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EXPRESS RIDE TO SUCCESS

Targetting budget travellers' hotspots has fast tracked HK Express to success says CEO Andrew Cowen

Turkish Airlines' goal: 5% of the world's passengers

Taiwan's transit door pushed ajar

ASEAN open skies proves elusive

SPECIAL REPORT

Singapore's aerospace ascendancy

Orient aviation 22 YEARS

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Singapore's aerospace supremacy

The reasons for Singapore's success as the region's primary aerospace hub are no mystery.

Its technical talent pool, nurtured by an excellent education system and a strong emphasis on science at its universities, provides a skilled workforce for every sector of the industry.

As well, Singapore is politically stable and English is widely spoken. Its laws enshrine protection for intellectual property and its legal and financial system is business friendly.

Government operates with a minimum of red tape for business start-ups. The Economic Development Board offers a broad range of incentives to support businesses in their development.

And, of course, Changi International Airport is the almost perfect hub. It connects Singapore to the world while always expanding its facilities to keep ahead of demand.

As a result, especially as Seletar Aerospace Park has come on line, is that the city has attracted virtually all of the world's major aviation manufacturers to its shores. It also has welcomed global leaders in airline logistics and components supply, training and Research and Development.

In essence, Singapore has become a magnet for the best aerospace has to offer worldwide. The manufacturers who have spent billions setting up subsidiaries in the city represent a who's who of the global industry.

As the Civil Aviation Authority of Singapore (CAAS) puts it, Singapore "promotes an environment where enterprises thrive, ideas flourish and innovation prevails. It supports the introduction of new aviation technology, products and processes and works with the industry to develop and enhance its capabilities. It is our intent to maintain a robust and progressive regulatory framework to support the growth of the industry."

By 2030, Asia will have a middle class of 2.5 billion people. Whatever economic issues confront the region, there is no doubt that aviation will grow and with it the need for industry expansion.

Singapore's aerospace sector, which has recorded average annual growth of 10% in the last two decades, and is predicted to earn $9 billion this year, remains ever competitive and is garnering all opportunities to increase its dominance as an aerospace hub.

Other governments in the region would do well to examine Singapore's achievements if they want to develop aerospace industries to a standard that will challenge the Lion City's supremacy. In the meantime, annual earnings of $9 billion are nothing to be sneezed at. Well done, Singapore. ■

TOM BALLANTYNE
Chief Correspondent
Orient Aviation Media Group

Taiwan's transit door pushed ajar

China's announcement that it would partially remove the ban on Mainland travelers transiting through Taiwan was hailed as a major business boost for Taiwanese carriers, but the new rules are still a long way from totally opening up the market.

Tom Ballantyne reports

Taiwan's China Airlines was clearly elated with the news that Beijing had agreed to allow travelers from some Chinese cities to transit through Taiwan for the first time. The flag carrier "expressed welcome" that Chinese nationals flying from Nanchang, Kunming and Chongqing will soon be able to transit through Taoyuan International Airport.

Welcome they may be, but CAL clearly wants more. "We are ready for the latest announcement and look forward to seeing the policy expand to all Chinese cities," an airline statement said.

No timetable has been announced for the new rules although Beijing said Mainland transit passengers will not be allowed to leave the airport and added the plan would only be implemented after preparatory work between the two sides was completed.

Nevertheless, for Taiwan's airlines, particularly CAL and EVA Air, the decision is a significant step forward. They have long complained they were disadvantaged by China because Mainland travelers can transit through other regional hubs, including Hong Kong, Singapore, Seoul and Tokyo.

Talks between Taipei and Beijing about lifting the transit ban had dragged on for years. Early last year, it was believed China would change its position before year end, but the discussions seemed to stall.

And it was politics, it appears, that prompted Beijing's shift on the issue. The CAPA consultancy believes the decision was "a possible sweetener" in the lead up to the Taiwanese general election that was held last month.

The election delivered a victory to a party that does not favour closer ties with Mainland China and came at time when a significant number of Taiwanese felt cooperation with the Mainland had not delivered benefits – hence the offer of transfer traffic rights to Taiwanese carriers, CAPA said.

Taiwan's Ministry of Transportation and Communications said the decision will support Taiwan's plan to develop as an Asia-Pacific transit center, increase Taiwan Taoyuan International Airport's passenger capacity and also non-aeronautical revenue within the airport zone.

Chinese government tourism statistics reveal that there were 107 million outbound Chinese tourists in 2014, with 2.16 million of them headed for the U.S. North American bound travelers are forecast to reach six million this year. If a portion of them transit through Taiwan, it will stimulate enormous business opportunities for the country. When the transit scheme is fully operational, it is expected to produce $290 million in benefits a year for Taiwan's airlines.

Twenty direct flights a week link Taiwan with Chongqing, Kunming and Nanchang, with 15 of them operated by Chinese airlines, said Taiwan's Civil Aeronautics Administration (CAA).

Since the decision to partially lift the transit ban, Taiwanese carriers are examining more direct cross strait flights from the three Mainland cities to Taiwan. The CAA estimated most of the 180,000 travelers from the three cities forecast to transit through Taoyuan will be bound for the

U.S., Canada, New Zealand or Australia.

"Unsurprisingly, the proposed program is starting small, with Taiwanese carriers able to transfer traffic out of the three cities. These are not primary points. The biggest, Chongqing, is Taiwanese airlines' 22nd most served mainland point. But transfer traffic could help Taiwanese carriers sustain service to smaller cities, where point-to-point demand is thin and there is room to boost load factors, unlike the situation on Beijing and Shanghai," CAPA consultancy said.

Starting the transfer program as a confined trial "is the general modus operandi of the mainland Chinese authorities, going back to the special economic zones of past decades." Beijing adopted the same approach when cross strait flights were introduced gradually between China and Taiwan.

CAL said: "With new fleets of B777-300ERs and the upcoming delivery of A350 aircraft, we look forward to increasing [Mainland] passengers travelling to Europe, North America, New Zealand and Australia after the latest policy officially hits the road," the CAL statement said.

Taiwan's flag carrier operates three flights a week between Taoyuan and Nanchang, two flights weekly between Kaohsiung and Nanchang and two flights a week between Kaohsiung and Chongqing.

"China Airlines owns the highest market share on Mainland China routes, and offers passengers access to an extensive global network. The comprehensive network includes 32 passenger destinations with 135 flights a week. The upcoming launch of a new route to Yangzhou, on February 1, will expand our operation to 33 passenger destinations and 137 flights a week," CAL said.

However, CAPA said: "The possibility of connecting traffic is unlikely to lead to significant capacity growth for Taiwan's airlines, who regard connecting traffic from Mainland China as supplementing, not dominating, point-to-point traffic."

Still, it is a start. Taiwanese airlines will be eager to promote the transit program and to demonstrate some traffic growth so the new rules can be extended to more Mainland cities and also allow passengers to stop over in Taiwan.

Taiwanese airlines may aim to carry transfer traffic to Taiwan from larger major cities such as Beijing and Shanghai, where the business travel sector is larger and yield is superior to secondary cities, but the attraction of transfer traffic out of the main cities is not as strong as it might seem.

Capacity controls and slot limitations are capping the number of flights into Beijing and Shanghai. For Taiwanese airlines to expand into these major cities would require stopover approval, which in turn would require slot expansion. Shanghai Pudong is gradually increasing slots, but Beijing is unlikely to have significant slots available until its new airport opens later in the decade, analysts said. ■

> "Transfer traffic could help Taiwanese carriers sustain service to smaller cities, where point-to-point demand is thin and there is room to boost load factors, unlike the situation at Beijing and Shanghai"
>
> **The CAPA consultancy**

China ignores IATA's reservations about its new slot auctions

The International Air Transport Association opposes China's pilot slot auctioning system, launched at two major Chinese hub airports in December, but it appears Geneva has lost the battle to withdraw the scheme.

Tom Ballantyne reports from Geneva

The International Air Transport Association moved quickly after China announced in early December that it planned to auction slots at overcrowded Shanghai Pudong and Guangzhou Baiyun airports.

Within days an IATA team was in Beijing where the delegation met Civil Aviation Administration of China (CAAC) and Air Traffic Management Bureau (ATMB) officials.

But their request that Beijing's regulators adhere to the Worldwide Slot Guidelines (WSG) system fell on barren ground. "Unfortunately, this is an edict that was handed down from the [Communist] Party itself to the CAAC and ATMB and there's not much we can do to actually say no in this case," said IATA's head of worldwide slots, Peter Stanton.

"For reasons I won't be public about ...... there have been various issues that have been brought to the Party's attention and this is one of the mechanisms they have decided to put into place."

Speaking at the IATA Global Media Day in Geneva, Stanton did not have to wait long to discover he was right. By year end, nine slots at Guangzhou Baiyun were put up for auction and snapped up by seven airlines for 550 million yuan (US$84.7 million).

Most of the slots were purchased by China's biggest and richest carriers and their subsidiaries. Urumqi Air, a subsidiary of Hainan Airlines, China's fourth-largest airline, paid the highest price, 90.99 million yuan ($14.02 million), for a slot.

Other successful bidders included Shenzhen Airlines, China Southern Airlines, China Eastern Airlines, Xiamen Airlines, Zhuhai Airlines and Guizhou Airlines. The slots are valid for three years, but carriers will be allowed to exchange, transfer or lease them in the secondary market.

A notice on the official CAAC Central and Southern Regional Administration website said as many as 34 airlines participated in the auction, but observers agreed it quickly became obvious that smaller private airlines could not afford to the slots.

A senior executive from one private carrier told local media: "The auction was too expensive for us". Wang Zhenghua, the chairman of China's biggest budget carrier, Spring Airlines, said the allocation system is unfair to private airlines as state-owned airlines were allocated all the good time slots.

> **If Beijing regards the pilot schemes at Guangzhou and Shanghai as successful it is likely auctions will become common practice at other airports**
>
> **Peter Stanton**
> International Air Transport Association's Head of Worldwide Slots

When the CAAC announced the pilot scheme on December 4 it said both airports would have new runways by 2016 which would create 196 additional weekly slots. There would be 98 slots available at the two airports for domestic carriers with the remainder allocated to international services.

Only domestic slots are being auctioned and the process will differ between the two airports. Guangzhou slots are being directly auctioned to the highest bidder and Shanghai Pudong will use a "lucky draw plus charge" model.

IATA opposes auctions because they deviate from the Worldwide Slot Guidelines (WSG), which is the recognized industry standard for allocating slots. WSG is best practice for both airlines and co-ordinators and maximizes the efficient use of airport infrastructure, explained Stanton.

"The problem with slot auctions is they do not ensure optimal slot utilization. Carriers with the ability to pay the most are granted access, but not airlines who will utilize the slot in the best interests of the airport or passengers," he said.

"Currently, slot ownership does not need to be defined. But with slot auctions, slot ownership is an issue because the airline acquires the slot as an owned asset. Slot auctions also are deviations from international standards. The industry functions most effectively when the same process is followed at both ends of a route.

"If slots are allocated by different processes at various airports, it will increase complexity. The WSG are time tested and have proven to be the most effective means to allocate slots."

Stanton said most deviations from the WSG are being considered because governments don't know global standards exist so they create their own. "There also are some governments who believe they are unique and want to apply their own rules," he said.

"In situations where the governments wish to deviate, then the best approach is to engage with IATA, request an amendment to the WSG so that it remains a single global standard. As well, there may be other solutions to their issues that would be more effective than their initial proposals."

Last month, the CAAC announced $11.7 billion would be invested in aviation infrastructure, especially airports, this year. Construction of important new airports, including those in Beijing, Chengdu, Qingdao, Xiamen and Dalian, also would be stepped up.

Eleven key infrastructure projects and 52 upgrades or expansion work on civil aviation facilities also will be started in 2016. The CAAC said Beijing's second international airport, the largest construction project in Chinese civil aviation history, is progressing well. Construction of the terminal and air traffic control facilities began in September and work on the support facilities is planned to start in June. Daxing International Airport, Beijing's second international airport, is scheduled to open in June 2019 and become fully operational by December that year. ■

Hainan Airlines subsidiary, Urumqi Air, paid the top price of 90.99 million yuan for a slot at Guangzhou Baiyun airport in China's first airport slot auction

ASEAN OPEN SKIES PROVES ELUSIVE

On January 1, ASEAN open skies was due to come into being. But the day passed with a whimper rather than a bang as the 10 nation bloc failed to reach agreement on the regime.

TOM BALLANTYNE reports

ASEAN's (Association of Southeast Asian Nations) planned Open Skies has missed its 2015 year end deadline with most analysts agreeing full implementation remains elusive. Kuala Lumpur-based Endau Analytics analyst, Shukor Yusof, said the bloc is "a long way from becoming a single aviation market given the reluctance of some member states, namely Indonesia and the Philippines, to engage in a long-term initiative to be less protectionist about their markets".

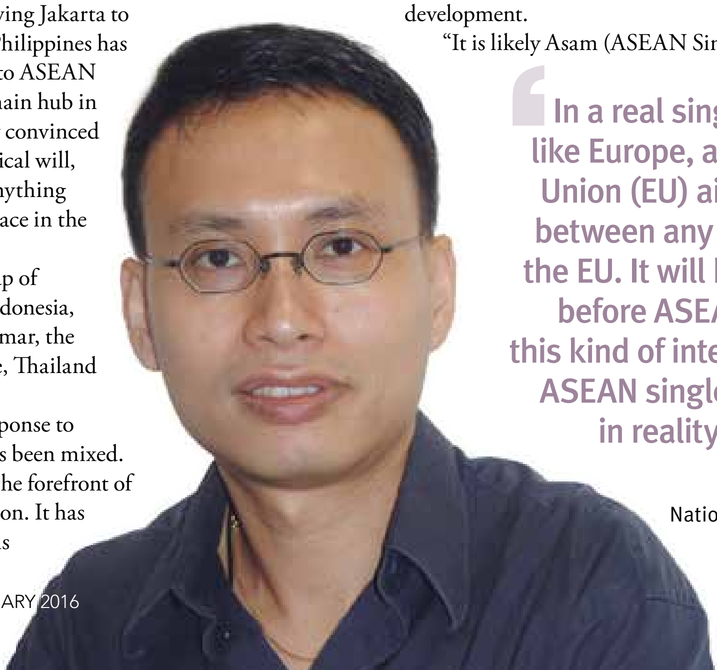
"Both these countries have yet to ratify the scheme. Indonesia is only allowing Jakarta to participate while the Philippines has opened all of its cities to ASEAN open skies except its main hub in Manila. I am not fully convinced there is sufficient political will, at least this year, for anything constructive to take place in the near term," he said.

ASEAN is made up of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

Elsewhere, the response to ASEAN open skies has been mixed. Singapore remains at the forefront of support for liberalization. It has removed all restrictions of entry. It is the smallest nation in the bloc and stands to benefit most from full open skies because it is a single city state. Malaysia also is a staunch supporter of liberalized skies. But Laos has been reluctant to free up Luang Prabang and Vientiane, particularly to Thailand's carriers.

Acknowledged aviation legal expert, Dr. Alan Tan, a professor of law at the National University of Singapore, told Orient Aviation a great deal of work remains to be done to achieve economic and market integration of the ASEAN aviation sector. Additionally, technical and regulatory integration within the block are in their very early stages of development.

"It is likely Asam (ASEAN Single Aviation Market) will



"In a real single market like Europe, any European Union (EU) airline can fly between any two points in the EU. It will be many years before ASEAN achieves this kind of integration, so the ASEAN single market is, in reality, incomplete"

Dr. Alan Tan
National University of Singapore professor of law

Challenges ahead for ASEAN open skies

* Persuade the Phillipines to open Manila to unlimited flights and win approval from Indonesia and Laos to allow flights for all other points apart from their capital cities
* Win ASEAN states approval to accord each other's carriers seventh freedom rights
* Include technical harmonization on the ASEAN open skies agenda, particularly pilot training and common ramp inspection standards

have to be extended, or have a second stage declared for the post-2015 period, to tackle unfinished business and new matters. In other words, Asam remains very much a work in progress," he said.

Dr. Tan said it is important to understand that ASEAN open skies does not include domestic flights. For example, a Malaysian carrier cannot fly between Jakarta and Bali. Nor does the scheme allow for seventh freedom rights, i.e. an airline's right to fly between points in two other countries.

"In a real single market like Europe, any European Union (EU) airline can fly between any two points in the EU. It will be many years before ASEAN achieves this kind of integration, so the ASEAN single market is, in reality incomplete," Dr. Tan said.

"There have been doubts about ASEAN's ability to meet the open skies deadline since the liberalizing regime was put forward almost a decade ago. ASEAN is made up of an extremely disparate group of nations ranging from developed Singapore to emerging Myanmar, Laos and Cambodia. The smaller states worry their home carriers will be swamped by bigger established airlines from Singapore, Thailand and Malaysia.

"The counter argument to resisting change is that a liberalized aviation sector will boost air traffic in a region with a population of 625 million, stimulate air connectivity, encourage higher service quality and lower fares.

"At present, the liberalizing of market access is limited to third, fourth and fifth freedom rights, which means airlines must still begin and end their flights at home-state points.

"For example, a Thai carrier cannot base aircraft in Indonesia to connect Jakarta and Manila, which is a seventh freedom. A beneficial route would Bangkok-Jakarta-Manila-Jakarta-Bangkok, a fifth freedom operation that starts and ends in Bangkok, but enjoys traffic pickup rights in Jakarta going both ways.

Dr. Tan said the seventh freedom issue must be addressed explicitly in the post-2015 period and allowed to flourish within the ASEAN open skies framework.

Senior aerospace analyst at Forecast International, Ray Jaworowski, said no one denies liberalization will benefit ASEAN and fuel aviation growth in the region. "It may open up channels for collaboration among operators, but it does not necessarily run on complementary operations as a single entity against the rest of the world," he said.

"The EU has seen increased competition in the single market, benefitting customers and driving carriers to be more cost-efficient. Low-cost carriers such as Ryanair and easyJet have become more than just low-end niche players. They are serious threats to legacy carriers already struggling to stave off competition from more efficient and service-friendly foreign airlines.

"The single market has led to mergers for strength, such as the International Airlines Group (IAG) which agglomerates British Airways, Iberia, budget carrier Vueling and Aer Lingus and is 10% owned by Qatar Airways. [But] it is hard to envisage, at this stage, such a development within ASEAN.

"The region has made some liberalizing progress especially as the market growth in the budget sector. But the pace is not moving fast enough. So long as the goal posts keep shifting forward, it is easy to lose the drive to change. Priorities can change quickly. ASEAN nations are caught in the global scramble for economic pacts in a world increasingly threatened by geopolitical rivalry drawn along economic lines.

"They, not as a bloc, but individually, risk isolation and being disadvantaged by non-participation. This could be a distraction away from the ASEAN agenda."

At a recent conference on budget airlines, the CEO of Jetstar Asia, Barathan Pasupathi, said ASEAN liberalization is restricted by limited infrastructure in some countries, notably insufficient airport slots in Indonesia and the Philippines. "The new rights are the slots," he said.

Not everyone is pessimistic about liberalization's progress in the Asia-Pacific. Indonesia may be accused of dragging its heels on ASEAN open skies, but the nation's airlines forecast passenger demand will grow up to 15% this year as a result of a better regulatory environment and the opportunities offered by ASEAN open skies.

"In 2016, there will be better prospects than last year, including the release of the eighth economic package accommodating business interests," said Indonesian National Air Carriers Association (INACA) chairman and Garuda Indonesia president director, Arif Wibowo.

Import duties on aircraft components and maintenance

AirAsia's solution to limited skies

AirAsia, to allow it to fly to domestic cities in ASEAN nations, has established joint venture airlines with large minority stakes in Thailand, Indonesia and the Philippines. In this structure, ThaiAirAsia, as a Thai airline, can connect Bangkok and other points, including domestic cities in Thailand. The Bangkok-based carrier can build its network in a way that AirAsia would not be permitted to do. All three of these carriers, as well as AirAsia X, are technically separate, but they share the same marketing and brand platform. To passengers they are all AirAsia.

and spare parts have been scrapped in the stimulus package, a decision Wibowo said would save Indonesian airlines between 10% and 15% in operating costs.

"Our expansion to ASEAN countries will be stronger. We will connect the entry and exit points from the open sky to all of Indonesia," he said.

In Vietnam, Vietnam's deputy prime minister, Hoang Trung, speaking in January, called on the country's aviation industry to build and upgrade its airports so that the country could become one of the top four ASEAN nations in aviation. In addition to developing a young and modern fleet, the sector should reduce airfares, improve service quality and international competitive capacity and expand domestic and international routes, he said. The industry has signed 67 bilateral agreements on aviation transport and six multilateral ones, while actively joining the ASEAN aviation market, he said.

One of the biggest issues for ASEAN is integration of aviation oversight. Currently, rules vary from country to country even at the level of designated separation distances between aircraft during flight.

One of the leading proponents of change has been AirAsia founder, Tony Fernandes, who has made strong calls for ASEAN to establish a common aviation regulator. He said ASEAN institutions should "step forward for commonality, for standardization and for quality".

Various national regulators and airlines have suggested such a development could take as long as two decades. "Given the (different) speed of development in each country, I don't think it will be done anytime soon and may take at least 20 years to take shape," Chula Sukmanop, director of the Office of Civil Aviation in Thailand told media recently.

Cargo boost from open skies

Indonesia predicted the country's air cargo industry will benefit from the multilateral agreement which will open freight services between ASEAN countries, bringing the promise of air cargo volume increases of up to 50%.

Head of the association's cargo division, Boyke P. Soebroto, said that the multilateral agreement would broaden the market for Indonesian air cargo service providers. Before this year, Indonesia's air freight aircraft were required to stop in countries like Singapore as a hub, en route to a final destination.

"For example, there was not a direct (air cargo) flight from Jakarta to Hanoi but with liberalization, we can fly directly from Surabaya to Hanoi," Boyke said. "This is a chance for Indonesian air cargo service providers to get into ASEAN industrial centers, both for imports and exports."

Under the ASEAN cargo agreement, Indonesia is opening seven cities to incoming and outgoing freight services: including Palembang, South Sumatra; Manado, North Sulawesi; Makassar, South Sulawesi and Biak, Papua.

The Philippines has promised to open six cities, including Cebu, while Thailand plans to open seven cities, including Bangkok and Phuket.

Dr. Tan said: "In the EU, there are common standards for safety inspections. A check done on an aircraft in Germany would be valid throughout Europe. Similar agreements apply to pilot training and certification standards.

"The situation is far less evolved in ASEAN. It will be many years before there can be common standards and procedures on safety. For example, Cambodian trained pilots being recognized ASEAN-wide."

Some industry figures don't even believe common aviation standards should exist across ASEAN. Garuda's Wibowo said: "Each inspector should intensify aircraft maintenance and ensure a high level of scrutiny. Secondly, regulators in each country should be able to check all airlines in an integrated way. There's no need to raise it to the ASEAN level."

Forecast International's Jaworowski said that as important as ASEAN open skies ultimately may be, it is only an initial step in realizing the full potential of the Asia-Pacific travel market.

"Future actions could involve the removal of operating restrictions on carriers, changes in airline ownership policies, formation of a region-wide regulatory agency (similar to the European Aviation Safety Agency) and establishment of an integrated air traffic management system. But right now, very little of that seems likely in the short to medium term." ■

Cyber toys threaten flight safety

Last year was the safest year on record for the world's airlines, with zero serious accidents involving Asia-Pacific commercial jet aircraft, but new threats to safe flight have emerged with the development of widely available drones and lithium battery powered hoverboards.

TOM BALLANTYNE reports

When director general of the Association of Asia Pacific Airlines (AAPA), Andrew Herdman, delivered his annual report card on air safety last month, he declared 2015 the safest on record worldwide and a very good year for Asia-Pacific jet operators. They had an accident-free 12 months.

AAPA's Herdman said that in 2015 the commercial air transport sector operated more than 40 million flights and carried over 3.5 billion passengers safely across the world. There were four major accidents involving large western-built jets operated by commercial airlines, which resulted in a total of 374 fatalities.

These losses included the Germanwings and Metrojet accidents, which are understood to be deliberate acts of unlawful interference. "Asia-Pacific carriers reported no major accidents involving large western-built commercial airline jets. The global fatal accident rate of one in five million flights marks 2015 as the safest year ever for commercial aviation. The major accident loss rate has more than halved over the past five years," Herdman said.

But the encouraging results should not breed complacency, he cautioned. The rising number of incidents where drones (Remotely Piloted Aircraft Systems) have come close to colliding with aircraft is a new threat to safe flight. Also an emerging risk to airlines is the likelihood of onboard fires from lithium battery powered hoverboards - or self-balancing motorized scooters. There have been numerous on ground incidents where they have caught fire and exploded causing serious injury.


AAPA director general, Andrew Herdman: the major air accident loss rate has more than halved over the past five years

The dangers of drones were recently highlighted by the International Air Transport Association's (IATA) safety and flight operations senior vice president, Gilberto Lopez Meyer. He said the organisation's research revealed that hundreds of drones have encountered airliners and airports and that collisions have occurred.

From January 2013 to June last year, 856 reports from seven official sources about drones were identified by IATA, with one suspected and one confirmed collision included. Almost 90% of the reports were from North American sources.

While there are no specific figures available on airline or airport drone incidents in the region, a number of incidents have been reported in the last few years. Last September, the New Zealand Air Line Pilots' Association said it was "very worried" after a drone had a near miss with a commercial flight in controlled airspace above Christchurch.

The pilot of an Air New Zealand A320, with 166 passengers on board, reported sighting a drone north of Christchurch as the plane headed for Auckland. It passed close to the aircraft at an altitude of approximately 6,000 feet. Technically, it was a near miss.

IATA's Meyer said five of the U.S. incidents involved traffic alert and collision avoidance system (TCAS) alerts. Only government drones are known to use TCAS. "We assume those TCAS using drones were government operated, but we don't know," he said.

"They certainly were RPAS equipped with TCAS systems. This is a serious problem. We are working with the ICAO (International Civil Aviation organization) to produce the necessary procedures, regulations and standards to control this problem as soon as possible."

Hoverboards also have hit the headlines. There have been so many incidents where the lithium battery powered hands-free scooters have caught fire that airlines worldwide are banning them as both check-in and cabin luggage.

The lithium-ion rating on some models sold by manufacturers, including the world's best-known hoverboard manufacturer, Swagway, measures 158 watt hours, putting it under the U.S. Federal Aviation Administration's (FAA) maximum limit of 160 watt hours, but the manufacturer urges extra caution about including the popular motorized scooter in onboard luggage.

"Our position on the question of flights is that while technically [the hoverboard] falls under the guidelines required by the FAA, we do not recommend taking the Swagway as carry-on. Each carrier varies in what they may allow [as cabin luggage], based on their individual comfort levels," said a Swagway statement.

"These types of boards are new so there seems to be a lot of varying information out there, but for the sake of safety, we can't stress enough that the calibre of the components used can make an impact on the overall safety of these boards."

This is one of the problems. While boards produced by reputable manufacturers may be high quality, numerous cheap "copies" are being sold, many of them in Asia and particularly China, and they don't meet accepted safety standards. They are even being sold airside at some Asian airports. ■

Challenges to safe turboprop operations

The director general of the Association of Asia Pacific Airlines, Andrew Herdman, said in his 2015 safety report that turboprop operations maintained a very good safety record, with fewer major accidents being reported last year, but they continue to experience somewhat higher accident rates compared with larger jet aircraft operations. "Particular challenges include operating in remote geographical areas and technical limitations involving the available airport and air navigation infrastructure."

He said turboprop operations play an important role in serving smaller markets and developing regions of the world, but do face some specific operational challenges. "We believe there are opportunities to enhance safety performance by focusing particular attention on the importance of human factors," Herdman said.

They include relevant flight training and adherence to standard operating procedures as well as investments in upgrading relevant air navigation aids and ground infrastructure at airports, he said.

EXPRESS RIDE TO SUCCESS

A hard headed focus on its market sector - plus a little help from cheap oil - has brought early success to HK Express, Hong Kong's first budget carrier.

Tom Ballantyne reports

It may be only 27 months old, but Hong Kong's budget airline, HK Express, has carved out a profitable identity among the city's cost sensitive travelers at a time when many Asian LCCs are struggling to make money. Said Andrew Cowen, the CEO of the China-controlled no-frills carrier: "HK Express was "very clearly profitable in 2015". But I won't beat about the bush. A large part of that was [the low] oil price. It's the same for every airline and long may that continue," the South African-born LCC veteran said.

"But you must never forget that as oil prices go down so do things like fuel surcharges. What you gain on the cost side you lose a bit on the revenue side. It's not a freebie, but it certainly helped. We have moved strongly into profitability."

Apart from the benefits of lower fuel costs, HK Express' recent achievements have been the result of reaching critical mass in fleet size and implementing initiatives that have been significant contributors to revenue. "It's not like two or three initiatives, but hundreds of initiatives," said Cowen.

"A number of them have come to fruition and more will in coming years. Part of my task from the shareholders is to move HK Express into a position of sustained ongoing profit. History will be the judge of that, but we think we are making good progress."

That may be an understatement, given the short time HK Express has been flying under a budget flag. In its former life as Hong Kong Express, it had been operating as a sister carrier to full-service operator, Hong Kong Airlines, which was owned by Macau casino magnet, Stanley Ho. Mainland China's HNA group, also owners of Hainan Airlines, later bought 45% of the struggling airline.

In 2013, the Chinese aviation conglomerate decided to transform Hong Kong Express into a low-cost carrier (LCC). Cowen was part of a team from Mango Aviation Partners, a firm providing expertise in budget airline management, to execute the transformation.

Launched with three A320-200s, its first flight as an LCC was on October 27, 2013, with a five destination network.

Since then, HK Express has definitely been making its mark. It may be a small operator, but it is the fourth largest carrier in terms of slots at Hong Kong International Airport. But as Cowen pointed out, because of the sheer numbers of carriers who fly into Hong Kong, this figure is quite a small part of the airport's total slots.

HK Express also is the second biggest airline flying between Hong Kong and Japan, only slightly behind Cathay Pacific/Dragonair. "We have more flights between Hong Kong and Japan than All Nippon Airways and Japan Airlines combined. We are a very significant investor in the Japanese market and we have a very significant share of it. Given the popularity of Japan for travelers that's a good place to be," Cowen said.

He continued: "We feel we had a great 2015, all things considered. We grew our fleet very significantly. We are at 13 aircraft. We were hoping to be at 15, but two have slipped into the first quarter of 2016.

"We have expanded our network and are at 20 to 23 destinations. We had our second birthday in October and we have carried more than three million passengers since we launched. That's quite a small number compared with the big guys, but it was an important milestone for us."

There won't be any let up in the airline's expansion. In December, Cowen announced plans to add 10 aircraft to earlier orders for the A321 and A320neo. It has secured 10 more 230-seat A321 aircraft, bringing the airline's total commitment to 12. The order follows an earlier confirmed commitment for 12 A320neo, which will be leased from aircraft lessor, Arctic Aviation Assets Ltd.

Six new aircraft, four A320neo and two A321s, will be delivered by year end, taking the fleet to 21. Another 10 aircraft will arrive at the carrier from 2017 to 2018, which will expand the airline's planes to a minimum of 39 by December 2018. Cowen said he has a target of 50 aircraft in that time frame, subject to available slots in Hong Kong.

The fleet plan is about much more than adding aircraft. It is an opportunity to hedge against fuel costs and slot constraints, which Cowen said was his biggest daily concern. "The A321s are obviously a step up in size for us. We will operate them with 230 economy seats. It will give us an extra 50 seats over the current A320s," he said.

"We also are thinking about ways to utilize slots. We have a fair number of destinations where there is more demand, but it may not make sense to fill that demand with more slots. It's better to do it with bigger aircraft. So going to the A321 is a very modest, cost incremental or business complexity increment. "It's also a bit of a hedge against greater, rather than less, slot constraints."

But when it comes to oil hedges, Cowen is cautious. "We are quite mixed about fuel hedging per se. It can be very expensive and it's as easy to get it wrong as it is to get it right. A more effective hedge is to take advantage of the surplus of neos that are appearing on the market," he said.

Cowen believed neos have been over-ordered. "It makes sense for us. We are not a first tier airline. The fact that we can get neos and will be the first LCC in North Asia to have them is an indication, in a way, of that over-ordering.

"This situation gives us extra range - all the valuable fuel efficiency and so on - even at current fuel prices. We also like the idea that we can put another eight seats on the neo and be the first carrier in the world to be a 188 economy seat neo operator.

"An extra eight seats doesn't sound much, but it provides a little bit more unit cost improvement and a little bit more slot utilization opportunity. It all adds up. That's part of our restructuring, a series of accumulative little steps that all add up."

In the meantime, growth has been little short of spectacular. In the twelve months to the end of November, its passenger numbers surged 84% over the same period a year earlier. For the month, passengers increased 58% year-on-year. Last August, which is a peak month, load factor averaged 92.5%. Overall it is in the 80s.

"The big driver is capacity addition. We needed to get our fleet to a critical mass," said Cowen. "There isn't a fixed number to this, but it is certainly up to 10 to 15 aircraft. The rule of thumb I tend to use is that each aircraft at an LCC short-haul airline supports

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CEO HK Express, Andrew Cowen: I won't beat about the bush. A large part of the profit was (the low) oil price. It's the same for every airline and long may that continue

approximately two destinations. Straight away you can see 10 to 15 aircraft supports 20 to 30 destinations.

"That tells you that for the Hong Kong consumer, you are flying to most of the places that he or she is interested in. Another critical mass element is unit costs. Obviously, unit costs are quite high with one aircraft, but start flattening out at the 10 to 15 aircraft level."

Cowen said the airline needed to grow quickly to get to that critical mass and to "hoover up" as many slots as possible at Hong Kong. "We were very aware that slots were starting to become much more constrained at Hong Kong airport. We did not want to get trapped into being too small an airline, which is a really difficult position to be in. So most of that growth is from fleet growth, but year-on-year our load factors have been moving up pretty steadily."

As for competition – and there is plenty of it in Hong Kong – Cowen takes it as a given. "It's very competitive. There are 17 or 18 LCCs flying into Hong Kong from other countries. That certainly means there's lots of LCC choices.

"But also we've have most of the world's significant flag carriers in Hong Kong. They're not all about business and first. They tend to have extremely large economy cabins. To our mind, the Hong Kong market is certainly one of the most competitive in the world.

"But it challenges us to keep raising our game, although it does leads to one or two sleepless nights. Most good companies, which we aspire to be, thrive on competition."

A key to HK Express' success has been its determination, from the start, to cement its position as Hong Kong's own low-cost, low-fare operator. Cowen conceded there was some brand confusion initially between HK Express and Hong Kong Airlines, partly because of the similarities in the names and its common branding.

The livery issue was resolved in early 2014 when a new Skyline livery was unveiled for HK Express which featured the cityscape of Hong Kong. New crew uniforms were also introduced last year. "We kind of wrapped ourselves up in the Hong Kong flag," said Cowen.

"Hong Kong people are justifiably proud of their skyline. It's iconic and representative of their city. It was a positive step. Then we had the advantage of being an LCC. People might have reservations about travelling with you, but they

will try you because of the low fares, especially if you offer attractive destinations. We were able, using standard tactical low fare offerings, to get an awful lot of people to try us." HK Express fares are between 30% and 70% below the local competition.

The airline named its first batch of aircraft after various local dim sum dishes. "That works very well. You have all these passengers climbing the stairs to the aircraft and often they're posing for selfies and photos by the name. That's going off to Instagram or Weibo or Facebook or whatever. It builds the relationship," Cowen said.

In another innovation, HK Express accepts the Octopus card, used by everyone in Hong Kong to pay for transport, food, parking and other services, to buy onboard meals and duty free products.

"We receive very, very good customer satisfaction scores. Our last customer satisfaction survey, to October 31, 2015, showed 94% of our passengers were happy, very happy, satisfied or very satisfied with our onboard service. If you have low fares, exciting destinations and it's very nice on board, that's great," said Cowen.

Before HK Express was launched, it surveyed where Hong Kong people wanted to fly. The answer was North Asia - Japan and Korea - and Southeast Asia. The responses shaped the network which now includes Hiroshima, Fukuoka, Osaka, Nagoya and Tokyo in Japan; Seoul, Busan and Jeju in South Korea and Chiang Mai, Phuket and Da Nang in Southeast Asia.

It also flies to Taichung in Taiwan and Lanzhou, Wixi, Ningbo and Kunming in China. Yangon and Mandalay will be added this month, with Luang Prabang in Laos, as well as the Pacific islands of Guam and Saipan being considered for later this year. The airline also serves several Chinese destinations with seasonal charter flights.

About 70% to 75% of HK Express passengers are from Hong Kong, although marketing efforts are underway to attract more inbound traffic. There also has been a huge shift to on-line sales. Before the airline was converted to an LCC, between 10% and 15% of its business came from online bookings. The figure is now more than 85%.

"That's important. If anything goes wrong, feedback comes back to us very quickly, either through social media or direct channels, and it can be acted on speedily," he said.

Critical to customer satisfaction has been the airline's impressive record for on-time performance (OTP). It boasts the best on-time statistics in Hong Kong, beating out its bigger competitors with an average of near 80% on time departures, according to independent flight statistic monitoring website, Flightstats.com.

The superior results are no accident, explained Cowen. HK Express strategy, from the time of its initial it's restructuring, was to be a complementary carrier to sister airline, Hong Kong Airlines. The full service carrier flies mostly between Mainland China and Hong Kong,

As a result, HK Express has relatively few Mainland destinations, which meant it has less delays from the

The Mango model

When the owners of the then full-service airline, Hong Kong Express, brought in aviation management agency, Mango Aviation Partners, to transform the airline into a LCC, it turned out to be a master stroke. Hong Kong did not have a home-grown budget carrier and many thought there was no place for one.

The Mango team, led by Andrew Cowen, has proved them wrong. Beginning his task at the airline's office near Hong Kong's International Airport, Cowen took on the role of deputy chief executive and launched the transformed carrier, HK Express, in October 2013.

Early last year, Cowen decided to remain in Hong Kong and was appointed CEO of the fast growing LCC.

For those who keep on suggesting LCCs won't work in certain markets, he said: "One of the things that always makes me smile a bit, and HK Express is I think my seventh LCC, are the people I encounter who have their head in the sand and say: 'Oh well, LCCs might have worked somewhere else but this is such and such city and it's different here'.

"I find myself saying here we go again. Unsurprisingly, the people of Asia, Europe, the Americas and Africa are 99.5% similar. There will be the cultural differences we all know and enjoy. That certainly means the execution of the model needs some adaptation, a process I prefer to describe as flexing. That's fine. It is part of what makes it exciting, fine-tuning the model to precisely what Hong Kong and Asian people want.

"It's no different from any business. If you are Nike, Kellogs, Unilever, Tesco or whatever, you don't take the European or the American formula and apply it exactly to Hong Kong or China. You flex it to match local cultural tastes."

Cowen isn't slow to respond to other criticisms of LCCs. "There's this quite shabby idea put about by a lot of full service carriers that you can travel on an LCC but you're not going to get good customer service. I totally reject that proposition. I've worked for full service carriers so I do understand that side of the equation. We think that LCCs actually give better customer service in many respects.

"You have a choice of having a meal. You don't have to pay for it whether you like it or not. You have a series of choices in the booking process and on board. We think this empowers passengers and is the way the market is going. People's choices and requirements are evolving and becoming more sophisticated and individual. We think airlines should respond to that. It shouldn't be the one-size fits all approach of full service carriers."

Cowen started his aviation career with British Airways and was part of the management buyout that acquired BA's budget subsidiary, GO, in 2001 for $169 million. A year later, it was sold to easyJet for $575 million, giving the management team a tidy return on its investment. The name Mango derives from the MANagement of GO.

In Asia, Mango was involved in the launch of Jetstar Asia in Singapore, AirPhil Express in the Philippines and the All Nippon Airways joint venture LCC, Peach Aviation.

airport and ATC congestion that dogs Chinese aviation.

"Having stripped away that very large ATC issue, which dominated the on-time performance statistics, it revealed the smaller causes of delays, which were anything from late fuel trucks to late buses - all the usual things. We had much more visibility about these problems and were able to systematically address them rather than have them lost in the wider, primarily ATC, delay issue," he said.

> We were able, using standard tactical low fare offerings, to get an awful lot of people to try us
>
> **Andrew Cowen**
> CEO HK Express

"We knew we had to get the fundamentals right to succeed in Hong Kong. First and foremost was a safe and secure airline. You've got to have that. Being [owned by] a long standing airline meant we had a safe and secure operation. We also had attractive fares and destinations.

"But this means nothing if you are always late. OTP was the next thing we had to get right, not only for the customer, but from a fleet utilization perspective.

"High aircraft utilization drives down costs to support low fares. You can't sustain high aircraft utilization unless your aircraft are consistently on time. If delays creep up then your system breaks down."

Cowen said HK Express did not want to assume the position of Hong Kong's LCC. "We wanted to earn it by right. So it was very important for us to have a very robust on-time performance and build that reputation," he said.

Like all airline chiefs, he keeps a close eye on economic conditions, including the slowdown in China, but he believed HK Express could withstand any challenges.

"In a slowdown, particularly in a deep and protracted slowdown, personal and business travel budgets are cut, but people need and want to travel while also being careful with their money. This is when the LCC model can be very resilient," he said.

"Secondly, if there is weakening demand, it tends to flow through to lower fares and LLCs have the cost base to weather that."

Cowen said the Hainan parent group is very supportive of HK Express. "They are long-term investors. They can see the market opportunities both for LCCs and also for being in Hong Kong. They are encouraging us very strongly to take advantage of these circumstances. The fleet announcements and the new destinations are a manifestation of that investment," he said. ■

Airbus tops order book in 2015

But Boeing is the king of cash.

Tom Ballantyne reports

For the world's big two commercial jet manufacturers, January is report card time and only one of them can top the class. In 2015, that honor went to Toulouse-based Airbus. But Boeing was by no means a loser.

Airbus won bragging rights in 2015 with the sale of 1,036 airplanes, exceeding its target for the 12 months. Boeing had net orders of 768 aircraft, but when the bean counters set to work the Seattle manufacturer came out ahead in terms of hard cash.

Most of Airbus' sales for the year were for cheaper, narrow-body A320 family airplanes. But at Boeing, its numbers were weighted by higher sales of wide-bodies such as the B787 and B777 and came in at US$112.4 billion at current list prices, putting the manufacturer ahead of the value of Airbus' sales.

But for both manufacturers, despite increasing concerns about global economic conditions, particularly the slowdown in China, the skies are gloriously sunny. Airbus delivered 635 jets to its airline customers and other buyers last year and has a backlog of 6,787 aircraft to deliver at list prices of $996.3 billion.

Boeing delivered 762 aircraft in 2015 and holds a backlog of 5,795 jets, worth more than $1 trillion. The order books are enough to keep their production lines humming at full speed for years.

"The Boeing team has worked hard to achieve strong performance," said Boeing Commercial Airplanes president and chief executive, Ray Conner. "Our team did a fantastic job achieving higher deliveries and delivering our products to our customers as quickly and efficiently as possible. This will continue to be our focus.

"We had a solid year of orders in 2015, maintaining a strong, balanced backlog that will help ensure a steady stream of deliveries for years to come."

Airbus chief executive, Fabrice Bregier, was similarly upbeat and shrugged off market turmoil in China. He said Airbus is committed to a new facility in Tianjin as well as to its overall strategy in China.

"We should not mix up problems we see in the financial markets and the real economy," he said during a media briefing in Paris. He forecast new U.S. visa policies would boost Chinese air travel and that Asian middle class demand would continue to grow.

Airbus is increasing production in 2016, especially of its A350 wide-body, to keep up with order demand and catch up with Boeing's dominance in aircraft deliveries. Increased automation and "digitalization", including 3D printing of some plane components, will be critical in achieving its goals, Bregier said. Airbus hopes to deliver more than 650 planes this year, but the proportion of single-aisle versus longer-haul jets would remain roughly the same.

Both manufacturers, who are increasing production rates as their order books grow, may face threats, predicted Teal Group's Richard Aboulafia. The analyst said that from an investor standpoint, the factors that could have the biggest impact on the airline industry are beyond the control of their chief executives: fuel prices and interest rates.

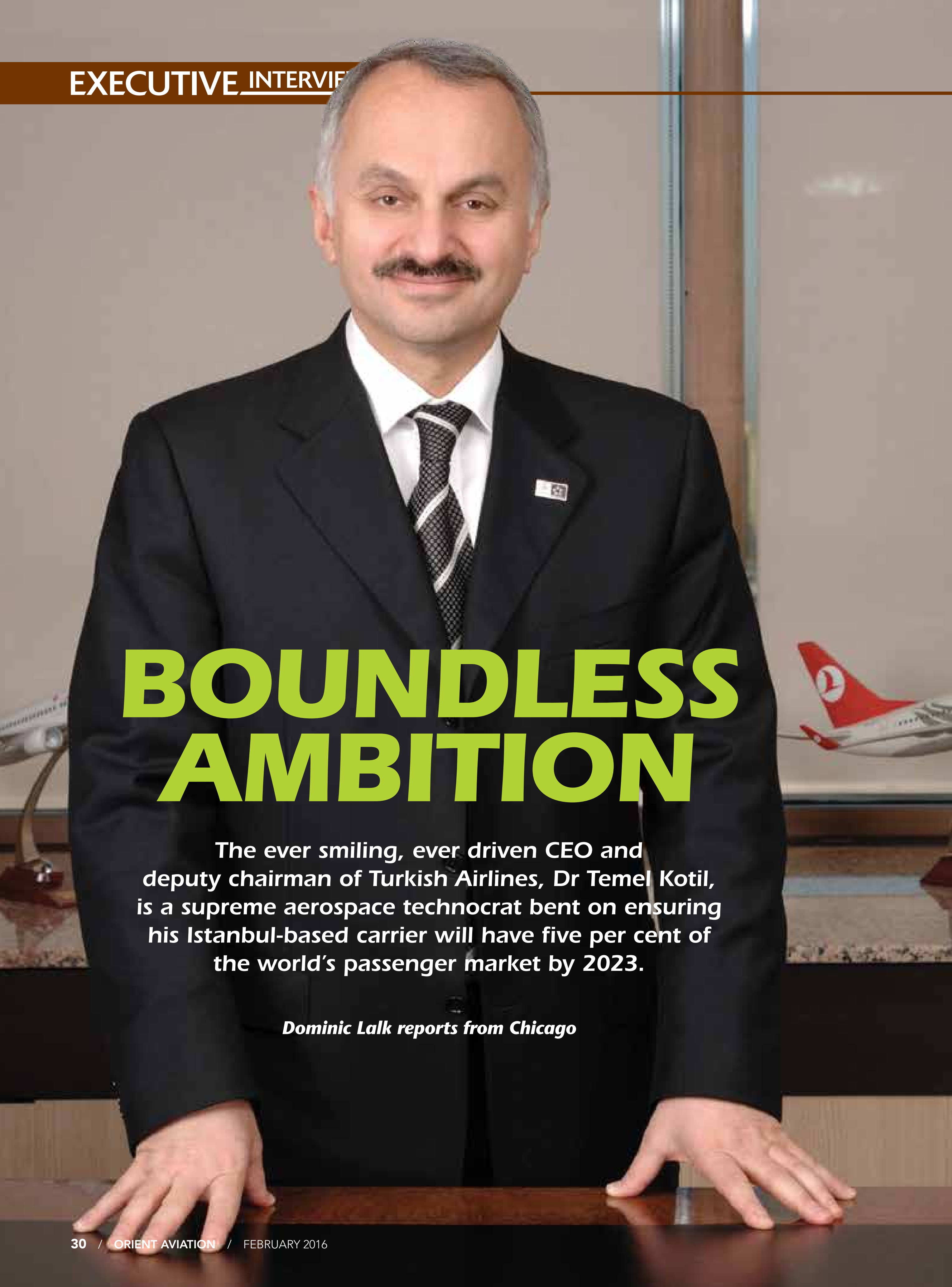
"If oil prices remain low and the cost of borrowing rises, the industry could quickly find itself in trouble, Aboulafia said. "When fuel is costly and cash is cheap, it makes a lot of sense for airlines to look at replacing older, less efficient airplanes with newer, more efficient models. If the environment changed, airlines may be less likely to buy new planes.

"We've been living in this incredibly perfect environment for seven or eight years where cash is almost free and there's every reason in the world to replace your older aircraft. One of those factors is changing and the other one could well change."

Airbus's chief operating officer customers, John Leahy, who also spoke in Paris, hinted Airbus may decide this year to launch a bigger version of the A350. with entry into service in 2020. The plane would be targeted at the 400-seat sector to compete with Boeing's 406-seat B777-9X, also due to enter service in the same year.

"If we are going to do it we should do it this year. We don't want to let Boeing have too much of a run with the 777-9X. They are bringing their airplane out in 2020 and we shouldn't be that far behind them," he said.

Leahy said Airbus is spending more engineering time on the possible next step in the development of the A350 rather than on changes to the A380. If there is to be an A380neo (new engine option) it would enter service in 2024 or 2025, about three years later than suggested as recently as last November, Leahy said. ■



BOUNDLESS AMBITION

The ever smiling, ever driven CEO and deputy chairman of Turkish Airlines, Dr Temel Kotil, is a supreme aerospace technocrat bent on ensuring his Istanbul-based carrier will have five per cent of the world's passenger market by 2023.

Dominic Lalk reports from Chicago

If there ever was a man in the right place at the right time, it is Dr. Temel Kotil. The CEO and deputy chairman of Turkish Airlines, backed by a committed government and a newly arrived group of private shareholders (50.88%) is focused on a singular goal: transforming Turkish Airlines into the best airline in the world.

But then again, what airline in the world, including several Asia-Pacific carriers, doesn't have the same goal, Orient Aviation asked in an interview at a recent meeting of Star Alliance airline members in Chicago.

"We will compete with anyone in the world. Turkish Airlines is the best airline in Europe that flies to the most countries in the world. Our target is to have the strongest network in the world, with more destinations than anybody else," Kotil said. "Our boss is the passenger."

"From my first day as the CEO of Turkish Airlines," he continued, "my vision was to make it the best in the world in all respects. We hope to achieve that objective by 2023, which is the centenary of the founding of our republic."

By 2018, which is the scheduled date for the opening of the Istanbul New Airport, Turkish plans to hold five per cent of the global commercial aviation market, Kotil said.

Since taking over as CEO in April 2005 from his "good friend", Abdurrahman Gündoğdu, Kotil has made significant progress towards his 2023 goal. In 2005, Turkish Airlines carried just over 10 million passengers a year on fewer than 100 aircraft. Its network was concentrated on Europe and the Middle East. Its load factor was below 70% and it flew "only a handful" of long-haul services.

> I invite any Chinese airline to fly to Istanbul. If they fly with me or not, it's the same thing. At least they are flying to Istanbul and not through the gulf
>
> **Dr Temel Kotil**
> CEO and deputy chairman Turkish Airlines

Today, the airline forecasts it will carry 72.4 million passengers this year to 235 destinations in 113 countries on more than 300 aircraft. In 2015, Turkish Airlines took delivery of 35 new aircraft and opened 24 routes. This year, it will add six cities to its network and accept 40 aircraft into its fleet. Its latest long-haul destinations are Istanbul to Port Louis and Antananarivo on a three times a week triangular service.

Kotil's 2023 goal is undoubtedly a challenge considering the sluggish European economy, the threats and fear of IS in Africa, Europe and the Middle East and, most importantly, mounting competition from Gulf airlines and long-haul low-cost airlines.

But Kotil is unfazed by these issues. "We are competing against ourselves, not others. If we offer cheaper and better services to passengers, they will choose us."

Turkish Airlines, a Star Alliance member since 2008, carried 54.7 million passengers in 2014, an 11.3% rise over 2013. It boosted its passenger count to 61.2 million travellers by December 2015, up 11.8%.

Of the 72.4 million passengers forecast for this year, 30.6 million will be on domestic and 40.8 million on international routes, with the rest made up of charter and hajj flights, Kotil said. This makes Turkish the sixth largest airline in the world by international passengers carried.

While passenger load factor is expected to remain stable at 78%, total Available Seat Kilometers (ASKs) will increase 21% year-on-year, to reach 186 billion, with capacity rising most prominently in North America (+31%), followed by Africa (27%), the Asia-Pacific (23%), Europe and the Middle East and Turkey.

Nevertheless, this is small change compared with the 2023 centenary target of 120 million Turkish Airlines travellers.

"China is important for Turkish Airlines," Kotil said and explained the carrier's growth on the Mainland was limited by air service agreements between Ankara and Beijing. Although Kotil views "any city in China with a population of more than one million as a potential destination for us," he also acknowledged it could take several years before air service liberalisation was agreed between the countries.

Kotil favours Open Skies. "I invite any Chinese airline to fly to Istanbul," he said. "If they fly with me or not, it's the same thing. At least they're flying to Istanbul. And not through the Gulf."

Turkish Airlines has 34 weekly frequencies to Greater China, including daily services to Beijing, Guangzhou and Shanghai as well as six flights a week to Hong Kong. The airline also flies daily to Taipei and will increase the service to ten a week from July.

"The Hong Kong route is popular. We have load factors of 90%. We applied for double daily traffic rights, but they haven't been granted yet," Akin Çarkçi, general manager Hong Kong for Turkish Airlines, told Orient Aviation.

Turkish codeshares with Star Alliance partner, Air China, on the Mainland. "We love them, but we're not sure they love us," Kotil said. He does not think "they are motivated" to engage in deeper cooperation with Turkish or any other carrier at this time. They are too busy building new markets and expanding their existing ones, he said. "If they fly to Istanbul, that's good, then we can fly to more places in China."

Apart from China, Turkish is expanding in the Asia-Pacific with double daily frequencies to Bangkok and Kuala Lumpur from June and daily flights to Delhi, Mumbai, Ho Chi Minh City, Jakarta and Singapore.

But staple destinations in most other carriers' networks, including Denpasar, Bangalore, Chennai, Phuket, Fukuoka, Nagoya and Yangon are absent from Turkish Airlines' network. The Philippines is represented by a three-weekly Manila service, but this frequency is dwarfed by Turkish's Middle Eastern competitors, which fly to Bangkok up to six times a day and have multiple daily frequencies to most cities in Asia, excluding the Mainland.

That said, Kotil firmly stated “the future is in Asia” and said down the line the world’s largest airports will be Beijing and Jakarta, followed by Istanbul. There was no mention of Dubai.

Africa also is an opportunity for Turkish Airlines. “African economies are growing. Passengers coming via Istanbul are growing. We’re offering much cheaper tickets than European airlines,” Kotil said. “In the near future, we will become the most important player in Africa.”

Turkish helped develop the international terminal at Mogadishu and flies daily to the Somali capital, and “is making a good profit”. Turkish uses its B737-800/900ER fleet to serve far-flung destinations such as Maputo, N’Djamena, Kano, Cotonou, Nouakchott, and Kigali.

Kotil has plans to fly to Australia, but is unable to do so for now as its long-haul fleet is built around the A330 and B777-300ER. The CEO said the viability of services to Australia was linked to its long-haul fleet development plan, which will be announced later this year.

Turkish has a fleet of 301 airplanes with an average age of 6.7 years, including ten cargo aircraft. The fleet grew from 261 to 299 in 2015, including a wide-body expansion from 55 to 73 and a narrow-body increase to 216 from 197.

By the end of this year, Turkish is forecast to have 339 aircraft: 240 narrow-bodies, 87 wide-bodies and twelve A330 freighters. The fleet is expected to grow to more than 450 aircraft by 2023, which will make it the same size as China Southern Airlines.

In 2013, it ordered 117 Airbus and 95 Boeing jets, with deliveries to 2021. Last December, it converted 20 A321neo and ten B737 MAX 8 options to firm orders, also with deliveries in 2021-22. The December top-up resulted in an order book of 92 A321neos on firm order plus 14 A319ceos, 30 A320ceos and 56 A321ceos (plus nine on order) already in its Airbus regional fleet. Turkish has signed a $1.8 billion deal with Pratt & Whitney for 184 PW1100G-JM geared turbofans to power its A321neos.

The Istanbul-headquartered carrier has a backlog of 20 B737-800s and 75 B737 MAX 8s, as well as nine additional B777-300ERs; a total of 32 of the long-haul workhorse. It already operates a fleet of 86 B737-700/-800 and -900ERs.

As Turkish’s order log reflects, it is well positioned for short-haul growth. For its long-haul ambitions, it needs to make a replacement and expansion decision for its A330 and B777 fleets soon. Kotil said he was studying the B777X, B787 and the A350, but said “he wasn’t motivated” to acquire the A380.

Istanbul is an ideal transfer point on global routes, reducing flight time and introducing the flexibility of using a variety of aircraft of diverse capacity, he said. Using Atatürk International Airport, Europe’s third busiest after London Heathrow and Paris Charles de Gaulle and ahead of Frankfurt Airport, as a hub allows Turkish Airlines to utilize a narrow-body fleet, a considerable cost advantage that contributes to its competitive effectivesness.

However, the carrier’s growth is closely linked to the expansion of Istanbul’s airports - Atatürk International, Sabiha Gökçen International Airport and under-construction Istanbul New Airport.

Its current global hub, TAV-Airports-operated Atatürk, is congested. It serves 61.2 million passengers each year, almost double its design capacity of 32 million.

Construction on Istanbul New Airport is underway to meet the airline’s growth targets after TAV lost the bid to the Limak-Cengiz-Kolin-Mapa-Kalyon OGG consortium. In June 2014, Turkey’s then prime minister and now president, Recep Tayyip Erdogan, laid the foundation stone at the new airport and announced “Istanbul is marking a historic day. Turkey is marking a historic day. The biggest

airport in the world is going to rise here."

TAV is investing another $100 million in the expansion of Atatürk to boost capacity by 10 million annual passengers, a decision that has raised questions about the practicability of three major airports in Istanbul.

"We will be ready to move [to Istanbul New Airport] in March 2018," Kotil told Orient Aviation . When fully operational, the $22 billion facility will have a carrying capacity of 150 million passengers annually, simultaneously servicing 271 aircraft via 181 aerobridges and six runways. It will be six times larger than Atatürk, Kotil said. Turkish plans to increase its daily departures to more than 2,000 at the new airport.

The only other airports constructed on the same scale are Dubai's Al Maktoum, or Dubai World Central, and Daxing International, south of Beijing.

To facilitate the move, and take some of the initial edge off operations, Kotil asked to defer 17 A321neo deliveries from 2017-2018 to 2021-2022, after striking a similar deal with Boeing.

When installed at the new airport, Kotil said Turkish's immediate goal was to boost frequencies on trunk routes to Europe and offer passengers more choice and flexibility. "We fly to Frankfurt, London, Paris and Rome four or five times a day. But we should have seven or eight daily," he said. Similar frequency increases are possible on long-haul services, notably New York, he continued, but emphasized Turkish's core strength will be a very dense regional network within a four-hour radius from Istanbul. To put this in perspective, Turkish now serves 14 airports in Germany, more than flag carrier Lufthansa.

Kotil said after the opening of New Istanbul Airport, the airline would remain committed to its second Istanbul hub at Sabiha Gökçen International Airport, in the east of the city. "Sabiha Gökçen is an entirely different operation on its own," he said. It will be upgraded with a second runway and expanded for regional growth, rather than long-haul.

Turkish Airlines also is developing the nation's capital airport, Ankara Esenboğa International Airport, into its third hub. "We want to make Ankara a hub for scheduled domestic and international operations," he explained. It bases 35 aircraft in the city.

Cargo will continue to play an important role in Turkish Airlines' development. Turkish Cargo is recording consistently robust profitability figures for its freight operations. In 2015, its cargo business grew 8.1% to 705,000 tons carried, as its African operations grew 61%, followed by South America (+19.7%) and North America (+16.2%). Only Europe slipped, at a rate of -1.7%. In 2016, Turkish Cargo will harmonize its fleet following the replacement of its two remaining A310Fs with off-factory A330Fs and predicts cargo/mail carried will increase by 13%, reaching 815,000 tons.

When quizzed about the competition from the Gulf, Kotil either genuinely does not see the Middle Eastern carriers as a threat or he is a good actor. "I believe that Dubai, Doha and Istanbul will be able to co-exist as three major international hubs for transiting passengers, he said.

Each hub had its own features and importance in the region. Turkish Airline's model is slightly different than the Gulf airlines, given its significant reliance on short- and medium-haul sectors. Turkish also has shied away from first class and has opted for a more leisure oriented customer offering with its 2009 premium economy Comfort Class.

Turkish has not reported a net loss under Kotil's leadership. In 2014, it posted a net profit of $845 million. Last year, the numbers are expected to have reached over $1 billion. In the first nine months of 2015, the airline's net profit was $877 million.

In 2016, Turkish expects its staff to increase by 19%, along with an 18% rise in fuel consumption compared with 2015. In the meantime, the carrier is targeting a 1.5% decrease in ex-fuel unit costs for the year.

However, the airline might still feel the pinch from competition from the Gulf and central Europe. Why else would it anticipate a 3% decrease in passenger unit revenue in 2016 in its January budget update to Borsa Istanbul, if not for fear of falling yields in an oversaturated market, asked Orient Aviation.

The Turkish CEO just smiled. "Big economies overheat and smaller economies like Turkey are emerging," he says. "There is excess capacity. Demand is not diminishing, the demand is there." ■

Destined for Turkish Airlines

Dr Temel Kotil graduated in Aeronautical Engineering from Istanbul Technical University in 1983. Awarded a scholarship by the Turkish Ministry of Industry in 1984, he moved to the University of Michigan-Ann Arbor, where he gained a Master's degree in Aerospace Engineering in 1986 and another second Masters degree in Mechnical Engineering a year later. In 1991, Kotil received his Ph.D in Mechanical Engineering.

He returned to Turkey in 1991 in the position of associate chair in the Department of Aeronautical Engineering at Istanbul Technical University, where he founded and managed the laboratories for aircraft design, structural mechanics and advance computational mechanics. From 1994-1997, he was manager of a technical department at Istanbul Metropolitan Municipality before he moved back to the U.S. In 2002-2003, he was head of the Research, Planning and Coordination Department at Advance Innovative Technologies Inc. in New York, but decided to return to Turkey as Turkish Airlines' executive vice-president in charge of technical affairs. Two years later, Kotil was named General Manager and CEO of the biggest carrier in Turkey. He was subsequently appointed deputy chairman of the airline.

Dr Kotil has served on the International Air Transport Association (IATA) Board of Governors since 2006 and on the Association of European Airlines (AEA) Board of Directors since 2010.

Singapore consolidates aerospace supremacy

At the 2014 Singapore Airshow deals worth more than US$32 billion were signed up. This month, the region's leading aerospace exhibition looks set to exceed that record as Asia-Pacific aviation continues its world-beating expansion.

Tom Ballantyne reports

Singapore's position as the region's leading aviation hub is unassailable. For the last two decades, Singapore's aerospace industry has grown at an average of 10% a year. It was worth some $8.5 billion in 2015 and this figure is forecast to increase to $9 billion by year end. It's MRO business alone accounts for 25% of the region's total MRO contracts.

Singapore has more than 100 companies who offer airlines cutting edge aerospace design and manufacturing services. It also has the largest number of aerospace Original Equipment Manufacturers (OEMs) in the region, including the presence of mulit-national companies, Airbus, Boeing, GE Pratt & Whitney and Rolls-Royce.

Rolls-Royce's global production center for assembly and testing of Trent 900 and Trent 1000 engines in Singapore has been producing engines for more than a year. The engine maker also manufactures fan-blades in Singapore for these engine types.

Rolls-Royce has joint venture partnerships with SIA Engineering (SIAEC), Singapore Aero Engine Services and International Engine Component Overhaul. The latter serves the global market. It also is an important MRO centre for Rolls-Royce.

The 2016 Singapore Air Show is forecast to top deals made at the 2014 show

North American manufacturer, Pratt & Whitney, this month opened a manufacturing plant that will produce GTF (geared turbofan) fan blades and turbine disks for its new generation PW1000 engines. It will be one of only two sites in the world that will manufacture the sophisticated component. The other is in Michigan in the U.S.

The 300-hectare Seletar Aerospace Park is the centre piece of Singapore's aerospace industry and a major reason for its dominance in the region. The dedicated industry park allows companies to reap the benefits of a world-class business infrastructure, complete with runway access, and also the synergies of cluster integration.

Singapore is the location of several aerospace regional distribution centres. Boeing Integrated Materials Management established its Asia Regional Centre in Singapore, where it assists airlines across the region to manage and maintain their spare parts inventories.

Embraer also chose Singapore as its regional logistics and components hub, where it holds spares and rotables valued at more than $9 million to ensure round-the-clock parts, maintenance and repair and inventory services for Embraer customers in the region.

Airbus, Bombardier, GE Aviation, Messier-Bugatti-Dowty, Pratt & Whitney and Rolls-Royce also operate spare distribution facilities in Singapore.

IFE manufacturer, Panasonic Avionics Corporation and SAIEC have established a joint venture to maintain and repair in-flight entertainment (IFE) and communication systems for most Airbus and Boeing aircraft, including new-generation models, the A380 and the B787.

European manufacturer, Safran Electronics, has formed a joint venture with SIAEC to operate a dedicated Centre of Excellence & OEM warranty repair centre for avionics components.

Fellow European manufacturer, Thales, has built an avionics manufacturing facility in Singapore for various Airbus aircraft, including the A320 and the A330. Key avionics systems that are solely manufactured in Singapore include the Flight Management and Guidance Computers, Spoiler-Elevator Computers, Flight Augmentation Computers and the Liquid Crystal Display Units. Singapore is one of the company's two manufacturing facilities in the world for Boeing 787 Dreamliner's Electric Conversion System.

All of the leading aerospace OEMs have chosen Singapore as the site of their important research and development (R & D) facilities. Similarly, they are deeply involved in programs to train the future skilled engineers and technicians necessary for the expansion of Singapore's aerospace sector.

Singapore has become a major centre for aircraft leasing, with Asia's largest lessor, BOC Aviation, headquartered in the city. With a comprehensive double tax avoidance agreement (DTA) network of 67 countries and a competitive corporate headline tax rate at 17%, Singapore aims to be the location of choice for aircraft and engine leasing companies wanting to tap into the Asia-Pacific airline market. The top ten leasing companies in the world have offices in Singapore.

Singapore now has become the "must be there" location for global aerospace companies and its potential for growth appears endless. The Singapore Economic Development Board (EDB) said: "The long-term prospects of the aerospace industry remain highly positive despite the short-term uncertainties in the global economy," it said.

"Air traffic and aircraft fleet size in Asia are poised for strong growth, bolstered by rising demand from regional economies such as China, India and the ASEAN nations. The global aerospace industry is in a phase of exciting development. The B787 Dreamliner and the A350 are already in service. More efficient engines such as the CFM Leap-X and the Pratt & Whitney PW1000G are being introduced.

"The drive towards greater fuel efficiency will increasingly push next generation aircraft to use new technologies, including extensive applications of composites in airframes, and the development of more fuel efficient engines. Singapore is committed to the development of our manpower capabilities and infrastructure to support growth in MRO, manufacturing and R&D activities in Singapore. This will put us in strong position to capitalize from emerging trends and emerging markets in Asia Pacific." ■

ST Aerospace goes after Asia's 1%

ST Aerospace is the world's largest third-party Maintenance, Repair and Overhaul (MRO) company, but 2016 presents some challenges to its market dominance as lower cost economies attract more airline business and new generation jets reduce demand for traditional MRO services.

ST Aerospace president, Lim Serh Ghee's response to the threats to the company's bottom line is to venture into new value-added areas, including an expansion of its passenger-to-freighter conversion business and business jet MRO and configuration contracts.

The company has existing agreements with Airbus for A330 passenger-to-freighter conversions as well as B757 and B767 conversions. Recently, it launched an A320-family passenger-to-freighter conversion program with Airbus, with the first A320 converted freighter scheduled to go into service in early 2018.

ST Aerspace owns Aeria Luxury Interiors, a U.S.-based VIP configuration company and DRB Aviation, also an American company but one that specializes in design, program management and certification of aircraft interiors, avionics and structural repairs, Lim said the company was establishing a business aviation aircraft interiors business at Singapore's Seletar Airport, using one of the existing hangars.

While the volume of work involved is lower than demand for upgrading airline cabins, the profit margins are much higher. It was decided to diversify into this sector, Lim said, because many high-net-worth individuals in Asia send their aircraft to Europe and the U.S. for maintenance and modification work. "We know they will be attracted to a facility in Asia that is reliable and dependable," he said.

Closing the time zone divide

Rolls-Royce addresses airlines' demands for local support.

It has been a year since Rolls-Royce's first Singapore-built Trent 1000 engine was officially launched, aptly bound for a B787 Dreamliner operated by Singapore Airlines' (SIA) LCC subsidiary, Scoot. Manufactured at Rolls-Royce's engine centre at Singapore's Seletar Aerospace Park, the unveiling of the engine was a milestone in the company's history and a new marker in its relationship with Singapore.

Last month, at a media briefing at the engine-maker's headquarters in Derby, it was announced that Singapore would participate in trials of a system aimed at bringing repair services closer to the company's customers.

Rolls-Royce head of marketing services, Alex Dulewicz, said that until now Rolls-Royce's customer support system had been extremely "Derby-centric", despite the fact that the installed engine base has increased from 3,354 in 2005 to 4,600 in 2015. It will reach an estimated 7,450 by 2025.

This growing list of customers requires faster response times to problems. They also want the engine maker to have greater accountability for managing and solving problems that do arise.

A major difficulty has been the working time zones between Singapore, other Asian hubs and the UK. Derby is between eight hours and 12 hours behind its Asia-Pacific customers. Asia-Pacific airlines reach, or have passed the end of their working day as Derby opened for business, explained Dulewicz.

To solve the problem, Rolls-Royce has placed regional teams in Customer Service Centres (CSCs) in Singapore, the Americas and Greater China. Singapore was the first to try out the new system, with engineering authority delegated to staff at its Rolls-Royce facility.

The localization customer support had resulted in "significant improvements in the level of responsiveness", the company said. Singapore also positioned satellite "airline support teams" in eight other locations around the Asia-Pacific.

"In just 12 months, Singapore has improved customer issue resolution lead time by 65%," Dulewicz said. Another factor that had improved relations with airlines was the development of greater cultural and linguistic empathy. Local teams speak the native language and understand how best to communicate with their local airline partners. Round-the-clock monitoring of engine problems worldwide, however, will continue to be handled at Derby.

The Trent 1000 engine facility in Singapore is running smoothly. The Rolls-Royce engine, said the country's Minister for Education Heng Swee Keat, symbolized the significant progress made by the local aerospace industry. "It is indeed remarkable that Singapore, with no history in the manufacturing of aero engines, is being trusted by Rolls-Royce, one of the leaders in the aerospace industry, to deliver excellence."

In addition to the assembly and testing of the engine, Rolls-Royce manufactures large fan blades and conducts research at its Seletar facility. Singapore is the regional headquarters for several of Rolls-Royce's group functions. Together with its joint venture partners, it employs more than 2,500 people in Singapore. ■

Pratt & Whitney strengthens Singapore hub

Global engine maker adds manufacturing to its Singapore business.

Tom Ballantyne reports

Pratt & Whitney – and Singapore - will celebrate the opening of the American company's manufacturing facility in Southeast Asia this month, consolidating the city's position as the region's major aerospace hub.

It's hard to imagine anyone other than an industry enthusiast describing a jet engine component as sexy. But that was the description lavished on a fan blade by Kevin J. Kirkpatrick, director, aftermarket operations, Singapore & Taiwan for Pratt & Whitney and managing director of its main engine overhaul business in Singapore, Eagle Services Asia (ESA) when he spoke to Orient Aviation.

Kirkpatrick said it is "just a sexy product. I've seen blades in other places, but the technology behind this, the weight of it, the way it functions in the engine, it is just unbelievably cool technology", he said.

"I wish we could show it around the world, but obviously there's a lot of technology in it that we don't want to show to everyone. It is a really, really cool product."

The "sexy" fan blade will be produced at Pratt & Whitney's new 180,000 square foot facility in Singapore, which will be opened in this month in the same week as the Singapore Air Show. Bordering its existing flagship MRO base at Seletar, initially it will manufacture fan blades and then expand to the production of high pressure turbine disks for the company's new generation, fuel efficient PurePower® Geared Turbofan™ engines (GTF).

Pratt & Whitney's Kevin J. Kirkpatrick: Singapore is a very desirable place for us as we expand our footprint in Asia

"That facility was built intentionally to support the growth," said Kirkpatrick. "It's our first manufacturing facility in Singapore. Most of our other facilities have been MRO. It will focus on the fan blade, which is a very advanced part of the geared turbofan. It's a hybrid metallic blade. It is only the second facility in the world that will manufacture it."

PurePower Engines are Pratt & Whitney's next generation of engines, which the company says will produce double digit improvements in fuel consumption as well as significant reductions in noise output, environmental emissions and operating costs. To date, PurePower Engines have been made up of two engine families: the PW800 engine family by Pratt & Whitney Canada, which will power the next generation of large business jets, and the PW1000G, or geared turbofan (GTF) engine family.

Both engine families have the PurePower engine core. The high performance core built for the demands of high-cycle, short-haul operation already is proving a success for the U.S. engine maker. The PW1000G engine has been selected as the exclusive engine for the Bombardier CSeries, the Mitsubishi Regional Jet (MRJ), Embraer's second generation E-Jets and as an option on the Airbus A320neo.

"We have had immense success in the marketplace. As this region is very critical to us, I am sure Singapore will play a significant role for Pratt & Whitney in that future," said Kirkpatrick.

Singapore is the company's most comprehensive, single location aftermarket outside the U.S and is on extremely important base for the manufacturer. "We like our position here. We like the talent that is available to us. We appreciate the infrastructure that Singapore provides: the educational systems, the Economic Development Board (EDB) support and the stable legal system," said Kirkpatrick.

"At many levels, Singapore aligns with United Technologies' (Pratt & Whitney is a division of United Technologies) goals of a country with which to partner. We look at this as a very significant hub for us and a very desirable place for us to expand our footprint in Asia."

Pratt & Whitney has more than 2,000 employees in Singapore in several businesses, including engine repair units, component supply and the complete suite of MRO services. If UTC's businesses are included in the conglomerate's presence in the city, the head count rises above 5,000. "In aerospace, I would argue we are the biggest multi-national player in Singapore," he said.

The main engine business is Eagle Services Asia, or ESA. "Pratt has had a long presence - more than 30 years - in Singapore. Originally, the engine centre was part of Singapore Airlines (SIA) and had been built to overhaul the airline's fleet. Pratt became involved in the company around 1999. Since then, we have been overhauling engines for customers outside the SIA fleet. SIA is now less than 2% of our overall volume," Kirkpatrick said.

"The facility focuses on the PW4000 engine and its variants. Additionally, we have expanded our capability to the GE 90 (General Electric) engine. We have had that capability for some time, but only recently decided to increase this business in partnership with GE.

"This is not a competitive shop to GE. GE is our customer and we are overhauling these engines on their behalf. We also will be overhauling various modules on the Engine Alliance 7000 (a Pratt & Whitney and GE joint venture) as well as the tear down, build up and test of the engine. We are gearing up for this and will start to manufacture parts of that in Singapore from this year."

Kirkpatrick said expansion is important but "our primary concern is aligning with our customers and making sure their fleets are very healthy and continue to fly for a very long time".

"That said, last year we increased PW4000 business by about five per cent in Singapore. The PW4000's overall fleet generally shrinks by about six per cent a year. In that declining market we have increased our market share. I think that comes back to customers looking to the strength of the OEM to provide very broad solutions, whether it's speed or cost to their operations."

"Would Pratt & Whitney expand its manufacturing capability in Singapore, as Rolls-Royce has, and build engines in the city," asked Orient Aviation. "We will consider opportunities. We have developed a very close relationship with EDB, Singapore's economic development arm. I won't say we will and I won't say we won't. We are always considering where we want to have these operations."

Kirkpatrick said the company "sees a pretty good 2016. Our engines are flying well. The volumes we see of PW4000 engines are consistent with the volumes we saw last year and we grew market share. That's the challenge. I don't see any reason why that wouldn't continue in 2016", he said. ■

Singapore steps up aerospace training

Invests US$21 million in technical training academy.

Singapore has continued its drive to make training a vital component in its aerospace agenda. In January, the country's Senior Minister of State for Transport, Josephine Teo, officially opened a US$21 million training centre to equip students and working adults with the skills required by the aerospace industry.

A part of Singapore's national SkillsFuture initiative, the Temasek Aviation Academy's facilities include aircraft technical training workshops, an aircraft-access training hangar, unmanned aerial vehicle (UAV) development facilities, a wind tunnel and flight simulators.

Teo said meeting the industry's demand for skilled manpower would be a challenge as Changi Airport expands. Work on the airport's third runway and Terminal 5 has commenced with the new terminal planned to eventually cater for more passengers annually than the current three terminals combined.

"Essentially, the skills of our people will determine our success at Changi, by making it a better hub despite the constraints we face," said the transport minister. "We often say we want our people to be future-ready, but how do we do that when the job categories, designs and requirements of the future are evolving and often yet unknown? It turns out that cultivating a healthy attitude towards learning, a certain flexibility of the mind and developing the skills of adaptation are critical," she said.

The existing Temasek Polytechnic introduced the SkillsFuture Earn and Learn Programme (ELP) for aerospace technicians last August. The Civil Aviation Authority of Singapore is working with industry partners to launch similar programs for airport passenger services and ground operations.

The deputy director of the polytechnic's School of Engineering, William See said: "Our mission is to ensure that those who pass through our doors are firmly placed on the path to success as aviation professionals, be they students aspiring to a career in aviation management or aerospace engineering, or working adults who need to deepen their skills and expand their job scope." Temasek Poly's aerospace and aviation department has grown from 76 students in 2007 to 1,500 last year. ■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