

Orient aviation

Vol. 23 No. 2 March 2016
orientaviation.com

MUELLER'S MEDICINE FOR MALAYSIA AIRLINES

Airline corporate doctor, Christoph Mueller, is facing his toughest test yet – building a new airline from the former stricken MAS

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well prepared to
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an update



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ORIENT AVIATION MEDIA GROUP

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Wilson Press HK Ltd.,
Hong Kong, 2016

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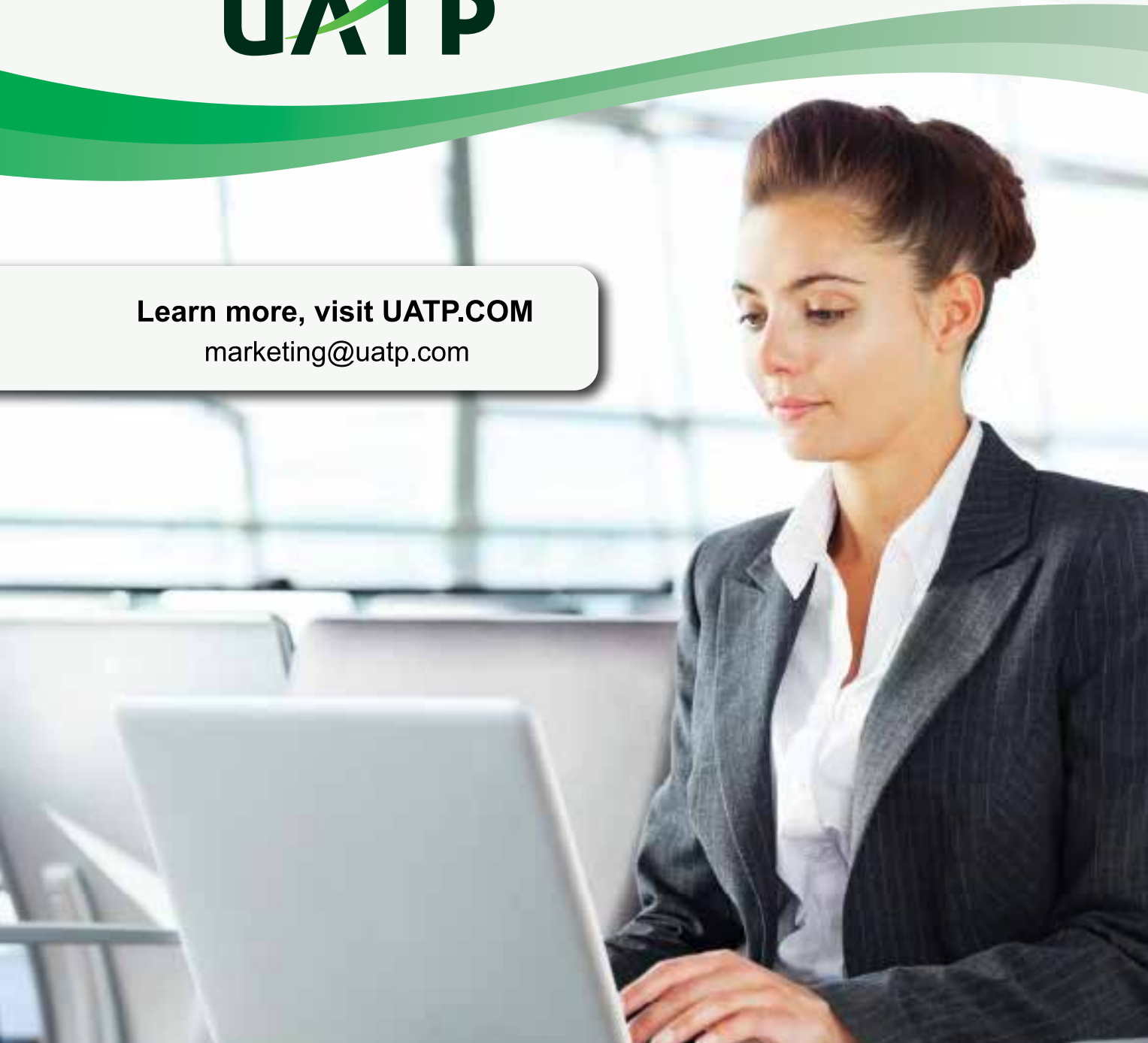
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Pros and cons of cheap fuel

Fuel is an airline's largest expense. The fact that oil is at its lowest price in years is a massive boost for an industry that was paying more than US\$120 a barrel for aviation kerosene 19 months ago.

With crude oil prices at a 12-year low, the industry's annual fuel bill will be cut by \$12 billion this year, the International Air Transport Association (IATA) has forecast. Fuel is expected to average 19% of operating costs in 2016 compared with up to 40% last year and 25%-30% in 2014. Operating margins for the industry are predicted to be the highest in more than 50 years at 8.2%.

But cheap jet fuel alone will not position airlines for long-term sustainable profits, particularly during this period of development in the Asia-Pacific. President of Emirates Airlines, Sir Tim Clark, told Middle East media in January that lower fuel costs was "a double edged sword".

He said the plunge in fuel prices lowered operating costs, but it also impacted on global business confidence and fostered market volatility.

In the region, a beneficial oil price has been offset by the depreciation of many local currencies against a rising U.S. dollar. Additionally, a number of the best managed Asia-Pacific airlines have hedged a significant proportion of their fuel costs at prices that are double, and often triple, the present spot price for oil.

Another challenge to healthy airline balance sheets

is the ever constant issue of over-capacity. Hundreds of new airliners have been ordered by Asia-Pacific carriers and the need to build load factors on these expanded fleets is creating downward pressure on airfares, especially in a low fuel price environment.

Asia-Pacific LCCs now carry 54% of passenger traffic in the region. They also are among the worst culprits in terms of the aircraft capacity they have on order. With these commitments in mind, IATA director general and CEO, Tony Tyler, said in Singapore last month that several airlines in the region are reviewing their fleet plans. They are likely to cancel or defer some of their airliners to avoid a new period of excess aircraft supply, he said.

But these are not the only issues that have emerged since oil hit its historic low. It was absolutely critical that airline management did not allow the shrinking fuel bill to reduce commitments to efficiency gains at their carriers, Clark said.

Another factor to consider is the industry's commitment to reducing emissions from aviation. It is an issue of particular relevance in a low fuel cost environment. Some airlines are considering returning older, gas guzzling aircraft to flying because oil is so cheap. It is a decision that will hinder the industry goal of being carbon neutral by 2020 and set back the ultimate target of a 50% cut in emissions by 2050.

There are some rocky months ahead. ■

TOM BALLANTYNE

Chief Correspondent

Orient Aviation Media Group

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"It has established itself as the primary source of information on industry topics in the Asia-Pacific region"

Tony Tyler honored as Orient Aviation's Person of the Year

Tony Tyler, IATA's director general and CEO, was honored as a Lifetime Achievement award recipient and Orient Aviation's Person of the Year at a dinner in Hong Kong in February.

Guests from government, airports and airlines attended the China Club celebrations, which included tributes from Boeing's Randy Tinseth, Qantas CEO Alan Joyce and the 2014 Person of the Year Christopher Luxon.

IATA staff contributed some witty anecdotes about their boss and Swire "lifer", James Barrington, brought the house down with a memorable roasting of the former Cathay Pacific Airways chief executive. ■

Photos: Graham Uden



Boeing's Randy Tinseth, Tony Tyler and Orient Aviation's Christine McGee



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- 1. Guests toast Tony Tyler
- 2. John Slosar, Professor Anthony Cheung Bing-leung
- 3. Joy Slosar, Gregory So Kam-leung
- 4. Randy Tinseth
- 5. James Barrington
- 6. Tony Tyler
- 7. Marc Chere, Shiree Tong
- 8. Philippe de Gentile-Williams, Mark Hoey, Marc Chere, Randy Tinseth, Jason Bender
- 9. Norman Lo Shung-man, Fred Lam Tin-fuk
- 10. Idalina Abreu de Silva, Mark Sutch



11. Nonthakorn Trakulpa, C K Ng
12. Jack So Chak-kwong
13. Kenny Tang, Florence Craig,
Henry Craig

14. Yvonne Ho, Benjamin Chan, Claire Chan, Zhang Baojian
15. Wilson Fung
16. Stanley Hui Hon-chung, Laurence Barron, Carine Truong,
James Ginns, Chris Gibbs

17. Fred Lam Tin-fuk, Simon Li Tin-chui
18. Paul Tuck, Laura Crampton
19. Tony Tyler and his wife Charlotte



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Air New Zealand ready to do battle with gulf carriers

When fuel was expensive, ultra-long-haul flying was a losing game. But with oil at its lowest level for years, New Zealand is a new target for U.S., Middle Eastern and Asian airlines.

By Tom Ballantyne

New Zealand may be small in population and remote in destination, but it is becoming a hot property in the airline world. In January, Emirates Airline announced it would be flying non-stop between Dubai and Auckland from June and Qatar Airways has hinted strongly it will follow suit from Doha.

In Asia, Malaysia's AirAsia X plans to extend its Kuala Lumpur-Gold Coast Australia service to Auckland, with the budget carrier's chief executive, Benyamin Ismail, saying if the route is successful his airline could soon return to Christchurch. The route was dropped in 2012 after the city suffered a devastating earthquake in February 2011. He added the country's capital, Wellington, was being considered as an addition to AirAsia X's network.

These new flights followed an American Airlines announcement that it would launch Los Angeles-Auckland services in June and a decision by Singapore Airlines (SIA) to add a Singapore-Canberra-Wellington route to its network later this year.

The SIA services will provide direct flights between the two capital cities of Australia and Wellington for the first time.

It all adds up to a dramatic increase in competition for local carrier, Air New Zealand (Air NZ), one of the world's best performing airlines. But the wave of new capacity is not keeping the airline's CEO, Christopher Luxon, awake at night.

"Air New Zealand is performing really well," he told Orient Aviation. "Our customer satisfaction scores, brand health and corporate reputation are the best they have been. And as we have indicated to the market, we are on track for a strong interim result later this month. At press time, the airline reported a NZ\$338 (US\$226 million) interim profit compared with NZ\$133 million a year ago.

"Reported moves by the Middle Eastern carriers to start ultra-long haul flying to New Zealand come as no surprise given the lower fuel cost environment that allows us to

take advantage of existing and new opportunities," said Luxon.

He has every right to be confident. Air NZ has been in the black for 13 consecutive years and reported a record net profit of US\$216 million in the twelve months to June 30, 2015. The strong financial results mean Luxon is sure the carrier is very well positioned to confront new competitive challenges. As he has

put it, Air New Zealand is "fitter than it's ever been and is in a stronger financial position to fight several battles at the same time".

Nevertheless, Emirates' non-stop arrival in Auckland - it serves New Zealand through Australia - will present some challenges for Air NZ's marketing executives. Presently, New Zealanders have only two one stop options to Europe. They can fly to Los Angeles on their home carrier and then onto Europe or they can go through Hong Kong and onwards to Europe with code share partner, Cathay Pacific Airways. A third option is Australia-Asia-Europe.

Emirates and Qatar will be able to offer one-stop flights from Auckland to their hubs and onto dozens of destinations across Europe. Emirates alone has 38 European destinations in its network. The Emirates flights will be operated with B777-200LRs, with an estimated flight time of just under 16 hours from Dubai to New Zealand and 17 hours, 15 minutes in the other direction.

"Having just one stop on the long haul flight to New Zealand will make the journey quicker and more comfortable," said His Highness Sheikh Ahmed bin Saeed Al Maktoum, chairman and chief executive of the Emirates Airline Group. "This will be a boon to many business people, tourists, expatriate New Zealanders and other travellers in Europe, parts of Africa and the Middle East."

With the introduction of the non-stop service, Emirates will be flying more than 2,000 seats a day in each direction on its New Zealand services.

**Air New Zealand CEO,
Christopher Luxon**



The new interest in New Zealand is a result of a wave of ultra-long haul routes that are being launched as the fuel price has plummeted. When oil prices rose above US\$100 a barrel and continued to climb, airlines eliminated uneconomic ultra long haul destinations from their networks.

That has all changed. Reports that Qatar could launch a record-breaking flight to Auckland emerged at the Bahrain air show, when Qatar Airways CEO, Akbar

Al Baker, said the airline planned to launch ultra-long haul flights, not only to Auckland but to Chile's capital, Santiago.

The latter would be a 9,034 mile (14,454.4 km) journey of 18 hours and 34 minutes. The longest flight in the world is Qantas Airways' Sydney-Dallas Fort Worth service of 8,578 miles (13,724.8 km) and 16 hours and 55 minutes in duration.

As well, Singapore Airlines has shown interest in resuming direct flights between New York

and Singapore in 2018, which at 9,535 miles (15,256 km) and a journey time of 18 hours 50 minutes, held the record for the longest route in the world until it was discontinued in 2013.

There is every chance some airlines will look at even longer flights. Emirates' president, Sir Tim Clark, has talked about the possibility of a 20-hour flight that would link Sydney directly with Rome.

Industry insiders also have suggested the Gulf carriers

may extend their direct services to New Zealand and onto the U.S. West Coast if they receive approval from the relevant regulatory authorities.

Air NZ is not letting the grass grow under its feet as competitors move into their traditional turf. With its six new B787-9s, eight B777-200ERs and seven B777-300ERs, it launched services to Houston and Buenos Aires in December and is considering more destinations for its long haul network. ■

NEWS

Airbus launches Tianjin A330 centre

By Dominic Lalk

The new A330 Cabin and Delivery Centre (CDC) is good news for Chinese airlines," said Airbus China CEO, Eric Chen, at a news conference celebrating the ground breaking of the manufacturer's first A330 CDC in Tianjin on March 2.

"As air traffic limitations, airport congestion and pilot shortages continue to hinder airline growth in China, we need larger aircraft such as the A330," said Chen, who was the first Chinese national to join the aircraft manufacturer.

The A330 CDC will be a facility where a flyable aircraft "in green" will arrive from its final assembly line (FAL) in Toulouse to have its cabin installed, furnished and exterior painted. The facility is on schedule to open in September 2017, with an output of one aircraft a month. By 2018, Airbus said it will deliver two A330s every four weeks out of Tianjin for a total of seven a month, including those produced in Toulouse.

"The cooperation with China

is going extremely well. China is growing extremely fast. We need wide bodies for domestic and international growth, so we are targeting the A330," said Airbus CEO, Fabrice Brégier, on the side lines of the Tianjin ceremony. "I think this is only the beginning of a long and successful journey," he said. "I am personally committed to the partnership with China."

Having delivered an average 20 A330s to Mainland carriers a year in the past decade, Airbus believed the Tianjin plant will offer a "win-win" opportunity for local airlines and the manufacturer to work closely during the final delivery stages.

"It takes 30 minutes by express train for Air China's managers to travel from Beijing to Tianjin," said Chen, a 31-year veteran of Airbus. "It is a big improvement for executives who ordinarily would spend up to a week travelling between France and the Mainland to take delivery of their aircraft."

This may have been the rationale behind the Mainland flag carrier's announcement, in the week of the ground breaking ceremony, for 12 additional



-300ceo variants, with deliveries from 2016-2018. At press time, Chen did not confirm if the order was a new commitment or part of the 45+30 A330 orders placed by China Aircraft Supplies last July when the A330 Tianjin CDC plans were unveiled.

"The continuing news about the slowing Chinese economy does not worry us," said Chen, who added Airbus has grown its market share on the Mainland from 6% in 1995 to 50% today.

Its expansion was aided significantly by its Final Assembly Line for the A319/A320, also in the port city of Tianjin. The facility will start manufacturing the re-engined neo from 2017, with the first delivery

to a "Chinese customer" scheduled for June that year. Airbus Tianjin general manager, Andreas Ockel, said demand for the A319 is shrinking and the Tianjin plant could potentially switch to production of the larger A321.

China's air travel market is forecast to increase to 1.7 billion in 2034, which will make China the largest civil aviation market in the world. Airbus forecast China will need 5,400 new passenger and cargo aircraft in the next two decades.

Chen predicted the market could become even bigger, and very quickly, if the Chinese government improved its bilaterals that would allow its nationals visa-free access to Europe and the U.S.

"If travellers no longer require a visa to travel to Europe or the U.S., international air travel originating in China would skyrocket," said Chen. "If that happened, even the A380 would not be big enough." ■



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China blacklists badly behaving passengers

An increasing number of unruly passenger incidents at the region's airlines have persuaded two Asia-Pacific governments to introduce tougher measures to combat air rage. While welcoming the initiatives, the world's airline association said enforcement of a global protocol to punish disruptive travelers should be the ultimate goal.

Tom Ballantyne reports

The New Year brought bad news in two Asian countries for disruptive airline passengers. China, one of the world's unruly passenger hot spots, is creating a passenger black list that will see anyone causing trouble aboard commercial aircraft banned from travelling. And in South Korea, the government has massively increased penalties for misbehavior on aircraft.

It is good news for the industry, said the International Air Transport Association (IATA). "The actions taken by South Korea and China will help send a strong signal that unruly behavior will not be tolerated by the respective states," IATA's assistant director for external affairs, Tim Colehan, told Orient Aviation.

"However, as an industry, we think the best way to deal with unruly behavior onboard is the enhancement of the international legal deterrent, specifically the Montreal Protocol 2014 (MP14)."

The protocol was adopted by the International Civil Aviation Organization (ICAO) at a Diplomatic Conference in early 2014 when governments agreed to strengthen Tokyo Convention 1963. It provides a more effective deterrent to unruly behavior by



Korean Air heiress, Cho Hyun-ah: Her tantrum over mis-served nuts in the airline's first class cabin has resulted in tougher penalties in South Korea for disruptive passengers

extending the legal jurisdiction for such events to the territory in which the aircraft lands.

Legal jurisdiction has been a grey area in penalizing unruly passenger behavior because incidents occur on aircraft that are registered in one country but land in another. As a result, it is not clear who is responsible for taking action against the offending passenger and they frequently walk free on landing.

Colehan said MP14 will ensure states have the necessary legal powers to deal with unruly passengers, even if these incidents take place on foreign registered aircraft that land in the offending passenger's territory.

While China and South Korea have toughened their stances against unruly sky-high behavior, neither country has ratified MP14. "We urge China and South Korea to make the ratification of MP14 a priority," he said.

China's new regulation will blacklist passengers who threaten or assault airport staff and cabin crew. Introduced by the China Air Transport Association (CATA) January, the misconduct that will result in blacklisting includes in blocking and attacking check-in counters, security check passages and boarding gates, fighting inside the airport or on board the aircraft, attempting to force entry to the cockpit or to open

an aircraft's emergency exits without instruction and spreading false information about terrorist attacks.

CATA will record the personal information of disruptive passengers and share it with airlines and state-owned TravelSky, China's national electronic travel distribution system. Inclusion on the blacklist will be kept on record for one to two years, CATA said.

China's biggest airlines - Air China, China Eastern Airlines, China Southern Airlines, Hainan Airlines and Spring Airlines - also have agreed to share the names of passengers who misbehave and to ban them from their flights.

"We have come up with our own list already," Zhang Wuan, Spring Airline's marketing chief told local media. "It includes (the names of) those who beat up our staff, refuse to get on the plane or block the exit."

In Korea, a revised aviation safety law that has imposed tougher penalties on people who obstruct or harass flight crew came into effect in January. The bill was proposed by Saenuri Party lawmaker, Ha Tae-keung, of the National Assembly's Land and Transportation Committee. It followed the nut-rage scandal

in late 2014, in which Korean Air heiress, Cho Hyun-ah, threw a violent tantrum onboard because she had been incorrectly served nuts in a packet and not a bowl in first class.

Under the new law, anyone obstructing or harassing pilots or other flight crew is liable to be jailed for up to five years or be fined up to 50 million won (US\$41,255). The previous maximum fine was five million won.

Intoxicated passengers who injure other passengers face fines of up to 10 million won, an increase of 100%. The number of reported air rage incidents involving Korean airlines and passengers increased from 203 in 2013 to 369 last year.



At its annual general meeting in Doha in 2014, IATA unanimously adopted a resolution which called on governments and the industry to produce a balanced package of measures to deter and manage the significant problem of unruly air passenger behavior.

Such behavior includes committing physical assault,

disturbing good order on board or failing to follow lawful crew instructions. At the time, IATA director general and CEO, Tony Tyler, said the resolution confirmed the determination of airlines to defend the rights of their passengers and crew.

“Everybody on board is entitled to enjoy a journey free from abusive or other

unacceptable behavior. Many airlines have trained both ground staff and cabin crew in procedures not only to manage incidents of unruly behavior, but also in measures to prevent them. But a robust solution needs alignment among airlines, airports and governments,” he said.

The definition of unruly behavior is broad. It includes non-compliance with crew instructions, consumption of illegal narcotics, sexual harassment and physical or verbal confrontation or threats. The number of incidents being reported annually is understood to be around the 10,000, but a majority of offenders are not charged. They escape with little more than a verbal warning. ■

NEWS

Flush with cash down under

The CEOs of Australia’s two major airlines and Tasman rival, Air New Zealand, unveiled rosy financial pictures for their airlines at the February announcements of their interim financial results, to December 31, 2015.

Qantas Airways Group CEO, Alan Joyce, who not that long ago was announcing record losses, described the company’s US\$491.4 million profit for the half year as the best in the carrier’s 95-year history. It was

a 234% improvement over the same period a year earlier.

In Auckland, Air New Zealand CEO, Christopher Luxon, reported a 154% increase in net income, to \$223.5 million, for the period and forecast full-year earnings would surge at least 70%.

And Virgin Australia CEO John Borghetti and his team have fought their way back into the black after several years of losses. Borghetti declared there had been a “significant improvement” in the group’s

financial performance following his announcement of a half year underlying profit of \$7.3 million, which represented a \$38.9 million turnaround from a year earlier. The improved result was driven by the group’s “disciplined execution of a five-year \$1 billion cost reduction strategy”, he said.

Qantas has well and truly bounced back from the dismal \$2 billion net loss it declared in 2014, although most of that was the result of writing down the value of aircraft. Today,

every part of its business is profitable, including its long-haul international operations. Once the group’s worst performing division, Qantas International reported earnings up almost 360%, to \$192.9 million.

While competition in the Australasian market remains tough, the carriers have benefited from lower fuel costs and a truce in a fierce domestic capacity war between Qantas and Virgin. ■



Mixed messages emerge in the region's capacity debate

At last month's Singapore Air Show, manufacturers' forecasts of more orders from the region's airlines contrasted with industry analysts' concerns about a looming capacity crunch in the Aisa-Pacific.

Tom Ballantyne reports

The big plane makers were more than happy at the Singapore Air Show and little wonder. They view the Asia-Pacific as a future cash cow. Some 12,800 new aircraft worth \$2 trillion, or 40% of world demand in the next two decades, is Airbus's forecast for the region. At Boeing, it is 12,820 jets at list prices of \$1.89 trillion.

But their confidence was not shared by everyone. Expectations of rapid growth and world-leading increases in air travel demand are all well and good, but as the show progressed it became clear a new caution about the market is gaining traction.

Governments, analysts and some airlines suggested the forecasts would be dented by economic conditions, both in the region and worldwide, as well as aviation's perpetual spoiler, overcapacity.

Singapore minister for transport, Khaw Boon Wan, warned of a darkening economic outlook that could slow air transport growth when he spoke at the Aviation Leadership Summit in Singapore on the eve of the air show.

Even collapsing oil prices, which on the face of it seem to benefit the region's airlines, reflected a highly volatile economic environment that could



Singapore minister for transport, Khaw Boon Wan: the Association of Southeast Asian Nations (ASEAN) and the European Union are exploring a long-term aviation agreement

portend a slowdown in travel demand, he said.

International Air Transport Association (IATA) director general and CEO, Tony Tyler, also tempered the manufacturers' optimism. Airlines in Southeast Asia, he said, may need to push back delivery of aircraft, after a decade of economic growth and optimism about air travel

all the airlines are studying their orders in the context of what the market is telling them."

Even a senior executive at Boeing hinted at a change in the pattern of airline orders. Dinesh Keskar, Boeing's senior vice president for sales for the Asia-Pacific and India, said Asian airlines, famed until now for multi-billion-dollar orders, have become more cautious as the global economy slowed and profits became thinner.

"Nobody has come to us and asked for any deferral," he said, but added the time for big-ticket orders may be over. They could be replaced by smaller buys with shorter replacement cycles.

"You have not seen any substantial orders from this part of the world (recently) and I think there was a time when a 100 plane order was considered the fashion. It is not the case right now," Keskar said. "From the Boeing point of view, we are in a good spot.

"In terms of the low-cost carrier market, our big customer in Southeast Asia is Lion Air. We have delivered 165 airplanes for them and they continue to take deliveries on time. When we look at airlines like Virgin Australia, Jet Airways or SpiceJet in India all of them are doing fine. In fact, some of them want their airplanes early, but our backlog is over

prompted them to order hundreds of jets.

Carriers in the region, that include Indonesia and Malaysia, are confronted with overcapacity and intense competition, he said. "It's easy to place these orders when times are looking good. I wouldn't be surprised if some of them are pushed back. I'm sure the planning departments of

5,000 airplanes so it is difficult to accelerate anybody's airplanes."

Airbus president and chief executive, Fabrice Brégier, who released the company's regional forecasts at the Singapore show, said traditionally the region has been one of Airbus' strongest markets.

"In recent years, we have consolidated our position with our modern and efficient products. We expect this trend to continue in the coming years, especially in the wide body market where the A350 XWB is setting new standards in the 300 - 400 seat category," he said. Airbus expected the Asia-Pacific to continue to lead demand for new aircraft in the next 20 years.

John Leahy, chief operating officer, customers for Airbus, explained the company's forecast. An annual increase in passenger traffic of 5.6% would contribute to a requirement for some 12,800

new aircraft valued at \$2 trillion, he said.

"The Asia-Pacific will continue to experience stronger growth than any other region in the world as more people fly more often," he said.

Concern about overcapacity, a frequent theme of commentaries in recent years, has accelerated as China's economy slows down. Despite the Mainland downturn, said IATA's Tyler, air travel remains robust in the country. "China is seeking to shift the economy away from capital investment and more towards consumer spending, which benefits airlines," he said.

Across the region, with budget airlines holding 54% of the market - more than twice the global average - fares and profitability have declined and that does pose a threat to the industry, he said.

While its economy is slowing, economic growth in the region is

boosting the number of middle class families and enabling them to spend more on air travel. Asia-Pacific traffic is expected to rise nearly 5% a year for the next two decades, and China is poised to become the world's biggest travel market, said IATA.

Despite his short term concerns, transport minister Wan also predicted a good long-term outlook for aviation, but said that growth raises challenges for air navigation service providers (ANSPs).

"The number of passengers within ASEAN has tripled in the last decade and routes have grown by almost 40%, to more than 1,500 city pairs. The region's reaction must involve air service liberalization," he said.

"Airport capacity cannot increase overnight and the volume of airspace for aircraft to operate is finite. We also need to share this volume of airspace with

unmanned aerial systems. Safety is an increasing challenge for Air Navigation Service Providers in such an environment."

Another challenge was the increasing pace of aviation liberalization in the region, Wan said.

The minister confirmed ASEAN was working with partners such as China, the European Union (EU) and others to conclude liberal air service agreements. The EU and ASEAN are exploring a comprehensive air transport agreement, following the EU-ASEAN Aviation Summit at the last show in 2014.

He argued for greater harmonization, information sharing and collaborations between aviation regimes. "Increasingly, governments and industry need to work hand-in-glove. Industry has the technical expertise and governments set the rules of play," he said. ■

NEWS

Teaming up for training

Airbus and low-cost carrier, Vietjet, have agreed to establish a flight training and maintenance training facility in Ho Chi Minh City, the first Training by Airbus agreement in Vietnam.

Under the terms of the partnership, Vietjet will install an Airbus A320 full flight simulator at its home base in the southern Vietnamese city to train flights crews for its A320 fleet. The facility also will introduce maintenance training, using the Airbus Competence Training classroom programme, to Vietjet's training organization.

Vietjet vice president, Dinh Viet Phuong, said: "Vietjet and Airbus have effectively collaborated with each other.

This agreement is a milestone for both organisations. Airbus' training expertise will ensure Vietjet's capabilities in flight training and maintenance is in line with internationally recognized standards. Investment in an aviation institute is one of the most important goals in Vietjet's sustainable growth strategies."

"Teaming up with Vietjet is

a major milestone in delivering Training by Airbus in the region," said Head of Airbus Customer Services, Didier Lux. In January, the Vietnam Civil Aviation Authority awarded Vietjet Training Centre its Aviation Training Organisation certificate

At the Dubai Air Show in November last year, the LCC ordered nine A321neos and 21 A321 neos, at list prices of

US\$3.6 billion. The aircraft will be delivered between this year and 2020, to facilitate the airline's regional expansion. In 2014, at the Singapore Air Show, the airline finalized an order for 100 A320 family aircraft.

At the close of 2015 Vietjet had a fleet of 29 A320 and A321 planes, operating up to 190 flights per day on 35 routes including Singapore, South Korea, Taiwan, Mainland China, Myanmar and Thailand. ■



RISKY BUSINESS

The knock-on effects of cheap oil for Asia-Pacific airlines are emerging as the industry's reporting season moves into full swing. Some carriers are reporting rocket charged profits, especially if they had not hedged their fuel at past high prices, but that is only part of the story. Chief correspondent, *Tom Ballantyne*, reports on the impact \$30 a barrel oil is having on the region's airlines.





Fuel is the life blood of the airline industry and its biggest cost. It also can be its Achilles Heel as past, extremely elevated aviation kerosene prices have demonstrated. This year, a barrel of oil will be the cheapest it has been in 12 years and airline profit margins will be the highest they have been for more than 50 years.

But it is becoming apparent that cheap oil can have its downside for in the Asia-Pacific, even at the best run Asia-Pacific carriers.

In the latest financial monitor of the International Air Transport Association (IATA), it was reported that crude oil prices dropped to a 12-year low in January. The triggers for the decline were weaker global demand and concerns over excess supply, including the additional barrels of crude being pumped out of Iran.

“If sustained,” said IATA, “the most recent declines in oil prices would reduce the industry’s annual fuel bill by approximately \$12 billion in 2016.”

That has to be good news for the airline industry, but for many carriers it’s a long way from a financial windfall. Overall, lower fuel costs may be pumping up profits but the reality is that Asia-Pacific airline profitability is lagging behind other regions. Asia-Pacific carriers are expected to grow earnings to \$6.6 billion in 2016, from \$5.8 billion last year, according to IATA.

Average forecasts for overall profit per passenger is \$5.13 in Asia, well behind the U.S. and Europe, where profit per passenger is expected to be \$21.44 and \$8.80, respectively.

Asian carriers’ managers “are working to overcome these challenges”, IATA’s Tyler said. “It’s hard to say when things will improve. It’s going to take a little bit of time to recover in terms of profitability.” Whether the improvement continues to gather pace or suffers another setback won’t only depend on managements continuing to introduce operational improvements and efficiencies but if the price of oil remains stable at relatively low levels,” he said.

IATA pointed out the hedging policies of a large number of airlines have fixed their fuel costs at earlier, higher prices, so there will be a delay in benefiting from cheaper oil.

An example is Singapore Airlines (SIA). The carrier posted a net profit of US\$196 million for its third quarter, ending 31 December 2015, up 36% compared with the \$144 million profit it reported in the same period a year earlier.

The better results were largely due to a 24% drop in the company’s fuel costs plus gains from the sale and lease back of some SIA aircraft. But they could have been better.

As principal analyst at Malaysia-based Endau Analytics, Shukor Yusof, explained, the SIA profit report contained other key



numbers for the quarter. Operating profit was up \$205 million, but losses from jet fuel hedges were \$51.3 million. Foreign exchange (forex) losses came in at around \$55 million.

Said SIA in its official results statement: “While more relief could arise from lower fuel prices, which have declined to a 12-year low, fuel continues to make up a significant portion of the Group’s expenditure, with 46.6% of the Group’s fuel requirement in the fourth quarter hedged at a weighted average price of \$90 per barrel.”

That, said Shukor, is quite a significant volume hedged at prices well above the current levels of jet fuel per barrel (between \$35 and \$33 per barrel at press time). He said a sharp

rise in oil prices accompanied by more weakening of the Singapore dollar would raise costs and put more pressure on margins.

While SIA is far from being alone in having fuel hedged at prices well above the current spot price for some months to come, other issues that could alter airlines’ strategies, because oil is so cheap, have emerged.

Analysts are asking if cheap fuel will encourage airlines to

Overall, the lower fuel costs may be pumping up profits but the reality is that Asia-Pacific airline profitability is lagging other regions. Asia-Pacific carriers are expected to grow earnings to \$6.6 billion in 2016, from \$5.8 billion last year

International Air Transport Association



keep older aircraft flying longer and postpone or delay deliveries of costly new fuel-efficient jets.

As well, airlines have been criticized for keeping fuel surcharges in place in a cheap oil environment and accused of profiteering by not passing on fuel price reductions in the form of cheaper fares.

“It is nonsense,” said Tyler. “It is simply not the case that anyone is profiteering. While fuel is still a big element of airline costs, there is still a huge chunk that is not affected, so to expect fares to tumble just because fuel has come down is wholly unrealistic.”

Speaking at an aviation summit on the eve of the February air show in Singapore, Tyler said industry profitability remained fragile despite the record \$36 billion global airline industry profit forecast for 2016.

“Certainly, lower oil prices have helped, but that impact has been delayed and diluted in many parts of the world due to forward hedges at higher than market rates and the rise of the U.S. dollar against local currencies.

“As costs come down so will fares, and the public is getting an extremely good deal from the industry right now,” he said. Airlines argue they are only starting to develop a sustainable profit for their investors due to high capital costs, regulatory constraints and intense competition.

Tyler pointed out that the majority of this year’s industry profits, or \$19.2 billion, will be generated in North America and he warned again about the profitability of carriers in Southeast Asia, home to cut-throat competition between low-cost carriers.

While fuel has fallen, the dollar has risen by 20% against regional currencies in the last 18 months, he said.

Despite the fuel surcharge criticisms and the claims of profiteering, IATA statistics clearly show airfare levels have been falling. In the first 11 months of 2015, they decreased 12% year-on-year. Even adjusting for the impact of an appreciation of the US\$ they were still 5% lower.

“Recent falls in oil prices and competitive pressures within the industry are likely to translate into further declines

in fares during 2016 as fuel hedges unwind,” said IATA.

And low oil prices also are helping to increase seat capacity. Aircraft that had been in storage because they were uneconomical to fly, are being reintroduced to airlines’ fleets.

The flipside of this trend is the negative impact it will have on the industry’s carbon emissions reduction programme. Rather than invest in cleaner planes, airlines can operate less-efficient, fuel-hungry aircraft, without a significant cost impact.

Another worrying development is that global seat capacity increased 5.1% in 2015, but the average passenger load factor “dropped back sharply” in December and airlines’ break-even load factor declined in line with the fall in unit costs.

In essence, declining load factors coupled with intense competition, particularly in the Asia-Pacific, are putting increasing pressure on yields and a brake on potentially higher profitability.

The stagnant state of the cargo side of the business - Asia has been hit hardest in this sector - is not helping. Air freight volumes ended 2015 just 0.5% higher than they started the year. The freight load factor has settled at a six-year low, maintaining intense pressure on cargo yields.

There also are broader ramifications to consider in the cheap oil scenario. For example, thousands of Filipinos work overseas, many of them on oil rigs, tankers and as domestic or construction workers in oil-producing nations in the Middle East.

They sent home \$22.8 billion in the first 11 months of 2015, which is approximately 10% of the Philippines gross domestic product (GDP). A prolonged period of oil at less than \$30 a barrel could have a negative impact on remittances, produce less revenue from fuel taxes, cut thousands of jobs and potentially produce a slump in travel.

Weak economic data from China, the world’s largest energy consumer, has hit global stock markets hard. The Mainland’s manufacturing sector contracted at its fastest pace since 2012 in January, adding to worries about demand at a time when the market is already weighed down by a large oversupply of oil.

“China is the last standing consumer of oil outside of the U.S. The problem is that everyone is relying on them,” said Carl Larry, director of business development at Frost & Sullivan in Houston.

When it comes to fuel charges, airlines said the travelling public does not understand that fuel charges do not fully reflect the true costs of fuel when it is expensive. Airlines sell tickets months in advance without any knowledge of what the cost of fuel on a given day of travel will be. It is one of the reasons they hedge. It allows carriers knowledge of what they will pay for fuel on a future date.

Nevertheless, most airlines in the Asia-Pacific have reduced or removed their surcharges. Airlines in Japan,



where surcharges are regulated, and South Korea, have been removing the charges in recent weeks.

Qantas began rolling fuel charges into their base fares a year ago. Hong Kong's Civil Aviation Department banned fuel surcharges for flights originating in the city in February, "because fuel prices have greatly reduced and stabilized to a reasonable level", it said.

Fuel surcharges on flights operated by Taiwanese carriers have been lowered, but not eliminated by the Civil Aeronautics Administration (CAA). The fuel surcharge for short-distance flights was cut by \$2.50 per sector to \$5 and for long-haul flights by \$6.50 to \$13.

In Malaysia, budget airline group, AirAsia, removed all fuel surcharges a year ago. In Indonesia, the Transportation Ministry announced in January it would cut the airfare ceiling price for economy-class flights by 5% following the slump in the oil price. If the fuel price goes up fare caps will be adjusted accordingly, the ministry said.

SIA said it regularly reviews its fuel surcharges and "and whenever changes are decided upon we announce them to the market".

As for hedging, the picture among the region's airlines is mixed. Chinese carriers have not hedged at all since losing big time during the global financial crisis. They have benefited greatly from buying fuel at spot prices. But most other airlines have some of their fuel hedged. As these hedging contracts mature in coming months, the decision to renew them or operate in the hope fuel prices remain low is the \$64 question in the present uncertain global economic environment.

In January, Peter Morris, chief economist at Ascend, said low oil prices were not expected to result in airlines cancelling orders for new fuel-efficient planes, developed when the oil price was high.

"The oil price has gone down, but the added benefit is someone has brought a whole new range of toys to play with," he said. Nevertheless, the possibility of cancellations of fleet orders has been raised.

A report by accountancy firm, PwC, suggested airlines were rethinking fleet management as oil prices shrank. "Carriers may opt to keep older planes operating longer and/or lease older aircraft that otherwise would have been decommissioned," it said.

"Consequently, the older fleet becomes more valuable while fuel prices remain low. There could be an adverse impact on Boeing and Airbus if airlines opt to delay orders for new aircraft although the two manufacturers will continue to benefit from a backlog of unfilled orders for 12,000 aircraft, valued at \$12 trillion."

CAPA consultancy said fleet growth had been below the long-term average since 2002, as airlines retired aircraft at a faster rate than normal. However, the fleet growth rate is expected

to rise to 4.9% in 2016, CAPA said, to above the historic average 4.4% - for the first time since 2001. "The percentage of retirements among new deliveries is also falling, possibly because the lower fuel price makes it economic to keep older aircraft longer," it said. ■

The oil price prognosis

Mohammad A. Al Sahlawi, a former member of the advisory board, Supreme Economic Council of Saudi Arabia, and now a professor of economics at the college of industrial management, King Fahd University of Petroleum and Minerals in Riyadh, said in January the price of crude should stay around \$20 for at least 12 months. "We don't see a major growth in demand in emerging economies like China, and supplies are expected to increase from many countries especially Iran and the U.S. So there is less demand and more supply, so prices would be at lower level."

Asked at a financial markets conference in Dubai when he expected a recovery in oil prices, Al Sahlawi said: "not very soon, we may see a recovery in 2-3 years".

That forecast seems plausible, given the reluctance of oil producers to slow production and cut supply, which would drive the price up. Despite the huge slump in oil prices in the last 18 months, the IEA (International Energy Agency) said it is unlikely that Saudi production will fall below 10 million bpd (barrels per day) in the coming months.

Saudi Arabia has produced more than 10 million bpd for ten consecutive months, pushing its average output at the end of 2015 to a record 10.17 million bpd. The Organisation of the Petroleum Exporting Countries (Opec) is pumping close to record amounts of oil despite tumbling prices. To add to the supply glut, another 400,000 bpd is expected to come on line from Iran, Opec's fifth largest producer.

A contrary view was voiced at an airline economic conference in Dublin in January, where Mike Corley, head of Mercatus Energy Advisors, warned the oil price could bounce back quicker than people expected.



MUELLER'S MEDICINE FOR MALAYSIA AIRLINES

Airline corporate doctor, Christoph Mueller, has a reputation for turning around failing aviation businesses. His latest project, resuscitating Malaysia Airlines Berhad (MAB), is his toughest test yet. After almost a year on the job, the MAB CEO told Orient Aviation's chief correspondent, *Tom Ballantyne*, the transformation is on the way.

Malaysia Airlines had been in intensive care for months when the former CEO of the Aer Lingus Group, Christoph Mueller, arrived in Kuala Lumpur last year to embark on the formidable task of restoring the airline's reputation.

In the previous 12 months, the carrier had lost 537 lives from two jet accidents, with one of the aircraft, MH370, and all its passengers and crew, still missing. The accidents did massive damage to the airline's brand.

The 54-year-old European's remit from the airline's new owner, sovereign wealth fund Khazanah, also required him to make the new airline entity, restructured from a failing MAS, profitable. The former flag carrier had been loss-making for years.

It was generally agreed that if anyone could do it, calm but battle hardened Mueller could. He took over as CEO of struggling Aer Lingus in 2009 and within a year had put the carrier into profit. He also staved off an assault on its share register from low-cost carrier, Ryanair. Before that he had imposed balance sheet discipline on several aviation businesses and had had many successful years in senior management at Lufthansa.

At MAB, Mueller was faced with a technically



MAB CEO Christoph Mueller: His airline's code share with Emirates Airline almost doubled the routes the carrier offers to its customers



bankrupt business. He knew the cure would not be pretty. In what he described as a “hard reset program” some 6,000 jobs have disappeared at the carrier, capacity was reduced by 30% and loss-making routes have been eliminated with clinical precision. Unsurprisingly, morale was reported to be at an all-time low.

Today, with several major changes accomplished, it was now a matter of “rolling up our sleeves” and getting stuck into the hard work, Mueller said. “That is no rocket science. There is no element of hope or wishful thinking in it. It’s really a very military plan that needs implementation.”

“The airline is on track to return to profit in 2018. “That is still our projection going forward,” Mueller told *Orient Aviation* in an exclusive interview last month.

A more difficult task could be fully re-establishing MAB as a recognized and reputable brand. “We had the two tragedies. We do not feel guilty. I think the attitude is to look at it as fate. To re-establish customer perception is most probably the biggest challenge. That will take some time. We just have to tour the world and re-establish our place as a new company,” he said.

In the meantime, it is difficult to judge how well MAB is performing financially, but it certainly remains in the red operationally, at least for the time being. Khazanah has secured the airline’s stability with funding of US\$1.4 billion, but it has piled up debts close to \$1.5 billion.

The airline was delisted in November 2014. It was the last time it announced a result, a \$308.9 million loss for the first nine months of that year, compared with a loss of \$196.5 million in the same period a year earlier. It has made a financial loss every year since 2011.

Unfortunately, the plunge in fuel prices has not helped the carrier’s bottom line, thanks to the depreciation of the local currency, the Ringgit. “In fact, the depreciation of the Ringgit is slightly stronger than the benefit we have enjoyed from the low fuel price, so it’s not entirely a wash,” said Mueller.

“We are harder hit by the Ringgit and that is easy to explain. More than 50% of our costs are denominated in US dollars and we still have income of approximately 50% in Ringgit. This is the reason we are being hard hit.

“The Ringgit has recovered compared with the beginning of the year, but we still have a slight deviation to our business plan. So let’s knock on wood that the Ringgit is strengthening and the fuel price stays where it is.”

Until now, the airline has not hedged its fuel. “We were simply too poor to do hedging, but now, with the funding from our shareholder we are contemplating re-entering the hedging scene. That would not be limited to fuel. Currency hedges are one of our considerations,” he said.

He sees fuel hedging as a risk mitigation tool. “Basically, it dampens a little bit the spikes and gives our commercial department a little bit more lead time to react to fuel prices. I believe a proper revolving hedging policy going forward 18 months is applied by most carriers in the world and that’s how we will do it. The risk mitigation is just stronger than forgotten opportunities,” he said.

However, the fuel bill has been shrinking because MAB

Winning back the Chinese

Mueller is confident that MAB has excellent prospects in the China market, where it took a big hit in reputation and bookings in the wake of MH370. The ill-fated flight was operating from Kuala Lumpur to Beijing and had many Chinese passengers on board.

“We are recovering in China. We have reached the seabed. One thing, of course, is a certain damage to our reputation. We may just need some time to recover that. Other airlines have experienced the same. You cannot change that overnight.” Mueller said.

He pointed out that China “has taken a little bit of a haircut” on GDP (Gross Domestic Product) in recent times. “The correlation between GDP and passenger demand is above 95%, but we have now a phenomenon in China that has not been observed in many countries in the world. In fact, business traffic still correlates to GDP so business traffic to and from China is down,” he said.

“But surprisingly, private consumption has not been affected by the decreasing GDP at all. There is an interesting explanation behind this. Private consumption - tourism or outbound tourism in China - correlates with the number of passport holders, not with GDP.

“And the number of passport holders in China is only 4% of the entire population. It’s an astonishingly low number. With the rate at which new passports are issued, we expect that to increase to 10% in the next seven or eight years.

“So outbound tourism is increasing and there is strong tourism demand originating in Mainland China. The second factor that is helping us recover is that Chinese tourists have two things they like very much when they travel somewhere: people with the ability to speak their language, which is plentiful in Malaysia, and secondly Chinese food. So we are one of the destinations of choice for Chinese tourists. They also come here in large numbers to shop in Kuala Lumpur and that helps.”

has removed several jets from its fleet. They include 17 B777-200ERs, which are all of grounded, sold or returned to lessors. Its fleet stands at 77: six A380s, 15 A330-300s and 56 B737-800s. The latter is due to be reduced to 35 by year end as older planes are retired.

On order, for delivery from 2018, are four A350-900s with options on another two. It also has options with lessor, Air Lease Corporation, for two A330-900neos. Although it was widely reported that MAB tried to sell its fleet of A380s, Mueller said there had been “a huge misunderstanding” in the media.

“We always wanted to retain them until 2018 because they are the only aircraft we can fly with to London. London has never been questioned as a destination in our network. London is basically so important to Malaysia, for a variety of reasons, that we would never have contemplated touching that route and we need all of the A380s. That will be the case until our new A350s arrive and that will be 2018. We are also, on an increasing basis, using the A380s for religious traffic to the Middle East,” he said.



The right-sizing of the fleet and the reduction in staff from 20,000 to 14,000 were no back of the envelop exercises. It was a carefully devised plan based on where MAB needed to fly, where it didn't and what its focus should be. MAB has dropped services to Paris, Frankfurt, Amsterdam and Istanbul and cut capacity to Australia by 40%. It also reduced frequency to several Asian destinations.

Mueller said the restructuring of an airline should be done with markets in mind. The carrier's long-haul network was designed when most airlines focused on traffic between Europe and Australasia.

Even today, he said, big airlines were using re-fueling stops in hubs such as Singapore and Hong Kong to link the markets. "What I'm saying is that the world has changed and there are two main impacts. Number one, that entire traffic from Europe to Australasia has gone to the Middle East carriers. They are much more competitive because of their geographic location and of course they are start-ups and are in a superior cost position," he said.

"Secondly, the trade between Europe and Australasia became inferior with the ascent of China. In 2001, China was number nine or 10 in ranking in the world economy. Now it is a very close number two to the U.S. Relevant traffic streams have changed. So our new network design was based on new origin and destination flows and new trade relationships between Malaysia and these emerging economies."

None of this means Europe is being downgraded in importance. One of the major steps Mueller took was to follow the example of Australia's Qantas Airways and sign an extensive codeshare deal with Emirates Airline. The deal was done in Dubai late last year.

"We are in a similar situation to Qantas. Flying into Europe ourselves had very thin traffic streams that left you with insufficient load factor. What does it mean for us? Clearly, we want to extend our network to those places where we will never be able to fly with a full aircraft ourselves," he said.

"That is Europe in the first place, but we will have more network extensions [through Emirates] to Africa, Latin America, North America

Capacity crunch coming?

Has he found any differences in running an airline in Asia from Europe. "You sometimes wonder if the industry has learned anything from the deregulation in the U.S. and Europe," he said. "We are making the same mistakes all over again, pouring too much capacity into otherwise very healthy markets and destroying the whole place. Currently, we have offerings in the market to fly to Langkawi for 20 Ringgit (\$4.75). It's unsustainable. It is a little bit of a surprise that the same mistakes are being made all over again."

and then places where it is difficult to generate enough traffic from Malaysia to fly to such cities as Tashkent, Teheran and many other destinations in the Middle East.

"By the end of the year, the choice of destinations you can reach with Malaysia Airlines will have increased by more than 60. "That is significant because we operate ourselves to a little bit more than 70. It's almost doubling the end points in our network. What our customers like most is that they can earn miles in our Enrich frequent flyer program for these flights. Very soon they will be able to redeem them on Emirates flights."

Initially, the MAB code is appearing on Emirates flights to 38 European destinations, 15 cities in the U.S. and 38 in the Gulf, Africa and Indian Ocean, with more to come.

As for the financial benefits expected from the partnership, Mueller wasn't saying. "Yes, we know that, precisely down to the last cent, but I would be reluctant to share that with you. It is significant and it is not only in terms of delivering additional revenue to us," he said.

"What you have to take into account is that we axe the losses on certain of our European routes and that is a bottom line improvement in its own right. We are getting rid of the losses, but still retaining the traffic."

One of the key factors in achieving success at MAB was reducing the staff to fit a smaller airline. Termination letters were sent to all 20,000 staff, with 14,000 being retained on new contracts.

The airline has another 2,000 workers on temporary contracts, but these jobs will be gone within this year. "Why is that? Because you simply cannot adopt new working procedures overnight," said Mueller.

"In some cases you need the help of supporting IT systems. In others you have to rewrite standard operating procedures. Now we are in a phase of the restructuring where we have to roll up our sleeves because the hard work is coming.

"We have structured more than 200 projects on the revenue and cost side. Some of them can be implemented rather swiftly and some others are dependent on a better IT structure and that can take up to two years in some cases. That's where we stand."

Mueller and MAB's senior management also have to deal with staff morale, which was at an all-time low after years of losses and the two accidents in 2014. Mueller described the morale situation today as "a





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little bit of a mixed bag". It was explainable, he said, because "those who were offered permanent contracts are very excited, looking forward and wanting to create something new", he said.

"For those who are with us on a temporary contract and know the leaving date is coming closer, I cannot blame them when they are not singing and dancing. But we will overcome that situation in a couple of months' time. I would answer by saying staff morale has increased."

Another critical change to be introduced at MAB is a measure to ensure staff and management can communicate effectively, often a problem for airlines. MAB has no unions, but Mueller believed it was very important to have employee representation.

"Shortcomings, leadership and whistle-blowing and all these type of things need to be channeled in a certain shape and form. So what we did, which is most probably unprecedented, was call in the employee representatives and asked them if they could kindly consider electing work councils so we had a counterpart to speak to," he said.

"That process is currently on-going. We have invited each employee group to elect two representatives: two from the flight attendants, two from the pilots, two from the mechanics, two from ground handling and so forth. It will allow us to communicate better with our employees and enable the employees to tell us what needs to be improved."

Absorbed as he is in the complexity of the airline's restructuring, Mueller is not ignoring the need for MAB to offer world-class service. He said the carrier has rightly been recognized for its good service delivery – the Malaysian mentality is to be very hospitable – but conceded the product needs a complete refresh.

"Little had been done because the airline was suffering from losses in the last couple of years. What is needed is a heavy investment in our products," he said.

Several improvements will be rolled out this year. A completely new catering concept is being introduced. "We will be absolutely leading in our food offering. Food is a very important factor in Malaysia. The cultural diversity we enjoy will enable us to offer the best Indian food if you fly to the subcontinent, the best Chinese food if we fly to China and also to Australia, a good steak cannot be rejected," he said.

"Catering will be rolled out in three waves. We started on our First Class just a week or two ago. That will be followed by long-haul business class and then the shorter routes."

New Business Class seats are being introduced. "The seats are above business class average. They are totally lie flat, but they are very wide and very long. There is a lot of storage space. I think they are just a notch below certain First Class seats I have flown recently on competitor carriers. That's very important because we fly long stretches," he said.

The airline's lounges worldwide are being refurbished and modernized and crew will have new uniforms. A completely new inflight entertainment system will be installed on the fleet.

When Orient Aviation spoke to Mueller he had just returned from a meeting on the introduction of Wi-Fi on most of the fleet, beginning early next year. "We are redoing our

entire service chain," he said.

But achieving sustainable profitability still won't be easy. MAB continues to operate in a fiercely competitive market awash not only with full-service rivals, but aggressive and still expanding low-cost carriers.

Mueller said competing is difficult, but not impossible. "If you had a choice between two or three carriers price still is the predominant factor. But what we can utilize, particularly against LCCs, is the quality of our schedule. Another important factor is connectivity here at KLIA (Kuala Lumpur International Airport)," he said.

"We are the only carrier in the land able to seamlessly connect passengers and luggage. Low-cost carriers don't have the IT capabilities to do that according to IATA standards. It is the benefit of a well-planned network. We are known in the market and we offer full service. That's where we compete, on service and on schedule." ■

The corporate doctor

There is little doubt that Malaysia Airlines' owners could not have found a better candidate to resurrect their stricken flag carrier than Christoph Mueller.

Having built a reputation as a turnaround specialist in more than 25 years in the aviation, logistics and tourism industries, the 54-year-old executive's record for results spoke for itself. His latest project, before taking charge of the new Malaysia Airlines Berhad (MAB) in March last year was the successful rehabilitation of Ireland's Aer Lingus.

Mueller, a 1988 graduate of the University of Cologne and a holder of an MBA, joined Lufthansa as a financial analyst in its internal audit department in 1989. From 1991 to 1994, he was a financial controller with Daimler-Benz Aerospace, where he implemented restructuring programs in several subsidiaries, including Dornier and Fokker. He re-joined Lufthansa as senior vice president finance in 1994 and was promoted to executive vice president in corporate planning and network management.

After completing an Advanced Management Program at Harvard Business School in 1999, he joined Belgian airline, Sabena, as its chief executive; a job cut short by the downturn in the airline industry that followed the 9/11 terrorist attacks in 2001. As bankruptcy approached for the airline, Mueller went to the market for funds and launched Brussels Airlines on the day Sabena was grounded.

He was chairman of the airline until 2002 and then moved across to DHL Worldwide as chief financial officer. Within a year, he had taken the company to an improved bottom line of \$300 million. Mueller also was the executive aviation director at Tui Travel, where he restructured the lease portfolio and order book of seven airlines and their 170 aircraft.

He also held non-executive directorships at several companies including LOT, Luxair, Lauda Air and Tuifly. In 2009, he was appointed chief executive of Aer Lingus, guiding the loss-making carrier to profitability in just 12 months. Under his leadership, Aer Lingus improved its operating results from a loss of \$90 million to an \$80 million profit in a shrinking Irish market.

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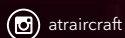
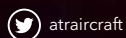
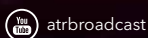
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No where to grow

As Asia-Pacific airport traffic continues to outpace forecasts, the growth is prompting more warnings from carriers that governments must accelerate their infrastructure expansion.

By Tom Ballantyne

When a number of Asia-Pacific airports released their detailed traffic statistics for 2015 it confirmed the predictions of airlines that airports will face serious congestion if they don't fast track infrastructure expansion.

In 2015 at Tokyo Narita international airport, which already is squeezed for slots, domestic and international passengers hit a record high in 2015, for the second consecutive year. They increased by 5% over the previous year, to 37.32 million. The growth, including a 23% increase in foreign visitors, to 12.49 million, reflected a surge in visitors to Japan as the Yen declined and domestic flights operated by low-cost carriers increased, said the Narita International Airport Corporation.

It was a similar story at Osaka's Kansai International Airport. For the first time since it opened in 1994, foreign travelers topped 10 million in 2015, a 59% increase over 2014. Passenger traffic hit a record 23.21 million, with the number of people on international flights jumping 24%, to 16.25 million, also a record. Domestic passengers grew 11%, to 6.96 million.

Hong Kong International Airport (HKIA), the third busiest airport in the Asia-Pacific, also set records for passenger traffic and aircraft movements in 2015,



bringing it closer to full capacity. Following a record-breaking 2014, the airport's traffic volumes continued to surge last year, with 68.5 million passengers and 406,020 flight movements, growth of 8.1% and 3.8%, respectively. The airport's cargo throughput also reached a record 4.38m tonnes.

"Expanding the airport into a three-runway system (3RS) is the only option for us to meet long-term air traffic demand," said Airport Authority Hong Kong chief executive, Fred Lam. "We will continue the preliminary work on the 3RS project, aiming to commence construction this year," Lam said.

It is a similar story across the region. In February, Thailand reported its six main airports had robust passenger growth of 21.3% last year, setting a record of just under 110

million passengers for 2015. Airports of Thailand (AoT) said the expansion momentum is expected to continue in 2016 and conservatively projected 11% growth in combined passenger numbers for the year.

Bangkok's Suvarnabhumi, the gateway to Thailand, accounted for the lion's share of air traffic, handling 52.9 million passengers last year, up by nearly 14% over the previous 12 months. Its official passenger capacity is 45 million a year. The city's second airport, Don Mueang, had the strongest passenger growth, not only in Thailand but in the region, as surging low-cost carrier traffic pushed the facility well beyond its limits. Passengers using Don Mueang leapt 40.7%, to 30.27 million, with international numbers jumping 53.1%, to 9.17 million, and domestic passengers

growing to 21.1 million, an increase of 35.9%.

The director general and CEO of the International Air Transport Association (IATA), Tony Tyler, wrote in a recent commentary in Japan's Nikkei Asian Review that historically, the Asia-Pacific had shown leadership on infrastructure. "It is home to several of the world's best and biggest airports. The Asian travel experience is certainly among the most pleasant in the world," he wrote.

"It will not stay that way without continuous hard work, strategic investment and regional cooperation. Singapore, Hong Kong and Seoul are legendary for great passenger experiences. But there are some regional bottlenecks to sort out.

"For example, you would be hard-pressed to find anybody singing the praises of the

airports in Jakarta or Manila and comments on Bangkok's Suvarnabhumi airport are as likely to be about its crowded corridors as about its great shopping experience," Tyler said.

"Building the infrastructure to meet growing demand for people and businesses to connect by air is a global challenge, he said. "The pressure is most intense in the fast growing Asia-Pacific, where airports and skies will need to handle 2.5 billion more passengers than they do today."

Tyler said that all the region's aviation infrastructure will come under increasing demand as the Association of Southeast Asian Nations' (ASEAN) single aviation market policy comes to fruition. "Every market that has liberalized has seen an economic boost as people's needs for connectivity



were fulfilled. There is no reason to believe that the ASEAN experience will be any different. Cost-efficient infrastructure must be available to accommodate demand," he said.

Association of Asia Pacific Airlines (AAPA) director general, Andrew Herdman, said: "Looking at the region's forecast of 5% to 6% continuing annual growth, and with the region projected to order around 40% of all new aircraft over the next 20 years,

the AAPA is concerned that adequate provision be made to accommodate the expansion.

"Most big hub airports, such as Singapore and Seoul, are ahead of the game, but red tape is causing bottlenecks elsewhere," he said.

An example of cumbersome bureaucracy inhibiting airport development is the proposed Long Than International Airport, to be built outside Ho Chi Minh City. It will be Vietnam's largest

airport, but it will likely be inaugurated five years behind schedule if it follows procedures as required, the National Assembly Economic Committee in Hanoi has warned.

To complete all procedures would mean that site clearance won't start until 2020 and land acquisition by 2023, the committee said. Construction could commence as late as 2030. The \$16 billion airport, with a capacity of 100 million passengers and five million tonnes of cargo annually, would not be completed until 2050.

Many believe that even in China, one of the worst areas for airport and airways congestion, the \$11.7 billion being spent this year on the construction of civil aviation infrastructure is insufficient to solve forecast air traffic and airport congestion. ■

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Landmark industry standards for emissions

Airlines and industry manufacturers universally supported the long-awaited announcement on emission standards for passenger and cargo jets but some critics want more stringent rules.

Tom Ballantyne reports

It has taken six years of painstaking negotiations and technical work, but finally the world's aviation regulator, in the form of the International Civil Aviation Organisation's (ICAO) environment panel, has announced new standards for greenhouse gas emissions from aircraft.

From 2020, ICAO will require all new aircraft designs to meet the new standards. Designs already in production must comply after 2023. There will be a cut off date of 2028 for manufacturers that have not introduced the new ICAO standards into their aircraft fleets.

The standards will be the first to impose binding energy efficiency and carbon dioxide (CO₂) reduction targets for aviation. When fully implemented, they are expected to reduce carbon emissions from aircraft by more than 650 million tons between 2020 and 2040, equivalent to removing more than 140 million cars from the road for a year.

Airliners must achieve an average 4% reduction in fuel consumption during the cruise

phase of flight, starting in 2028, when compared with planes delivered in 2015. They also must set a 33% emissions reduction target for new large aircraft in production, commencing in 2023 and staggered over a five-year period.

Negotiators agreed to a second standard, which would deliver a 36% reduction in emissions on new models of large planes from 2020. The new standards will not apply to existing in-service aircraft.

The Committee on Aviation Environmental Protection (CAEP)'s agreement must be approved by ICAO's 36-nation governing council, but no substantial changes are expected. ICAO

council president, Olumuyiwa Benard Aliu, said the agency's goal "is ultimately to ensure that when the next generation of aircraft types enters service, there will be guaranteed reductions in international carbon emissions".

"The agreement of this CO₂ standard is a vital and very welcome development," said Tony Tyler, director general and CEO of the International Air Transport Association (IATA). "The CO₂ Standard does not solve aviation's climate challenge on its own, but it is an important element in our comprehensive strategy for tackling carbon emissions.

"The next milestone will be the implementation of a Market Based Measure to address CO₂ emissions, which we hope will be agreed at the ICAO Assembly in September. Our shared industry goals are for carbon neutral growth from 2020 and a 50% cut in CO₂ emissions by 2050. This CO₂ standard is a significant milestone in meeting those targets. It proves the industry and the world's governments are working together in seeking a sustainable future for aviation."

The announcement was welcomed by the big aircraft

manufacturers. "Airbus has invested significantly in improving the environmental performance of its sites, products and services, consistently bringing the most eco-efficient aircraft to the market, meeting and surpassing environmental performance requirements," the Toulouse-based plane maker said in a statement.

It said its new A320neo reduces CO₂ emissions by 15% today, rising to 20% by 2020, while the A350 XWB is cutting CO₂ emissions by 25% compared with the aircraft it is replacing. The A330neo will offer a 14% reduction in CO₂ emissions, and the A380, in service since 2007, shows a 40% reduction in CO₂ emissions compared with previous generation very large aircraft.

Boeing commended the CAEP agreement and said it is fully committed to meeting the new emissions standards. This agreement represents real progress beyond the substantial industry achievements already made to reduce aviation emissions, it said.

"The new standard is ambitious and will become part of the certification process applied to every airplane before delivery based on the ICAO schedule," it said in a statement. "We have made significant investments to improve the efficiency and environmental performance of our products and will continue to

ICAO council president, Olumuyiwa Benard Aliu: the next generation of aircraft types will have guaranteed reductions in carbon emissions



do so. Environmental goals are aligned with our business goals as greater fuel efficiency and lower emissions are top priorities for our commercial customers.

"We believe the ICAO standard will have the intended results of ensuring older aircraft are replaced by newer, more efficient aircraft that will further reduce fuel use and carbon emissions."

Boeing said its B787 Dreamliner family reduces fuel use and CO₂ emissions by 20% to 25% compared with aircraft it replaces.

The new B737 MAX, with first delivery expected in 2017, will reduce fuel use and emissions by 20% compared with the original Next-Generation B737. The B777X, with first delivery scheduled for 2020, will be the world's largest and most fuel-efficient twin-engine jet, said Boeing.

Even the White House chimed



in with praise, when it said the agreement "is an important signal that the international community is well-positioned to rise to the challenge of implementing a global market-based approach to reduce aviation emissions".

But the response from some

environment groups was muted. Dan Rutherford, aviation director at the U.S.-based International Council on Clean Transportation, said the standards don't set the bar high enough. He said they require reductions of only a third of what aircraft will be capable

of achieving when the ICAO standards take effect.

As a result of demands from their airline customers, the latest Boeing and Airbus designs already meet the proposed efficiency standards, he said. In the meantime, the manufacturers can continue to sell older, less efficient designs for years as airliners now in use are exempt from the new standards altogether, meaning even dirtier planes can continue to fly, he said.

Environment groups added ICAO had been working on international standards for 18 years and is now proposing to give aircraft manufacturers another dozen years to comply.

"This outcome was the minimum needed from ICAO for a credible first start," said Bill Hemmings, aviation director at Brussels-based NGO, Transport & Environment. "The Europeans moved a bit, but it was not what the U.S. administration wanted." ■

NEWS

Singapore upgrades aircraft tracking

By Tom Ballantyne

Singapore's regulator, the Civil Aviation Authority of Singapore (CAAS) has become the first air navigation service provider in the Asia-Pacific to adopt space-based ADS-B (Automatic Dependent Surveillance – Broadcast) that will allow equipped aircraft to be tracked wherever they are flying in the country's airspace.

The CAAS signed a 12-year subscription agreement with Aireon during the Singapore Air Show last month that will provide space-based (ADS-B) data for the Singapore Flight Information Region (FIR).

In the next two years,

CAAS will set up the necessary infrastructure to integrate the service with its Air Traffic Control systems. The system will supplement existing surveillance sensors and improve air traffic controllers' situational awareness.

"Demand for air travel is growing rapidly in the Asia-Pacific region," said Kevin Shum, the director general of CAAS. "CAAS is committed to continuously investing in cutting edge and cost effective air traffic management capabilities to manage this growth. The use of space-based ADS-B will keep Singapore at the forefront of emerging air traffic management technologies. By doing so, we can safely improve the efficiency and capacity of air navigation

services for the areas under our responsibility."

Chief executive at Aireon, Don Thoma, said Aireon had signed a Memorandum of Agreement with CAAS a little over a year ago to explore the feasibility and impact of implementing space-based ADS-B in the Singapore FIR.

"The CAAS and Aireon teams successfully worked together to evaluate the capabilities, assess the operational changes and measure the benefits that could be realized by spaced-based ADS-B. We are proud of our continued partnership and fully support CAAS in providing enhanced services to their customers and the flying public,"

the company said.

Aireon is deploying a global, space-based air traffic surveillance system for ADS-B equipped aircraft across the globe. For the first time, it will provide real-time ADS-B surveillance to oceanic, polar and remote regions as well as augment existing ground-based systems that are limited to terrestrial airspace.

In partnership with leading Air Navigation Service Providers, NAV CANADA, the Irish Aviation Authority (IAA), ENAV and Naviair, as well as Iridium Communications, Aireon will have its global, space-based air traffic surveillance system by operational by 2018. ■

“Avalanche” coming for Asia-Pacific MROs

Boeing and Airbus didn't use much ink signing up orders at the Singapore Air Show last month, but it was a different story on the maintenance, repair and overhaul (MRO) front. A flurry of deals underscored the growing importance of the sector in the region and the scramble by non-Asian players for a share of the business.

Tom Ballantyne reports

Sales of \$3.15 billion at list prices may sound like a lot of money, but historically speaking, deals for new jets at February's Singapore Air Show were thin on the ground.

The big story at the show was MRO growth, with several non-Asian companies upgrading their investments in the region to secure a share in the expanding aviation MRO industry.

The global MRO market is valued at \$65 billion, with the Asia-Pacific holding almost 30% of it. In 2015, the MRO spend in the Asia-Pacific, including China and India, was estimated at \$18.3 billion, said Christopher Doan, vice president of Oliver Wyman, a global management consulting firm.

Oliver Wyman acquired MRO forecasters, TeamSAI, in February last year and integrated it into CAVOK, its aviation technical consulting business and services practice. Doan forecasts MRO Asia-Pacific business will grow to \$34.8 billion by 2025.

Another management consultancy, ICF International, is more cautious. It said that by 2024, the global MRO market will be worth \$90.1 billion, with the Asia-Pacific's share predicted to be \$29.2 billion. The region will grow 4.9% a year and in China by 6.8% for MRO providers.

With such financial incentives ahead, it is not surprising that both independent MRO providers and original equipment manufacturers are focusing on the region in their search for growth.

In Singapore, Airbus and the Singapore Airlines Engineering Company (SIAEC) signed an agreement to form a joint venture, based in Singapore, to provide airframe maintenance, cabin upgrade and modification

services for A380, A350 and A330 aircraft operating in the region. The joint venture is subject to the relevant regulatory approvals.

It is SIAEC's first collaboration with a major aircraft manufacturer for airframe maintenance. SIAEC will hold 65% equity in the joint venture and Airbus the remaining 35%. Said Fabrice Brégier, Airbus president and chief executive: “the Asia-Pacific is a key market

for Airbus wide body planes. It will continue to drive demand for larger aircraft types such as the A380, the A350 and the A330. Setting up a world class facility in this region with SIAEC reflected Airbus' strategy to develop a full range of support services for operators of our aircraft near to their home bases.” The joint venture partners will lease two hangar bays from SIAEC for its operations, with plans to add two more in the next six years.



Europe's AFI KLM E&M also is making a major investment in Singapore through its partnership with Indian software company, Ramco, and the support of the Singapore Economic Development Board. The research and development (R&D) centre, the MRO Lab, is focusing on strategic MRO sectors from Big Data solutions to predictive maintenance and customer experience to artificial intelligence.

"We are proud to extend our R&D capability and anchor it in the heart of Singapore, one of the world's greatest innovation platforms," executive vice president AFI KLM E&M, Franck Turner said.

Ramco vice chairman and managing director, P R Venketramana, added: "The MRO Lab will set a new benchmark for innovation and we are happy to have an anchor customer who shares the same passion to develop solutions that can transform operations in the aerospace industry."

Also in February, Germany's Lufthansa Technik (LHT) announced it would establish an Airbus A350 XWB spares pool in Hong Kong, the first step in its efforts to be a MRO leading provider for the new Airbus wide bodies in the Asia-Pacific.

It also has completed various Asia-Pacific construction and MRO service-expansion efforts to secure business from new aircraft types—including the A350 XWB and Boeing 777X—that have been ordered in large numbers by the region's airlines.

"The priority for our customers is parts availability and reliability," said Gerald Steinhoff, the global MRO's senior vice president corporate sales Asia-Pacific. "It is important where our A350 material will be placed and how fast it can be delivered to the airlines with MRO capabilities in the area. We have

decided, as an initial step, to open a pool location in Hong Kong." He hinted other developments, including an A350 XWB MRO partnership, could follow. "There is a certain interest among potential partners in the region for a joint approach," he said.

Insiders speculated that Cathay Pacific Airways, with 22 A350-900s and 26 A350-1000s on order, could be a potential partner. LHT is preparing for a large Asia-Pacific requirement for A350 XWB and B777X MRO by expanding two of its four existing facilities at Lufthansa Technik Philippines (LTP) and Lufthansa Technik Shenzhen (LTS).

LHT sees engine and component MRO as the "strongest drivers of growth" in the Asia-Pacific and it has established the strongest products, measured on volume," said Steinhoff. The company manages component MRO for more than 300 aircraft in the region and operates spares pools in Hong Kong and Singapore for several aircraft types.

Steinhoff said his company's overall business is growing especially fast in Southeast Asia, although "geographically, we have customers in every Asia-Pacific country". An example is the contract LHT signed with Lion Air to build a facility for machine maintenance at the Indonesian airline's Batam complex.

Also in Indonesia, Garuda MRO subsidiary GMF AeroAsia has set up a partnership with aircraft services provider, SR Technics, to develop its aircraft component business and improve services.

GMF will be supported by SR Technics in providing B737NG aircraft components to its customers. GMF president director, Richard Budihadianto, said the company signed contracts worth \$100 million at February's Singapore Air Show, including the extension of a

Singapore and FAA sign MRO standards agreement

The U.S. Federal Aviation Administration (FAA) and the Civil Aviation Authority of Singapore (CAAS) concluded a milestone Maintenance Implementation Procedures (MIP) agreement last month that allows for reciprocal acceptance of safety oversight requirements, as well as the mutual recognition of procedures for the approval and monitoring of aircraft maintenance organizations. The MIP was concluded under the wider ambit of the U.S.-Singapore Bilateral Safety Agreement (BASA) signed in 2004.

The BASA is a government-to-government umbrella agreement that gives provides a framework for the FAA and CAAS to develop implementation procedures for reciprocal acceptance in areas including, but not limited to, approval and monitoring of maintenance facilities and maintenance personnel, flight operations and flight crew members, as well as aviation training establishments.



The MIP will significantly reduce regulatory burdens and compliance costs for the aviation industry and will eliminate duplication of inspections and audits on aircraft maintenance organizations in Singapore and the U.S.

"This landmark agreement with the Civil Aviation Authority of Singapore will strengthen aviation safety while reducing the cost of inspections for aircraft repair work," said FAA Administrator, Michael Huerta. "The United States looks forward to our continued collaboration with ASEAN Member States."

Director-General of CAAS, Kevin Shum, said: "This latest agreement between CAAS and the FAA reflects the strength of our bilateral relationship that dates back more than two decades. We share a common goal in finding solutions to tackle complex challenges in the aviation landscape, in areas such as aviation safety and security, air traffic management, environmental issues related to aviation, and human capital development."

contract with Malaysian airline, Eagle Express, for its A330 and B747 aircraft and MRO contracts with KLM and Indonesia's Sriwijaya Air.

At the Singapore Air Show, SR Technics and Ho Chi Minh City-based Vietjet signed a six-year integrated component support agreement for the budget carrier's A320 and A321 fleet. The new agreement follows

the signing of SR Technics as Vietjet's long-term partner for CFM56-5B engine services in 2015.

U.S. headquartered engine-maker, Pratt & Whitney, is moving deeper into the region with the announcement it will incorporate V2500 engine overhaul capability into its joint venture facility in Shanghai. The Pratt & Whitney Shanghai Engine Centre opened

in conjunction with China Eastern Airlines in 2009 to overhaul CFM56 engines. Maintenance of the V2500 engines at the facility will commence in 2017.

"The Shanghai Engine Centre is a proven, high-quality engine maintenance provider in this very competitive Asia-Pacific market," said Matthew Bromberg, president of Pratt & Whitney Aftermarket. "Growing capabilities at this facility exemplifies our commitment to providing operators with comprehensive services at a competitive cost."

Three of China's HNA Group subsidiaries have signed a V-Services Fleet Hour Agreement (FHA) with Pratt & Whitney for maintenance of their combined fleet of 46 V2500 engines. The agreement covers West Air, Beijing Capital and Tianjin Airlines. "When it comes to our fleet, we do not compromise on our aircraft's performance and overall reliability," said Xin Di,

chief executive of HNA Aviation Group. "I am confident that under this V-Services agreement we have the right resources in place to maintain our engines to the highest regard."

OEMs continue to expand their MRO market share with the region's airlines, particularly with aftermarket power-by-the-hour services. Many airlines regard these agreements as more efficient in handling their engines, maintenance and deals for components.

Singapore Airlines (SIA) has signed a 10-year Flight Hour Services Tailored Support Package (FHS-TSP) contract with Airbus to integrate and provide full component support, line and base airframe maintenance and fleet technical management services for the carrier's 19 A380s.

It also extended its OnPoint solution agreement with GE for the MRO of the GE90-115B engines that power 19 of its

B777-300ER aircraft. "GE Aviation is honored to have the opportunity to continue maintaining Singapore Airlines' GE90 engine fleet," said Kevin McAllister, president and chief executive officer of GE Engine Services.

One of GE's largest customers in Asia, China Airlines, has confirmed a 15-year OnPoint materials solution agreement with the U.S. provider for new parts, component repairs and used, serviced materials for the overhaul of its fleet of CF6-80E engines that power the Taiwanese carrier's A330 fleet. GE's aviation engine arm has announced it will invest US\$78.6 million in Singapore aerospace ventures in the next decade.

GE also negotiated an OnPoint Solutions agreement with Colorful Guizhou Airlines for the carrier's CF34 engines. The 10-year deal, worth \$56 million, covers all MRO work for its CF34-10E engine fleet that powers its

seven Embraer 190 aircraft.

Unveiled in January, Rolls-Royce's SelectCare is an additional services option to the company's comprehensive TotalCare package and the more basic MRO services offer. Senior vice president of customer strategy civil engines at the manufacturer, Richard Goodhead, said Rolls-Royce has effectively provided a package that allowed customers to have a set number of overhauls at a fixed price while offering them access to some service options available with TotalCare.

Following the success of its first off site customer service centre (CSC) in Singapore, the Derby, UK-based engine maker, which has forecast a 300 per cent increase in MRO business in the next 15 years, will open in three more CSC: in Derby (Europe, the Middle East and Africa), Washington D.C. for The Americas and Beijing for Greater China. ■

AFI KLM E&M builds business with its Asian clients

Global MRO provider, AFI KLM E&M, announced major deals with two Asia-Pacific airlines and Indonesia's giant aircraft maintenance operator, GMF AeroAsia, in February.

The Southeast Asian MRO and the European headquartered company signed a comprehensive Memorandum of Understanding (MoU) that extends their relationship for engine overhaul and repairs and C checks on B744 aircraft.

The MRO includes component support synergies for Boeing and Airbus fleets and the maintenance of GE90, CFM56-7 and other CRM56 engines. AFI KLM E&M said it also is considering subcontracting maintenance services for B747 series airplanes to GMF.

"The extension of this agreement with a major MRO in the Asia-Pacific demonstrates the competitiveness of our component and engine offering," said executive vice president AFI KLM E&M, Franck Ternier. "A wide range of topics are currently under discussion. This is a natural continuation of the successful partnership agreement signed



in 2014," AFI KLM E&M said.

In South Korea, fast expanding budget carrier, Jeju Air, has agreed with AFI KLM E&M to extend its maintenance contract for the CFM56-7B engines that power its B737-800 fleet for more visits. The long term contract will eventually cover a planned Jeju Air fleet of 40 aircraft.

In the same month, new client, Wuhan based Chinese cargo airline, Uni-Top Airlines,

confirmed a support agreement with the European MRO for the CF6-80C2 engines aboard its seven A300 aircraft. The deal includes spare engines and 14 shop visits.

AFI KLM E&M has "a personalized approach to the client and their expertise and their wide range of resources are an assurance of fast and efficient services for us," Uni-Top executive vice president, Yu Huang said.

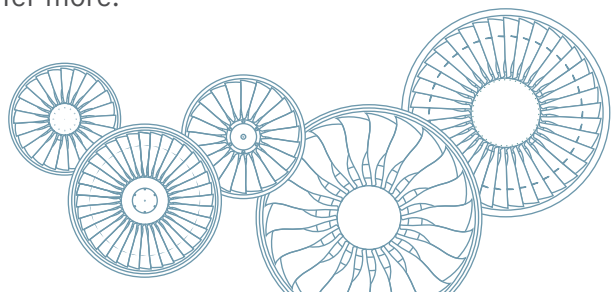


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MTU Aero Engines wins big in Singapore

Singapore was good news for MTU Aero Engines orders with the engine manufacturer scoring business worth US\$570 million during the February air show. The German engine manufacturer and MRO provider scored especially high with commitments for the PurePower PW1000G-family geared turbo fan (GTF) engine, a power unit developed in conjunction with U.S. manufacturer, Pratt & Whitney.

Air Canada signed a Letter of Intent with Bombardier, the manufacturer of the new CSeries jet for 45 of the -300 variant plus 30 options, to be powered by GTF engines, in February. The aircraft deal is estimated to be worth US\$3.8 billion.

Adding to the order book was budget carrier Vietjet's decision to order 63



A320neos and A321neos, powered by GTF variant, the PW1100G-JM engine, and the Letter of Intent signed between lessor, Aerolease, and Mitsubishi Regional Jets for 20 of the Japanese aircraft, also to be powered by a GTF variant.

As a bottom line bonus, MTU shared in an order for IAE V2500 engines for 23 A320ceo jets ordered by the China Aircraft

Leasing Company.

In the Original Equipment Manufacturing (OEM) business, MTU Aero Engines plays a key role in the development, manufacture and marketing of high tech components with international partners. Almost a third of today's active aircraft in service are equipped with MTU components.

MTU CEO, Reiner Winkler, said: "In the commercial engine business, the GTF programs for single aisle aircraft are critical in defining MTU's future.

"At our headquarters in Munich, preparations are going full steam ahead for the final assembly of the A320neo engine. MTU will assemble one third of all the engines for the neo jets. This is a pretty demanding task." ■

ST Aerospace opens VIP jet repair centre at Seletar

Tom Ballantyne reports

The Singapore Seletar Aerospace interiors centre, officially opened in mid-February, is equipped with facilities that "allow aircraft owners to work with in-house designers to visualise the interior of their aircraft through 3D renderings and 3D printing of scale models that give the most

realistic impression of each element before the production phase," said ST Aerospace.

ST Aerospace's latest venture, a facility to equip and maintain private jets, is the first of its kind in the region. The MRO company entered the VIP aircraft completion and refurbishment business in 2011 through its U.S. affiliate, VT San Antonio Aerospace. Operating as AERIA Luxury Interiors, the Texas-based

centre specializes in completions and refurbishment of Airbus and Boeing aircraft and benefits from access to the skilled craftsmen and engineering talent pool in the U.S. state.

Now ST Aerospace has expanded its VIP aircraft interior offerings on the back of the successful build-up in San Antonio and set up the VIP Aircraft Interiors Centre in Singapore. "We see potential in reaching out to

customers in this region for VIP aircraft interiors," said Lim Serh Ghee, president of ST Aerospace.

"Besides increasing our geographical footprint to provide convenience to customers in this region, what is also exciting is the amount of skills transfer involved. New skills are imparted from our successful set-up in the U.S., to ensure we offer the same level of aesthetics, engineering and on-time delivery in Singapore," he said.

By going up the value chain at Seletar, its 70 staff will provide VIP luxury cabin interior design, engineering, installation and maintenance services to customers from across Asia-Pacific and the Middle East, the MRO said.

Executive vice president, aircraft maintenance and modification of ST Aerospace, Ang Chye Kiat, said the company had noticed rising demand from aircraft operators for VIP aircraft cabin interior refreshes to be done at the same time as heavy maintenance. ■



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