

Gateway to growth

TIM ROBINSON reports from the Asian Aerospace International Expo and Congress 2011 held at Asia WorldExpo, Hong Kong, on 8-10 March.



Boeing

Three sides of China's aerospace growth — main picture — Air China placed an order for five Boeing 747-8Is to cope with rising demand. Lower: the business aviation static display. Left: Presentations in the Congress session included one on the aerodynamics of the COMAC C919 airliner.

First started in 2007 when the Asian Aerospace brand name broke away from its old Singapore location and was relocated to Hong Kong, this biennial aviation show is still evolving its own identity. Now taking place for the third time, it has so far defied critics who questioned the wisdom of two premier airshows competing side-by-side in Asia-Pacific. The organisers report that over 12,300 trade delegates attended and 270 exhibitors signed up. The number of delegates from China, meanwhile, was up from 2009 by 50%. As well as the exhibition hall there were dedicated conferences and symposiums — Asian Business

Aviation (which saw an additional 5,300 attendees), Air Freight Asia and Asia Pacific Airline Training Symposium — as well as a new event 'Aviation Awards Asia' (aimed at recognising the best of the best in commercial aerospace in the region). Although there was no flying display, the show did include some 22 aircraft in the static display, at the Hong Kong Business Aviation Centre (HKBAC), including business aircraft from Airbus, Boeing, Bombardier, Cessna, Dassault, Embraer, Hawker Beechcraft, Gulfstream and Pilatus. This is three times the number of aircraft at the inaugural Asian Aerospace in 2007.

The official opening of the show, meanwhile, saw lion dancers and traditional Chinese drummers escort VIPs on to the stage for the ribbon cutting ceremony. This year, it was noted, it was especially significant for Hong Kong — celebrating its 100th anniversary of powered flight. The growth continues apace. Since the new airport opened in 1998 air traffic has almost doubled. Officials are also extremely proud that 'local boy' Tony Tyler, ceo of Cathay Pacific, will be moving on to head up IATA — giving an Asia-Pacific voice to the world's airline

association as the region provides the driving force for global recovery.

It's not a duopoly anymore

In Airbus' first media briefing given by Christopher Emerson, svp head of product strategy and market forecasts, he said that Airbus research shows that Asia-Pacific will need some 8,560 new aircraft over the next 20 years — with a total value topping \$1.2trillion.

Significantly, he also drew attention to the fact that the 'end of the duopoly' was here — with Canada, Russia and of course China all fielding new entrants — making estimates more complex. Another complicating factor for predictions was oil. Though the recovery signs were good and graphs showed movement in the right direction (world passenger traffic in January was up 7.4%, with traffic in Asia-Pacific itself up 8.5%) the uncertainty in the Middle East means that fuel prices are an important factor. This, Emerson believes, benefits Airbus by putting pressure on airlines to retire older less-efficient fuel-guzzling types and replace them with new efficient aircraft such as the A320neo (described in the press handout as a 'natural fuel hedge'). Emerson also admitted that the demand for short-haul aircraft in China, could be affected by the development of high-speed rail links connecting megacities. However, he refused to be drawn on the question of whether both Airbus and Boeing would lose ground to the COMAC C919 if Chinese carriers have to buy it — saying it was a question for COMAC themselves.

Lucky for some

Even before the show had its official VIP opening — a short-notice media briefing had invited the aviation press to an Air China/Boeing media briefing. This turned out to be an order for five 747-8Is from China's flag carrier. No delivery date was set for these aircraft apart from that it would be in the next three years. It seems that Boeing's new 'lucky' Asian orange/red 747-8I roll-out livery has already proved its worth.

Embraer aims Legacy 650 at Chinese market

Embraer brought along a Legacy 650 bizjet to display on the static line. One selling point, claims Embraer, is that, with three cabin zones, the 650 has 30% lower direct operating costs than the three-zone Gulfstream — putting it on a par with jets like the Dassault Falcon 2000EX and Bombardier Challenger 605 with two cabin zones. Embraer's strategy — to



Supersonic biplane?

Found in the halls was this concept on Japan's Miyagi region stand. Looking rather like a cross between an A-12 stealth bomber and something that Captain Scarlet would pilot, it is, in fact, a concept from local Tohoku University for a low-noise supersonic airliner. Closely separated upper and lower wings that meet at the wingtips, however, mean it is technically a biplane. After the airship then — is the biplane due a 21st century reboot?

become a major player in business aviation by 2015, it had 'completed in 2011' — last year the Phenom 100 was the most delivered bizjet in 2010.

So what were the differences in the Chinese business aviation market — compared to others? We asked Guan Dong Yuan, President, Embraer China. Not much, he said, Chinese customers 'want the same' as other customers around the world. However, he did concede that at the moment the larger aircraft such as Legacy 650 (three sold) and Lineage (one sold) was the hottest part of the Chinese business aviation market. But as time went on, he said, that he expects smaller bizjets, too, to increase in popularity as the market evolves.

background, is very often cabin upgrades will be synchronised with other maintenance work — making TAECO into a one-stop shop for cabin and MRO work. Finally, a Chinese cabin outfitter will avoid such diplomatic incidents as when a Chinese Government Boeing 767 was returned festooned with bugging devices after being fitted out in the US.

HNA orders 38 Boeing widebodies

In another press conference, China's fast-growing Hianan Airlines Group (which also includes shipping and insurance arms) made Boeing, Dassault and Gulfstream's day with MoUs for 48 aircraft — 38 of them widebodies from Boeing. The order, from HNA's Hong Kong Airlines, comprised 32 Boeing 787s (two VIP versions) as well as six 777F cargo aircraft — in a deal worth over \$8bn at list prices. For their part, Dassault and Gulfstream secured MoUs for five business jets apiece — Dassault for five Falcon 7xs and Gulfstream for four G550s and a single G450.

TAECO becomes Airbus VIP outfitter

It was revealed that Xiamen-based MRO provider TAECO would become the eighth Airbus VIP cabin outfitter and the first one in Asia. TAECO already has extensive experience in airline cabin modifications and upgrades — but this new cabin outfitting capability adds design engineering capability and approvals. Though the focus, initially, is on Airbus' narrowbody product range — 'in theory' in the future it could expand to other types. Another advantage, notes Airbus of TAECO's heavy maintenance



Airbus is already thinking ahead in adapting its designs and ideas to the Asian VIP market to better sell its Airbus Corporate Jets. A cabin concept called 'Phoenix' featured lots of red (a lucky colour in Asia) a round table for the family to play cards or games and even a karaoke machine — so entrepreneurs can belt out Elvis hits at 36,000ft. Though this last feature sounds like a gimmick — Airbus revealed they have already sold a jet with such a system installed. Next up — a VIP cabin concept with dual Guitar Hero set-ups?



The new face of China – Rolls-Royce and Bombardier Challenger 850.

market which it forecasts will need some 600 aircraft over the coming decade. However, David Dixon, regional vp sales, Asia-Pacific, Bombardier Business Aircraft, warned that this prediction may be conservative — and ‘understated’ — given it was estimated at only 200 bizjets only two years ago. He noted — “There are no business schools that teach you” how to predict this sort of growth. He also noted that as China moves to become a net investor with international interests in South America, Africa and elsewhere — this will in turn drive demand for long-range business jets — with Bombardier’s new long-legged Global 7000/8000 products well-placed to exploit this.

Cathay Pacific leads Asia-Pacific rebound

Some idea of the way in which the dynamism of this region is helping power the global recovery was given by Cathay Pacific which not only reported a near tripling of its profits in 2010 from HK\$4.69bn to HK\$14.05bn but also announced it had placed some \$5.99bn worth of airliner orders with Airbus and Boeing. The orders will boost its existing fleet with 15 extra A330-300s and ten additional 777-300ERs — as well as an extra two A350-900s it will source from ILFC.

“Now, what is a 797?”

With the pace of press conferences slackened on the second day — it was a chance to meet up for deeper conversations with executives at the show. *Aerospace International* spoke to Randy Tinseth, vp marketing,

Boeing Commercial Airplanes on 747-8I sales, new entrants to the market and whether this summer’s Paris airshow might see the announcement of a Boeing ‘797’ — a potential 737 replacement. Though Tinseth refused to be drawn on whether it will be a new aircraft or a re-engined 737 he noted that the re-engine plan had so far drawn a ‘mixed’ response from customers. Could any new aircraft be a twin-aisle? Certainly a wider fuselage might speed up turnaround times he remarked, perhaps allowing some operators to squeeze in an extra flight per day. Whatever Boeing’s decision on the successor to the 737 — its next move will be extremely significant.

To watch the video interview with Boeing’s Randy Tinseth go to www.aerosocietychannel.com

Aviation Awards Asia

A new event this year at Asian Aerospace was the inaugural Aviation Awards Asia — a



competition to recognise and honour the best in civil aerospace in the region. Winners were chosen by a distinguished panel of judges who scored entries on innovation, customer service and business strategy among other factors. The winners in the five categories were:

- Full service airline: *Air New Zealand*
 - Low-cost carrier: *AirAsia*
 - Business Aviation: *Dassault Falcon*
 - MRO: *SLA Engineering*
 - Technology & the Environment: *Airways New Zealand*
- Congratulations to the winners!



Japan eyes a piece of the action, too

While all eyes were on Greater China’s aerospace ambitions — whether it be aircraft manufacturing, airlines or airports, Hong Kong’s status as an Asian world city also means the show attracts those elsewhere in Asia-Pacific. Japan’s Mitsubishi, for example, briefed journalists on the status of its MRJ regional jet programme — now with its first US order under its belt. From the presentation slides it is clear that Mitsubishi has Embraer in its sights, claiming that the MRJ90 will be 40% quieter and produce 20% less CO₂ emissions than the rival E190. However, while it is keen to take on Embraer — Mitsubishi, so far, is happy not to challenge Airbus or Boeing. Its MRJ100X announced in 2009 is still under study. Deliveries of the MRJ90 will begin in 2014, with a first flight pencilled in for the middle of next year. The company also showed its cabin mock-up which features large luggage bins, LED lighting and slimline seats (developed in-house) that are, says the company, some 3-5kg lighter than (older) standard regional jet seats.

Can China cope with this aviation growth?

While the majority of the show was upbeat with airlines, manufacturers and media dazed over China’s headlong growth — one or two dissenting voices did speak off the record on the challenges that this might bring. One issue in particular was the concern over training of new pilots. Said one training provider who asked not to be named: “China will run out of pilots before they realise they need to loosen the rules on foreign *ab initio* flight schools.” With currently no new foreign-based *ab initio* schools being approved, Western flight training providers are privately worried that China may not have the



China's COMAC stand was one of the biggest, and featured a model of the C919 as well as a 3D film.

capacity to bring on the pilots it needs in the time required.

And it is not just pilots. Another source commenting on: "45 new airports in five years" said "They just don't get the amount of growth" — and, when pressed, said this referred not only to the Chinese authorities, but airlines, manufacturers and everyone involved. However, while there are concerns, it is clear that there was broad agreement that China can address these problems once it wakes up to them. The dark side of this unprecedented growth is perhaps best represented by the falsified pilot records scandal that shook China in 2010. All involved, from regulators, airlines and manufacturers, must be aware of the risks, as well as the opportunities, of this massive expansion in aviation.

Future of aviation

The show also hosted conference sessions — with a particularly interesting set of technical presentations given by Professor Rik Parker, director of research & technology, Rolls-Royce; Al Bryant, vp, Boeing Research & Technology China; Stephane Garson, VP marketing, CFM/Snecma; Song Fu,

deputy dean, Laboratory for Advanced Simulation Turbulence, Tsinghua University, Beijing; Professor Xin Zhang, Airbus Noise Technology Centre, University of Southampton and Dr Mark Watson, head of environment, Cathay Pacific. These speakers covered such topics as open-rotor engines (Rik Parker), sustainable biofuels (Al Bryant), Leap-X engine (Stephane Garson), C919 aerodynamic research (Song Fu), future green aviation (Xin Zhang) and the airlines' perspective (Mark Watson).

A highly technical session, it is impossible to cover everything that was said here — but key themes emerged. First, biofuels are becoming extremely attractive (partly due to Middle East uncertainty) and are now commercially viable. According to Al Bryant the crossover price of biofuels vs JetA1 was exceeded when oil went past \$90 a barrel. Meanwhile, in engines, both Rolls-Royce and CFM see potential longer term in open-rotor powerplants — which could deliver 15-20% better fuel efficiency than advanced turboprops. Encouragingly too, there are signs that ICAO may recognise that open-rotor may be a special case

for future noise standards — potentially opening the door to this promising technology.

Static display says China has arrived

While big airline deals naturally grab attention and generate headlines, perhaps the best example of the wealth being created by the 'new China, was the static display of business jets at Asian Aerospace — which boasted a packed ramp with 22 aircraft. This figure does not include another nine or ten aircraft that were there naturally outside the display on the ramp. The size of jets too is significant — with the smallest being a Bombardier LearJet 60XR, or perhaps the Gulfstream G150. And there were only two turboprop aircraft on display — a Pilatus PC-12 and Hawker Beechcraft King Air 350i.

Those trying to pitch VLJs to the new generation of Chinese billionaires then — may have to think again — here a large cabin aircraft tells your friends, and indeed the world, you have arrived. With this aviation show — China has most definitely arrived.



Hong Kong Airport keeps growing

Hong Kong's International Airport is already taking steps to cope with demand. In 2013 a new cargo terminal for Cathay Pacific will boost cargo capacity from the current 4.8m tonnes annually to 7.4m tonnes. It will also boost its ability to handle passenger growth with a new midfield 73,000sq m central concourse in 2015. This development will include 20 additional stands — some of them for A380-class aircraft.



Budget chopper

However, if your wallet doesn't stretch to a BBJ or ACJ, then Japan's Gen Corporation has just the thing for you — a one-person helicopter for some €70,000. This helicopter, called the Gen H-4, is a co-axial design with the pilot tilting the fixed rotors and engine(s) assembly itself. Endurance is 60 minutes from the four 124cc engines that provide power. Extremely easy to fly, the Gen H-4, incredibly, does not need a helicopter or pilot's licence to fly in Japan. The company is now working on EASA certification as well as an UAV version.

Summary

So will the show succeed? While some attendees *Aerospace International* spoke to said it still needs more 'buzz' and there were notable big names missing in terms of Tier 1 suppliers — the show is certainly positioned well as the gateway to so much aviation growth in China. And it is not just China either. One clue that encapsulates Asia's growing self confidence was an ad spotted on the IFE system on the flight over for a Singapore bank that had as the tagline "It's Asia's time — It's our time" and a child's laughter shaking worried-looking Parisians across the globe. Something definitely to ponder for the future.