost services could stifle this growth potential.

In the meantime, the global MRO revenue pie continues to grow. According to U.S. aviation consultancy Team SAI, the aircraft MRO market, valued at $57.7 billion this year, will increase to $86.8 billion by 2024. Another U.S. consultancy, ICF International, forecasts the market will expand by 3.9% annually and be worth $89 billion by the end of the next decade.

Expansion will be at a "healthy" compound average rate of 4.2%, said TEAM SAI with growth to accelerate to 4.9% until 2019 and then slow to 3.5% until 2024. Narrow body aircraft MRO work will account for 46% to 48% of the MRO business in that period, wide bodies for 40% to 43% and regional jets at 9%.

The Asia-Pacific will grow at 5% per year from 2014 to 2024, with China's market expanding from $4 billion to $10.2 billion in that decade. ICF also forecast the greatest growth in demand would be in the Asia-Pacific, which will spend $7.1 billion more on MRO services in 2022 than it did in 2013, followed by the Middle East and China.

Speaking at a recent U.S. MRO conference, ICF principal, Richard Brown, said aircraft modifications will be one of the fastest growing MRO sectors, at 6.4% annually, as airlines install winglets, upgrade interiors and invest in inflight

connectivity technology.

"The biggest driver of revenue overall will remain engine services with the sector predicted to generate more than $35 billion in 2023, up from $24 billion in 2013.

'While we are set for a period of significant fleet renewal in the next 10 years, which is likely to see maintenance cycles lengthen, it seems that the increasing number of aircraft in the air and the need to ensure older aircraft are as efficient as possible will generate plenty of MRO work," he said.

Apart from winning business, both OEMs and MROs face the issue of training and retaining sufficient numbers of qualified engineers to service the growth in demand. In September, Boeing projected Asia-Pacific demand for new commercial airline pilots and maintenance technicians in the next two decades would be 39% of the global requirements for new pilots and that 224,000 new technicians and engineers would be needed in the region through to 2033. It said China will require 101,000 technicians, Southeast Asia 55,000, South Asia 30,000, Northeast Asia 24,000 and Oceania 14,000.

All of which will undoubtedly be the centre of discussions at the 14th Annual MRO Asia Conference & Exhibition, which is being held from November 4-5 in Singapore. It is expected to attract some 2,500 industry professionals from 50 countries to the Lion City to address the critical MRO issues that face the region. ■

Asia-Pacific carriers farewell grand lady of the skies

There's at least one area in which fewer MRO specialists will be required - the maintenance of the Boeing B747 jumbo jet. Apart from a few new B747-8 Intercontinental passenger jets and freighters entering the market, the days of the B747-400 are decidedly numbered.

Japan Airlines retired the last of its B747 fleet in 2011 as part of its restructuring and All Nippon Airways ditched its last B747 in March. Cathay Pacific Airways operated the final flight of its last B747-400 on August 31, on the San Francisco-Hong Kong route but Hong Kong-based carrier has B747-8 freighters in its cargo fleet.

Philippine Airlines (PAL) retired its last B747-400 on September 1 after the U.S.'s Federal Aviation Administration (FAA) upgraded the Philippines to a category 1safety rating which allowed PAL to replace B747s with new B777s. Air New Zealand flew its last B747 flight on September 10, from San Francisco to Auckland route, again replacing it with B777 services.

Qantas still has 13 B747-400s flying across the Pacific and said it will continue to use the aircraft "for the foreseeable future". It has said, however, it will remove four from service by 2016.

European MRO breaks ground in Indonesia

One of Eastern Europe's major airline maintenance, repair and overhaul (MRO)providers has taken its first major step into the Asian market, finalizing a deal that will see it set up extensive operations at Jakarta's Soekarno-Hatta International Airport.

FL Technics, headquartered in Vilnius, capital of the Baltic state of Lithuania, won a tender to rent of an 8,400 sq. m. aircraft maintenance hangar at the airport and will launch its operation with base maintenance services for Airbus A320 aircraft. The tender was conducted by PT Angkasa Pura II, the airport's operator.

FL Technics and its local partners will operate a 24,500 square meter MRO centre, which will include the hangar, an adjacent ramp, aircraft parking stands and additional support facilities for up to three narrow body aircraft at any one time. The complex will employ 150 engineers, technicians and other qualified staff.

In 2013, Soekarno-Hatta International Airport handled almost 400,000 domestic and international flights carrying 59.7 million passengers and more than 342,000 tonnes of cargo. It is one of the largest airports in the Asia-Pacific and the busiest in the Southern Hemisphere.

"During the last couple of years we have been thoroughly exploring the Asian market," explained Zilvinas Lapinskas, chief executive of the Lithuanian firm. "We are now confident we possess a deep understanding of its trends and the issues that local carriers are facing in the MRO segment, in a market with more than 5,000 aircraft in airline fleets," he said.

"Moreover, quite a few Indonesian carriers are on the list of operators with the fastest growing fleets," he said. Indonesia's major carriers are planning to more than double their fleets in the next 10 to 15 years. With this in mind, FL Technics is considering building an additional hangar to accommodate growth in its business.

FL Technics will offer a comprehensive range of services, including A-to-D checks, interior refurbishment services, NDT (Non-Destructive Testing) inspections, composite and structure repairs and spare parts supply.

The company has an office in Malaysia, but the Indonesian MRO centre is its first regional, in-country facility. It also has offices in Russia, Britain, Poland and Italy. The company's strong growth is backed by Avia Solutions Group, a leading air transport industry consultancy and provider, also headquartered in Vilnius.

Avia Solutions Group provides pilot and crew training, aviation staff leasing, ground handling and aircraft fuelling and other aviation related services. It is the largest aviation group in the Baltic States and one of the largest in Eastern Europe. Avia was listed on the Warsaw Stock Exchange in March 2011, the first foreign company to do so. It is affiliated with General Electric and has more than 17 subsidiaries globally.

FL Technics is an EASA Part-145, Part-M, Part-147, Part-21 certified company, as well as a Boeing GoldCare Program partner, with certificate approvals in Russia, Bermuda and other countries. It currently services a wide range of Boeing, Airbus, ATR, Embraer, Bombardier CRJ, and other types of aircraft. ■

Smart phones drive MRO innovation

Maintenance, Repair and Overhaul workshops are no longer places of sweat, noise and elbow grease as the mobile app drives innovation in the aviation workshop.

Tom Ballantyne reports

Today's generation of MRO engineers grew up with computers at home, cell phones in their pockets and, more recently, smartphones and tablets as a part of their everyday lives.

Espen Olsen, director aerospace and defence business development and sales at Europe's IFS, a major supplier of solutions for fleet management, contractor logistics support, MRO, and defence manufacturing, said: "They are well versed in how such technology works. In this age of 'bring your own device', mobile applications can drive innovation in MRO."

In a White Paper released in September by IFS, "The Pivotal Role of the Mobile in Civil Aviation MRO." Its authors said new mobile applications, combined with agile resource planning tools, will enable MRO shops to avoid costly new software developments or extensive training as the business' practices change.

"Nowhere is the use of smart devices more practical than in the world of aircraft MRO. The numbers of aircraft in service today is unprecedented and MRO is a major and swiftly evolving market. New developments have to take into account increasingly competitive profit margins, extensive regulatory frameworks and passenger safety," the authors said.

"With some [analysts] claiming that 99% of the revenue received per flight by airlines is needed to break even, MRO mobile technology will drive innovation and profitability in this market," Olsen said.

Traditional MRO involves a lot of paper maintenance manuals, he said, whereas a mobile app offers the manuals on a device in a technician's pocket. "Work becomes more interactive, more interesting and, arguably, more effective with the inclusion of videos and 360 degree images," he said.

"Tablets are adaptable to the support of general MRO, are portable and relatively robust, providing the ability to take photographs of a specific part which needs repairing, as well as incorporating wearable technology.

"Maintenance engineers on the ground will enjoy the most benefits from this mobile MRO new age," said Olsen.

Instead of assessing the situation, attempting to identify the specific manufacturer part number, returning to the warehouse to retrieve the relevant part and finding that it isn't currently in stock, engineers will be able to examine faults on an aircraft in real time using a mobile device to identify the asset, determine its immediate availability and have the part delivered to the aircraft repair site.

The White Paper pointed that mobile devices offer a window to enterprise resource planning (ERP) software, its maintenance processes and sign-off, as well as supply chain and configuration management.

"Businesses should look to integrate mobile apps as an extension of their full ERP suite, as opposed to a separate entity," said Olsen. "In this way, MRO providers can significantly improve efficiency, improve the accuracy of data capture and simplify what is traditionally a slow, paper-based process. The more holistic an ERP solution is, the simpler it is to extract management information and benefit the bottom line. This includes the integration and use of mobile technology.

"A mechanic can target the exact information he or she needs to carry out a repair at any location and follow a rigorous MRO process whether it is in a sprawling hangar complex or on the tarmac at a remote location."

Wearable technology, such as smart watches, are expected to play a role in future MRO operations. IFS's research and development team is trialling notifications from IFS applications on a Samsung Gear 2 smart watch as a proof-of-concept. The research team hope to demonstrate the ability of the

device to engage with content from ERP and asset management systems. The project aims to show that users can read updates, make transactions, send alerts for processes and receive important notifications in real time.

IFS, a major MRO company in the defence sector, has been expanding its commercial airline MRO portfolio. Emirates Airline has selected IFS Applications™ 8 to manage its new engine overhaul facility in Dubai. The solution will support all business processes, including MRO and corporate performance management (CPM). The Dubai airline is building an engine overhaul facility in Dubai which could service up to 300 engines annually after it is completed.

Mobile technology is only one leg of advanced information that will benefit future MRO operations. Speaking earlier this year at an MRO event in the U.S., Richard Brown, principal at ICF International, a U.S. management, technology and policy consulting firm, predicted the MRO market will produce significant cost savings because of the big increase in e-enabled aircraft.

"In the next decade, as the fleet of next generation IP-enabled passenger jets increases from 400 to 11,300, MROs will use IT technology to improve prognostics and predictive maintenance, better coordinate maintenance planning, boost productivity, better manage supply chains and parts inventory and streamline technical record keeping," Brown said. ■

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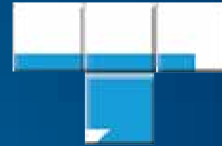

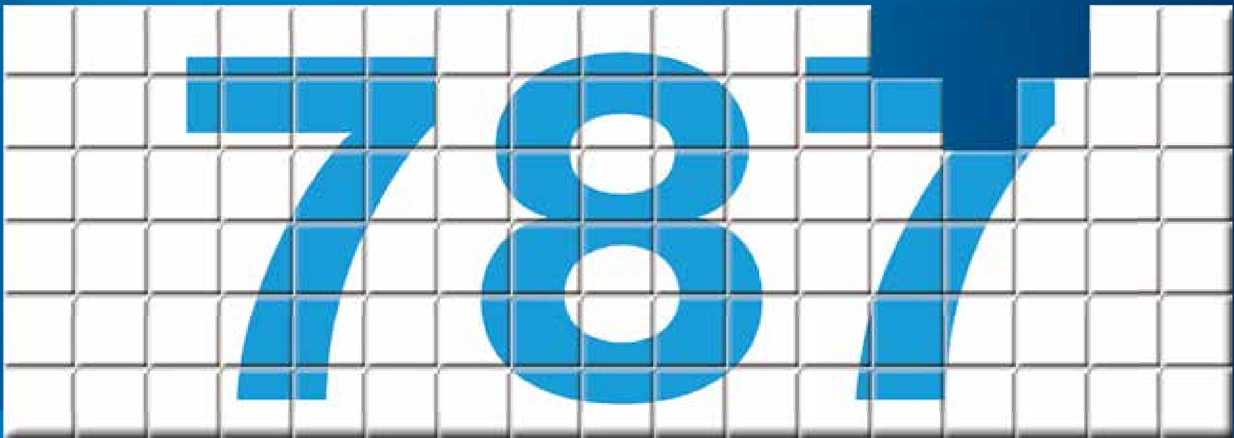

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Support for global tracking system falters

After the mysterious disappearance of Malaysia Airlines flight MH370 in March, the aviation industry began investigating options for a standardized worldwide aircraft tracking system. It has become clear a solution will be hard won as some industry figures doubt there is value in a global system.

TOM BALLANTYNE reports

As a new Australian Transport Safety Bureau-led search for the missing Malaysia Airlines MH370 aircraft commenced in the southern Indian Ocean last month it emerged that finding a comprehensive solution to track all aircraft in real time could proving to be as challenging as the hunt for the lost B777 and its passengers and crew.

The International Civil Aviation Organization's (ICAO) Aircraft Tracking Task Force (ATTF), set up soon after the jet went missing on March 8, was scheduled to publish its draft options in September, but the deadline for delivery of the recommendations has stretched to next month.

At the same time, at a public forum held by the U.S. Transportation Safety Board (NTSB), serious differences about the merits of a new real-time tracking system emerged between U.S., European and international air safety authorities. The dialogue clearly indicated a global agreement on standards and regulations affecting key safety enhancements will likely take years to come to fruition.

And while International Air Transport Association (IATA) airlines, at their June gathering in Qatar, unanimously declared they would do whatever was necessary to ensure their aircraft were tracked at all times, at least one IATA member, Emirates Airline, has since said that despite the disappearance of MH370, there is no need to improve modern aircraft tracking systems. Emirates president, Sir Tim Clark, instead wants measures put in place to ensure pilots can't turn off tracking devices.

"The Boeing 777 is one of the most advanced planes in the world, with the most modern communications systems," he said in an interview with the German magazine *Der Spiegel*. "It is already difficult to turn off current tracking systems such as transponders and the ACARS (Aircraft Communication Addressing and Reporting System).

"Manufacturers should work to make them impossible to switch off. We have to ensure ACARS runs continuously. If that happens, then we can monitor planes over the seas, and we wouldn't need extra tracking systems," he said.

The delay by the ATTF in completing its draft options was uexpected. According to an International Air Transport Association (IATA) spokesperson, Mona Aubin, the decision followed am "exhaustive internal review" that determined "that we needed more clarification on the recommendations and on guidance for implementation".

No details were given about the issues that required clarification, but IATA director general and CEO, Tony Tyler, has cautioned against hasty solutions. Earlier this year, after the MH370's disappearance, he said IATA "also must ensure that prudent decisions are made in line with global standards. This is not the time for hastily prepared sales pitches or regional solutions".

Tony Tyler, IATA director general and CEO: prudent decisions on aircraft tracking upgrades must be made in line with global standards

At the NTSB's public forum, it quickly became clear that some agencies are in no hurry either. The U.S. Federal Aviation Administration (FAA), is not drafting rules that would mandate enhanced tracking of planes. The FAA's top safety official, Peggy Gilligan, indicated these and some other long-discussed changes would be hard to justify under current federal cost-benefit trade-offs.

She said the agency is working on dozens of other, higher priority safety rules that offer more readily quantifiable benefits. It isn't clear, she added, "when and if" the agency can fit real-time tracking requirements into its agenda.

A leading European Aviation Safety Agency (EASA) official said his agency is only months away from proposing rules that would call for practically universal, real-time tracking of aircraft. European lawmakers could take action on the rules as soon as early next year.

However, what has become evident is that airlines as well as equipment manufacturers are working on improving aircraft tracking. During the NTSB forum, airplane and cockpit manufacturers and satellite-service

providers said they were developing procedures that transmit position, speed, altitude and other airliner data to the ground if there is a catastrophic failure inflight or an airplane goes down for any reason.

Boeing executive, Mark Smith, told the forum the U.S. planemaker favours more effective use of the technology and capabilities aircraft have, rather than mandates for new hardware. With some 69,000 airline flights daily world-wide, he spoke of the dangers of "unintended consequences" if new devices or procedures were embraced.

Steve Kong, business and development manager for London-based satellite operator Inmarsat, said the company has offered to provide free of charge every-15-minute location updates to airlines with systems compatible with those of Inmarsat. Some airlines can pay for updates as frequently as every 60 seconds or even less. Boeing and Inmarsat are working on enhanced systems intended to transmit more extensive data to the ground as often as every 10 seconds if there is an emergency.

> We have to ensure that ACARS (Aircraft Communications Addressing and Reporting System) runs continuously. If that happens we can monitor planes over seas and we would not need extra tracking systems
>
> **Sir Tim Clark**
> President of Emirates Airline

Separately, Airbus has outlined plans to make it easier to locate the black boxes – the data and voice recorders – if a plane crashes into the sea. Airbus Head of Security Operations, Pascal Andrei, said the manufacturer intended to install deployable black boxes on future A350 and A380 aircraft. They would be ejected from the plane in the event of a crash and are designed to float. Asked how soon they would be installed, he said it would be "very soon after some more studies and assessments" are completed.

Boeing's Smith said the company has placed deployable recorders on various aircraft it builds for the military, but has no plans to put them on commercial jets. "We think they need study" before widespread adoption, he said, and pointed out there were dangers in unintended or accidental deployment.

In his interview in Der Spiegel, Clark surprised some observers by casting doubt on the official version of events surrounding MH370's disappearance in March. He believed the aircraft was always under control and may not be in the southern Indian Ocean.

"MH370 was, in my opinion, under control, probably until the very end. Experience tells us that in water incidents, where the aircraft has gone down, there is always something. We have not seen a single thing that suggests categorically that this aircraft is where they say it is, apart from this so-called electronic satellite 'handshake', which I question as well."

He said there was "not even a seat cushion" of evidence that the plane had ended up there and that all the "facts" needed to be re-examined. "There hasn't been one overwater incident in the history of civil aviation - apart from Amelia Earhart in 1939 - that has not been at least 5% or 10% trackable. I am totally dissatisfied with what has been coming out of this investigation, he said. ■

MRO EXTRA

Boeing Shanghai wins over Silk Way West

Full Service Maintenance, Repair and Overhaul facility, Boeing Shanghai Aviation Services Co ltd, has signed an agreement with cargo carrier, Silk Way West Airlines, for line maintenance. Based in Baku, Azerbaijian, Silk Way West serves businesses in Britain, the Middle East and South Korea, China and Hong Kong. It has a fleet of two B747-8s,three B747-400s, two B767-300s and Ilyushin and Antonov aircraft. ■

Sabena establishes ATR component warehouse in Singapore

MRO and component provider, Sabena technics, has opened an ATR component warehouse adjacent to Singapore's Changi international airport, Said Sabena technics asia CEO, Phillipe Delisle: "with more than 25 years of experience on ATR MRO, we aim to cover all our Asia-Pacific customers' operational requirements and improve their fleets availability by providing 24/7 support." The warehouse, in Changi Airport Free Tax Zone, also provides Sabena technics asia with the opportunity on improve our support on other aircraft types, such as the Fokker F100, as well as be closer to Australian operators, said Delisle. ■

Tigerair Australia and AJW sign support agreement

Tigerair Australia, which is expected to soon become 100%-owned by Virgin Australia Holdings, has signed a long term agreement with AJW Aviation to deliver complete inventory technical management, including components, major assemblies, wheels and brake, auxiliary power units, thrust reversers and consumables. Tigerair is the British controlled company's first major customer in Australia, after the establishment of its strategic supplier relationship with Air New Zealand in 2013. Tigerair Australia "will be assisted by our Singapore office," said AJW CEO, Boris Wolstenholme. The company has more than 500 aircraft under power by the hour. ■

Australian aerospace on hunt for Asian business

Australia's aerospace industry has launched a program designed to capture a bigger slice of fast growing international market, including Asia.

Tom Ballantyne reports

A new Australian organization, the Meta National Commercial Aerospace Hub, aims to bring together Australia's aerospace businesses and industry researchers to better promote Australian commercial aerospace expertise in the region and beyond.

The "collaborative hub'' is backed by industry umbrella group, Aviation/Aerospace Australia (A/AA), that wants a bigger share of the world's US$50 billion aerospace market. Meta managing director, Zoran Angelkovski, said Australia has a $200 million share of the $50 billion global market for metal aviation components, which should be much higher.

"It's all about generating ideas and projects to create growth and jobs for the aerospace industry,'' he said. "We want Australian manufacturers to tap into the global supply chain as commercial aircraft production levels are set to double in the next 15 years," he said.

Deputy chairman of A/AA, Paul Fox, said: "Australia has the right skills, abilities and regulatory standards to capitalize in the aviation sector. Our manufacturers have a strong ability to innovate, solve complex problems and provide solutions for this burgeoning market."

Australian manufacturers could build COMAC partnership

Asked how Australia could compete with powerful aerospace providers in such countries as China, Singapore, Japan and South Korea he said: "I'm not saying we are going to just walk into their garden. There is a fairly well-trodden pathway. The sooner we start on that pathway the sooner we will find those avenues to deliver our specific services and solutions."

"We're in a period of unprecedented growth. Boeing and Airbus have said a number of times that they are going to struggle to keep up with the demand. That opens up new opportunities. We don't know what the specific opportunities are right now. That's the first step, to do more research about emerging opportunities and then match our skills and capabilities with that demand.

Fox believed Australia has a good chance of supplying parts to new aircraft being built in the region, including China's C919, the single-aisle jet being manufactured by the Commercial Aircraft Corporation of China (COMAC). He has visited the COMAC factory in China and "interestingly Australia, largely through the education sector, is very well connected to COMAC", he said.

"I met very senior aerospace engineers in the program who have studied at RMIT University (in Melbourne) or other Australian universities or are doing exchange programs in the country. Our regional relationship, largely through the educational sector, hasn't been fully leveraged. COMAC is a significant target for our capability."

Meta's Angelkovski said: "We believe in understanding Australia's core capabilities and use that capability to tap into the global supply chain. Meta intends to bring these great manufacturers to regional and global attention and demonstrate what is possible in Australia."

A/AA estimates there are more than 800 Australian firms that generate an annual turnover of $4 billion across the aerospace supply chain. Some of these companies are globally competitive and successfully tapping into the global market, but a collaborative approach to win business is far better than markets being attacked by individuals, said Angelkovski. ■

New LEAP engine completes first flight

CFM's LEAP engine made a successful maiden flight in October, aboard a modified B747 test bed at GE Aviation Flight Test Operations in California. The CFM LEAP test program for all three variants of the engine includes 28 ground and CFM test engines and 32 test flight engines for Airbus, Boeing and China's COMAC. The LEAP engine partners promise the engine will deliver double digit fuel consumption improvements and CO2 emissions compared with today's best in class CFM engine. Airlines had made 7,700 firm orders and commitments for the new engine by September this year.

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