



ASIAN
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The New Generation

ASIA LOOKS TO RAMP UP TRAINING
TO HEAD OFF PREDICTED PILOT SHORTAGE

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POWERING AHEAD

Pratt & Whitney works to overcome GTF challenges



Planes aplenty, not so many pilots

ALBEN

Currently, all the forecasts about the future of Asian aviation are exceptional, except for one – the forecast that Asia will need 253,000 new pilots between now and 2036. Simply put, there are not enough currently being trained to fill all those cockpit seats as contributor **Michael Doran** explains.

THE BOEING 2017-2036 CURRENT MARKET OUTLOOK presents a positive outlook for Asian aviation, predicting new aircraft deliveries at 16,050 out of the global forecast of 41,030 new aircraft valued at US\$6.1 trillion. Boeing forecasts that 637,000 new pilots are needed globally to fly all those new planes and 253,000 needed for the Asia-Pacific region.

Based on these forecasts, the Asia-Pacific region needs to train close to 13,000 pilots annually – or 70 per day, according to one forecast, but the International Civil Aviation Organisation (ICAO) reports existing training capacity is less than 5,000 annually. The same report states that there is an annual global deficit of over 8,000 training places and the only region that has a surplus is North America.

There is currently not enough infrastructure to meet the forecast demand for pilots in Asia or indeed the rest of the world. Asia cannot train enough pilots to meet their future needs within the existing training infrastructure and unless global training is expanded it will be increasingly difficult to source it elsewhere. The costs of not having enough pilots is extremely high in dollars and reputation so action is needed now to ensure more people are attracted to a piloting career.

The basic question remains of how and by whom is this gap going to be bridged? Who is going to pay for it – the aspiring pilots, the airlines or the training providers making the major investments?

Airlines throughout the region are taking different approaches and the increasing costs and scarcity of expatriate pilots means many are now looking at securing their own steady stream of new hires. Some airlines, such as Singapore Airlines, are investing heavily in building their own training capacity while others like China Southern, Hainan and China Eastern are securing places through joint ventures with existing flight training organisations.

When looking at pilot training there are two distinct parts usually undertaken at different facilities. First there is the ab-initio (from the beginning) training that takes a cadet with no experience to a Commercial Pilot Licence or a Multi-crew Pilot Licence (MPL) in

« Companies like Alsim in France are expanding their operations and sales in Asia to meet demand.

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around 15 months. The second part is usually done when the new pilot joins an airline and is trained to gain a Type Rating, endorsing them to fly on a specific aircraft type. As an example, China Eastern will do the initial flying training with CAE Oxford in Melbourne and do type rating at their subsidiary company, Shanghai Eastern Flight Training Centre, on CAE simulators.

This training model is often referred to as Cadet to Captain and one example of a successful outcome is at AirAsia where nine cadets who graduated in 2011 became AirAsia A320 captains in May 2017. Tony Fernandes, CEO of AirAsia, said: "Our first cohort is very talented and we are very proud of their accomplishment, today flying as AirAsia captains".

Global training giant, CAE has been at the forefront of the integrated model since 2012 when it acquired Oxford Aviation Academy and now operates the world's largest network of ab-initio flight schools under the CAE Oxford banner. CAE Oxford operates schools at nine locations with a capacity to train around 2,000 cadets annually.

In Asia, CAE Oxford has ab-initio pilot programs active with mul-



iple carriers, including IndiGo, Jet Airways, JetStar Australia, Japan Airlines, China Eastern and Shenzhen Airlines. "These programmes leverage our international training footprint of training centres and

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flight academies in Asia-Pacific, Europe and the US from which over 1,000 cadets graduate each year" said Nick Leontidis, CAE group president for Civil Aviation Training Solutions.

CAE is the global leader in civil flight simulators with over 260 full flight simulators installed at airlines such as Singapore, China Eastern, Xiamen, Korean Air, Sriwijaya Air, and Jet Airways to name a few. Increased simulator training forms an essential component of the MPL pathway and CAE has developed a strategy to take the cadet through to captain using the people and products of CAE.



Increased simulator training forms an essential component of most programmes today.

In 2014 China Eastern formed a joint venture with CAE Oxford in Melbourne, Australia that now partly secures their pilot supply chain. General manager Mike Drinkall said the partnership has brought many benefits for both parties. "For CAE Oxford, we have a guaranteed supply of pilots coming through which underpins the investments we have made to accommodate them. For China Eastern, who are looking to train 1,000 new pilots a year, they are getting a consistent stream of highly trained airline ready pilots coming back to them for entry as first officers" he said.

L3 Commercial Training Solutions has developed a similar approach of flying schools and flight simulators. L3-CTS has bases in the UK, New Zealand, Bangkok and the USA. Company president, Alan Crawford, said they are seeing lots of growth in the MPL programs and commenting on the pilot shortage he said, "There's a need for more airline sponsorship of cadets." Crawford also sees the need for airlines to make commitments to cadets early in the training process.

In June 2017, L3-CTS partnered with Hong Kong Airlines in a Cadet Pilot Program to take cadets with no flying experience all the way through to second officer positions. The programme is fully funded by Hong Kong Airlines with a structured pathway in place from

cadet to captain. The vice chairman of Hong Kong Airlines, Tang King Shing, said the programme "forms a remarkable milestone for Hong Kong Airlines in nurturing and grooming our own talent asset and with the company's commitment to the local aviation industry"

The initial flight training will be done at L3-CTS New Zealand in around 18 months followed by simulator training on the path to appointment as an A330 second officer. To support the ongoing development of their pilots Hong Kong Airlines are installing 12 full flight simulators in their new aviation training centre.

Australia's Airways Aviation Group has devised its own programme that takes a novice through to airline-ready pilot with three progressions. The first step for Asian students would be the Aviation Foundation School in Kuala Lumpur for ground training, followed by flight training and commercial pilot licence work in Australia and then advanced simulator training at the Aviation Airways Brisbane Airline Training Centre as required.

When asked about the pilot shortages in Asia, the founder of Airways Aviation, Romy Hawatt, said: "It is evident from airline partners that this is clearly the biggest challenge facing them at the moment. With multiple pilot training academies and a dedicated Airline Training Centre, Airways Aviation has capacity in Australia to support the flight training requirements of Asian airlines looking to train ever increasing numbers of new pilots."

"Our recent experience suggests that airlines are looking for increasingly bespoke solutions to their specific training requirements. As a result, Airways Aviation has also prioritised the development of extensive support services to act as a trusted partner for airlines. These dedicated training pathways include an aviation degree, a flight screening and recruitment solution and end to end airline ready pilot training."

Another aspect to this total package concept is the CREW programme which recruits pilots for airlines utilising 15 global assessment centres. Hawatt, at Airways Aviation, said "CREW has already secured some of the world's largest airlines as customers, providing them with an increasing global footprint to attract, screen and select the very best candidates."

A trend observed by both CAE and Airways is that airlines are getting involved much earlier in the pilot selection and training phases and looking for training that is tailor-made to their standards. "In that sense airlines are more than ever looking beyond the recruitment of first officers, assessing and recruiting candidates that have what it takes to become successful captains," CAE's Nick Leontidis said.

From an airline perspective Singapore Airlines has developed a pathway to take cadets with no flying experience to first officer using a combination of offshore and Singaporean resources. The cadet course is operated by subsidiary, Singapore Flying College, with initial flying training in Australia at the college's base in Perth. That is followed by type rating and further training in Singapore before beginning their careers as first officers with the Singapore group.

The Singapore Airlines' programme stands out through its defined pathway approach, training is provided and the cadets are paid an

allowance during training. In return the cadet is bonded to SIA for a period of seven years from appointment. SIA also has programmes in place for direct entry second officers and first officers where the required aircraft type rating is provided by SIA, again secured by a bonding period.

SIA recently announced a joint venture with CAE to establish a training centre to provide a full range of type rating and recurrent training programmes for Boeing 737MAX, 747, 777 and 787 aircraft types. SIA CEO, Goh Choon Phong said "With the SIA Group expanding its fleet to drive additional growth, the joint venture will help keep pace with our own training requirements as well as other airlines in the region." In 2016, the airline set up the Airbus Asia Training Centre in partnership with Airbus for A380, A350, A330 and A320 training.

With this approach, Singapore Airlines has covered all the bases by having programmes for cadets, second officers and first officers with the training and type rating within its own facilities. It is also making it attractive for potential recruits to join the airline by trading off the training costs for a bonded employment period and a position after training is completed. It is a model that sets a benchmark for other Asian carriers.

Given the size and value of the training opportunity in Asia, it is no surprise it is also capturing the attention of governments within the region. The Australian government is mounting a trade mission to China in support of aviation training organisations based in Australia. The September mission will visit Shanghai, Chengdu and the Beijing Airshow with capability seminars in each location. Australia's trade minister, Steve Ciobo, said "Australian aviation training is among the best in the world so there is a great opportunity for Australian aviation firms to create partnerships with Chinese airlines and pilot training academies."

Perhaps a more novel approach is to just extend the flying life for existing pilots. The Civil Aviation Administration of China is reported to be planning to raise the mandatory retirement age from 60, the Ministry of Transport in Japan has raised it to 67, Malaysia Airlines to 60 and retirement at AirAsia and Emirates comes at 65. India is also considering a plan to force pilots to give a one-year notice period before they can join a new employer.

To those who see a pilot shortage as a mirage that has been predicted for years but never materialised, recent events in the USA should jolt them out of their complacency. Horizon Air is a US regional carrier with a fleet of 60 aircraft and a subsidiary of Alaska Air. Due to the pilot shortage, the airline cancelled 6 percent of its August services, deleting around 700 flights that month. In July 2017, Horizon CEO David Campbell told staff: "Our ability to attract, train and retain pilots did not keep pace with our growth plans and that led to numerous cancellations since December."

A 2016 study by the University of North Dakota reports a need

Australian aviation training is among the best in the world so there is a great opportunity for Australian aviation firms to create partnerships with Chinese airlines and pilot training academies.

STEVE CIOBO, AUSTRALIAN TRADE MINISTER

for 18,700 new pilots in the US by 2020 and the US Regional Airline Association says that if the shortage is not addressed then 1,400 aircraft will be parked by 2026 due to lack of pilots.

To bring the issue closer to home, China Eastern has just announced they expect to add 170 additional aircraft to their fleet in the next two years which, according to CAE estimates, will require close to 1,900 extra pilots to crew them. Forty-four of those aircraft are due before the end of 2017.

There is already a pilot shortage impacting on airline operations which if left unaddressed has the potential to derail airlines' growth plans throughout Asia. While flight training organisations will seek to capitalise on this demand, the consequences of failure lie elsewhere. That responsibility sits with the airlines to develop the processes and partnerships that will allow them to meet the increased Asian demand for pilots and air passenger services. +

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