



News from the Boeing world



September 2010



Boeing Australia & South Pacific



Boeing forecasts 920 new aircraft for Oceania over next 20 years

Throughout September, Boeing has shared its 2010 Current Market Outlook for Australia, New Zealand and the South Pacific Islands, forecasting demand for 920 new aircraft valued at US\$120 billion over the next 20 years. The strong local demand is in line with global projections of 30,900 new airliners by 2029 at a cost of US\$3.6 trillion.

Boeing Commercial Airplanes Vice President of Marketing Randy Tinseth conducted a series of briefings with key aviation journalists, airlines, airports, aviation industry analysts and financial institutions in Australia and New Zealand.

Tinseth said the Oceania aviation industry was being transformed by intense competition, innovation by airlines and in the development of new, more efficient aircraft, as well as the growth of low cost airlines.

"We're seeing that with the strong demand for single aisle aircraft that's forecast for the next 20 years," Tinseth said. "Sixty-eight percent of the 920 new airplanes required by 2029 will be single-aisle aircraft such as the 737."

Twin-aisle aircraft, such as Boeing's long-range 787 Dreamliner and the 777 family, will account for 28 percent of the forecast demand.

The forecast also reflects the strong position of the Asia Pacific aviation industry.

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US Navy contract for 124 F/A-18 and EA-18 Aircraft

Boeing has been awarded a new multi-year procurement (MYP) contract from the US Navy for 124 F/A-18E/F Super Hornet and EA-18G Growler aircraft, in a contract valued at US\$5.297 billion.

Under the terms of the agreement, Boeing will deliver 66 Super Hornets and 58 Growlers to the Navy from 2012 through 2015.

The new contract is the third multi-year agreement between Boeing and the US Navy for production of the F/A-18E/F, the Navy's frontline strike fighter, which delivers forward-deployed air combat capability around the world.

The EA-18G, the United States' newest combat aircraft, conducts advanced airborne electronic attack (AEA) missions to support Navy and joint force requirements. The EA-18G is scheduled for its first combat deployment later this year.

Boeing delivered 210 Super Hornets to the US Navy during the initial F/A-18E/F MYP from 2000 to 2004. Boeing was then awarded a second MYP that included aircraft procurement during fiscal years 2005 to 2009. Aircraft deliveries under that contract continue through 2011 and total 257 aircraft.



Boeing Commercial Airplanes Vice President of Marketing Randy Tinseth briefs key aviation media in Sydney on Boeing's Current Market Outlook for Oceania

Super Hornet production milestone

Boeing this month completed production of the first Royal Australian Air Force (RAAF) F/A-18F Super Hornet that has the capability to be converted into an electronic attack aircraft.

Boeing is pre-wiring the RAAF's second tranche of 12 Super Hornets for potential electronic attack capability conversion during production at the company's facilities in St. Louis.

The Australian government announced in 2007 that it would acquire 24 of the advanced Block II versions of the Super Hornet, all of which are equipped with the Raytheon-built APG-79 Active Electronically Scanned Array radar.

Eleven Super Hornets are now operating at RAAF Base Amberley. Boeing will deliver Australia's 24th Super Hornet in 2011.

UAVs monitor marine mammals

Boeing's Insitu Pacific has teamed up with researchers from Murdoch University in an Australian-first trial to investigate whether Unmanned Aerial Vehicles (UAVs) can be used for surveying marine mammals.

Researcher Dr Amanda Hodgson has received a post doctoral grant from the Australian Marine Mammal Centre to work with Insitu Pacific to adapt its UAV camera system for wide area marine mammal surveying purposes.

The three-year period of study will include a number of trials to investigate whether UAVs provide a useful alternative to traditional manned aircraft for surveying marine mammals such as dugongs and humpback whales.

Insitu Pacific's UAVs have recently completed the first round of flights, off Western Australia's mid-north coast.

Vigilare enters service with RAAF

The Royal Australian Air Force this month began using the Boeing developed Vigilare system for national surveillance and air defence operations.

The \$275 million system became operational at the Northern Regional Operations Centre (NROC) in the Northern Territory on 2 September.

Vigilare integrates data and information from aircraft, ships, networks and radars to provide a comprehensive picture of the skies above and around Australia.

Tim Malone, Defence Materiel Organisation (DMO) project director for Project Air 5333, said the enhanced capability of Vigilare delivered a "robust air defence Command and Control (C2) system" for Australia.

"In my opinion, this capability, especially the sophisticated Tactical Data Link implementation, is arguably world-class," Malone said.

With NROC now in operational service, Boeing will install Vigilare at the Eastern Regional Operations Centre in Newcastle ahead of final acceptance in mid-2011.

"We're extremely pleased with the way Vigilare has transitioned into operational service at NROC," said Steve Parker, vice president and general manager of Network and Space Systems for Boeing Defence Australia.

"It's indicative of the considerable engineering and project management rigour we've applied to this project and the pragmatic relationship we've established with our supplier partners, the Australian Defence Materiel Organisation and Air Force.

"Vigilare has set the benchmark for future complex systems integration within the Australian Defence Force by bringing several disparate systems together to create a true systems-of-systems environment."

Boeing's Vigilare capability has attracted international interest and is confident of the Network Centric Command Control System's (NC3S) export potential.

NC3S as part of broader offering from Boeing in a restricted tender with the United Arab Emirates to replace their air defence ground environment.



Royal Australian Air Force Air Combat Officers (left to right) Flight Lieutenant Alesha Whitehead and Flight Lieutenant Robert Vine using Vigilare with P3 Orion pilot Squadron Leader Anneka Deaton observing. Photo: Defence

Boeing shares 20-year outlook with future of the aviation industry

Current Market Outlook (continued from page 1)

Long-term air traffic growth across the Asia-Pacific region is projected to be 7.1 percent annually over the next 20 years, compared to world average growth of 4.9 percent.

Today, about one-third of all airline traffic touches the Asia-Pacific region. By 2029, almost 43 percent of all traffic will start, end or be contained within the Asia-Pacific region.

Full details of Boeing's global 2010 Current Market Outlook are currently available at <http://www.boeing.com/commercial/cmo/>

The detailed Oceania outlook will be available from November.

More than one million pilots and maintenance staff needed

The commercial aviation industry will require 466,650 pilots and 596,500 maintenance personnel over the next 20 years to accommodate the strong demand for new and replacement aircraft.

This crew assessment, based on the Boeing 2010 Current Market Outlook, forecasts that airlines will need an average of 23,300 new pilots and 30,000 new maintenance personnel per year from 2010 to 2029.

The largest growth in both pilots and maintenance workers will be in the Asia-Pacific region with a requirement for 180,600 and 220,000 respectively.

Within Oceania - Australia, New Zealand and the South Pacific Islands - 16,100 pilots and 16,700 maintenance personnel will be needed over the next 20 years.



Boeing Commercial Airplanes Vice President of Marketing Randy Tinseth (centre) talks about the future of the aviation and aerospace industry with students from Queensland University of Technology in Brisbane

They might be the pupils of today, but come 2029, the students of Brisbane's Aviation High and the Queensland University of Technology (QUT) will be the people leading Australia's aviation industry.

So a presentation on Boeing's projections for the next 20 years of commercial aviation was always going to spark lively discussion.

And that's what Boeing Commercial Airplanes Vice President of Marketing Randy Tinseth found when he visited Aviation High as part of a series of briefings on the company's 2010 Current Market Outlook for Oceania.

More than 60 students from Aviation High – Australia's only high school with a dedicated aviation and aerospace focus – and QUT participated in the briefing.

The main topic of discussion was the long-range Boeing 787 Dreamliner and the cutting edge technology that is a feature of the aircraft.

Students were keen to talk about the airplane's technological and design improvements, such as the use of composites, next-generation engines and aerodynamic wings as well as the larger windows, lower cabin pressure and cleaner cabin air.

Aviation High is one of 17 schools participating in the Aerospace Project, which commenced in 2004 to provide students with clear pathways into the growing Queensland aviation and aerospace industries. There are now more than 740 high school students throughout Queensland studying Aerospace Studies as part of the program.

Boeing Australia, specifically through Boeing Defence Australia, has been involved with the program since its inception.

To date, more than 90 students have undertaken a five-day structured work experience placement with the company.

787 flight test program spreads its wings

During September, four of the five Boeing 787 flight test aircraft have conducted remote test operations.

Test aircraft were conducting operations in Rosewell, New Mexico (wet runway testing), Keflavik Airport in Iceland (high altitude and cold weather), Yuma, Arizona (hot weather), and Victorville, California (flight loads survey testing). The 787 flight test fleet has conducted almost 2,000 hours of flying in more than 620 flights.

737 production rate boost

Boeing will increase its production rate for the Next-Generation 737 program to 38 aircraft per month in the second quarter of 2013.

Announcing the production increase, Boeing Commercial Airplanes President and CEO Jim Albaugh said factors influencing the rate increase included the company's current backlog of more than 2,000 Next-Generation 737s, current options that customers are expected to exercise and ongoing sales campaigns.

The company's 2010 Current Market Outlook forecasts demand for more than 21,000 single aisle airliners, such as the 737, over the next 20 years.

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Overseas internship a dream come true

Bryan Huang describes his three-week Boeing and Queensland University of Technology (QUT) funded internship to the United States as a dream come true.

The 19-year-old was selected from a dozen high-achieving avionics students for the trip which was organised by the non-profit Future of Flight Foundation.

"It was an unbelievable trip," Huang said. "To see all those sites and cities on my first visit to the US was amazing. It was a dream come true."

Fascinated from a young age with space and aircraft, Huang enrolled in an avionics engineering degree at QUT three years ago to pursue a career in aerospace.

One of his current university assignments is to build and fly an autonomous robot. And he drew plenty of inspiration for the project during his visit to Boeing's Unmanned Aerial Vehicle "swarming" laboratory in Seattle.

"The collision avoidance and pre-determined tracks and altitude technology being developed there has certainly given me some ideas for my current project," he said.

The trip also included tours of the Satellite Development Centre in El Segundo, Renton 737 and Everett 747 factories in Seattle, and V-22 Osprey and CH-47 Chinook production lines in Philadelphia.

"The Everett factory is the largest building in the world by volume and you really have to step inside just to appreciate how immense the site is," Huang said. "Your entire perspective is shifted as you see huge Boeing 747s lined up in assembly like little toys."



Bryan Huang before a B-25D flight over Mount Baker in Seattle with pilots Lance and John Sessions.

Other highlights were a 20-hour workshop that involved him manufacturing his own composite snowboard and fixing the engine of a B-25D World War II Bomber before flying it over Seattle's Mount Baker.

Boeing Research & Technology Global funded the QUT internship for the first time this year through Boeing's relationship with QUT under the University Relations program that aims to encourage students towards research and career paths in aerospace.

Bill Lyons, General Manager of BR&T-Australia, met with Huang to hear about his experiences. "He certainly made me proud to work for Boeing and also of the great relationship we have developed with QUT," Dr Lyons said.

Since 2008, Boeing has contributed more than \$350,000 to Australian universities through the University Relations program – including QUT, the University of Queensland, RMIT University and University of NSW – with funds used for student projects, travel bursaries, scholarships, awards and student out reach programs.