

Consolidated Air Combat Capability

In keeping with the 2000 Defence White Paper, the Australian Defence Force (ADF) is committed to maintaining an edge in regional air combat capability. The Super Hornet is the clear choice as a bridging air combat capability for three reasons:

first because of its excellent capability to meet Australia's requirements, **second** because of its availability and supportability, and **third** because the Air Force has the capacity to make this transition more easily than with any other aircraft.

The Super Hornet is in service with the US Navy through to 2030 and will continue to be upgraded, keeping it relevant through until 2020. It will ensure our air combat capability edge is maintained through the transition to F-35 over the next decade.

The Block II Super Hornet will be on the ground in Australia in a little over two years. The Super Hornet acquisition will allow us to retire the F-111 at a time of our choosing.

Regarding claims the Super Hornet is not sufficiently stealthy

The Super Hornet is a low-observable (LO) aircraft, orders of magnitude more 'stealthy' than F-111 or Su-30s. The F-35 JSF is a Very Low Observable (VLO) aircraft and true 5th generation.

Regarding Super Hornet not being 5th generation

The ADF has never said that the Super Hornet is '5th generation' - a term referring to the combination of stealth and sensor integration. The only two true 5th generation aircraft are F-22 Raptor and the F-35 JSF.

Super Hornet vs Su-30 series aircraft

If a Super Hornet is to meet a Su-30 in the coming eight years, ADF pilots would want to be in the F/A-18F cockpit every time. Any pilot who has flown the new Block II F/A-18F with AESA radar would.

The Super Hornet is a true multi-role aircraft that spans the air combat spectrum, including maritime strike, so vital for Australia. The Block II airframe is redesigned for signature reduction and the aircraft is built around the most advanced radar in any non-fifth generation aircraft in the world.

Modern lethal weapons render any aircraft performance measure irrelevant if it does not enable first shot. First shot is achieved long range through:

- modern networking;

- survivability – (through signature reduction and integrated electronic counter-measures that deny opponents the ability to shoot);
- advanced radars to cue weapons early, and
- lethal missiles – (with long range and protection against countermeasures).

In its air superiority roles, the F/A-18F possesses all these attributes and will test any modern air defence system. Air combat capability is about far more than the aircraft specifications. Reliable, sustainable logistics support, the best training and a full air combat system of command and control is required to match modern threats. No other aircraft can meet this requirement in the bridging timeframe better than F/A-18F Super Hornet.

Was DSTO's F-111 wing testing flawed?

There were no errors in the set-up of DSTO's F-111C wing fatigue test. The wing fatigue test was developed to simulate the loads on the aircraft in-flight.

The F-111C wing fatigue test was initiated by Air Force and conducted by DSTO to manage and address fatigue cracking problems identified in the mid-1990s. The wing fatigue test article failed unexpectedly during testing. All F-111C wings were subsequently replaced with later model wings which passed the wing fatigue test.

Defence Evaluation of various capability options:

It is a normal part of prudent military planning to develop fallback options for government consideration. The bridging capability option leveraged off several years of on-going analysis through AIR 6000.

Preliminary DSTO studies were carried out on both the technical risk and operational analysis of Block II Super Hornet as a bridging air combat capability prior to government decision.

The F/A-18F Block II Super Hornet is clearly the most capable aircraft across all air combat roles that Air Force have the capacity to introduce in the bridging timeframe.

The option of the F/A-18F Super Hornet builds on our understanding of the current F/A-18 fleet. This option is least risk to ensure that Australia's capability edge is maintained at a time of major equipment renewal and change for Air Force.

F-111

The F-111 is a great strike aircraft, professionally operated and maintained by Royal Australian Air Force personnel. The F-111 has been the stalwart of Australia's air strike power for last 30 years but will not continue to meet Australia's strategic needs.

Australia aims to retire the F-111 at a time of our choosing, noting the F-111 was planned to retire well before Super Hornet was considered as a bridging capability.

The F-111 would operate at increasing operational risk with emerging threats in the coming decade beyond 2010. It would also operate at increasing safety risk beyond 2010 with the ageing airframe issues highlighted by wing fatigue, well publicised fuel tank issues and wiring looms.

The F-111's *effective* range is increasingly reduced as it needs to avoid air and surface threats rather than having the ability to penetrate them as can a modern multi-role fighter such as the F/A-18F Block II Super Hornet.

The F-111 needs a fighter escort with any air threat, is not networked and doesn't fit into Australia's networked Defence architecture for the coming decade.

Extent of consideration of alternatives for AIR 6000

- Project AIR 6000 was established in 1999 to consider options leading to acquisition of new air combat capabilities when the F/A-18 and F-111 aircraft are phased out of service.
- The project developed qualitative measures to identify the potential advantages and disadvantages of the various AIR 6000 options.
- Non-JSF contenders included the F-22, F-15E, F/A-18 E/F, Eurofighter Typhoon, F-16 Block 60, Dassault Rafale and the SAAB Gripen.
- The JSF emerged as the likely solution for meeting Australia's future air combat needs and presented the ADF with an opportunity to leap a generation of aircraft and also participate in its development.
- With the exception of the JSF and F-22, all cost data was derived from responses to AIR 6000's Request For Information in December 2001 - JSF cost data has been made available through participation in the JSF Program.
- The JSF price was/and still is, well towards the bottom end of the original AIR 6000 contenders.
- AIR 6000 analysis indicated that JSF was certainly more capable than the contenders.
- Non-JSF contenders offered far lower aircraft production numbers and limited Australian industry involvement in design, development and production of aircraft systems.

The decision to join the JSF Program

Australia joined the JSF Program in October 2002 to obtain access to F-35 Air System information, as well as capability and industry outcomes, recognising that gaining these benefits did not commit Australia to acquire the JSF aircraft.

The decision also recognised the clear benefits that a stealthy, multi-role, 5th generation JSF offered over the full range of contender aircraft, based on Defence analysis of

contenders to replace the air combat capability provided by the F-111 and F/A-18 aircraft.

For a minimal outlay of only around 0.3% of the JSF's development budget, benefits from joining the program included:

- The opportunity to participate in a developmental program largely funded by the US Government.
- Privileged access to JSF Program information.
- The opportunity for very detailed technical risk analysis by Defence of all JSF systems years before any contractual commitment.
- Constant engagement with the JSF Program Office on JSF cost analysis.
- Unprecedented ability for early development of our concept of operations and tactics.
- Enhanced opportunities for interoperability and commonality to support future coalition operations.
- Delivery of the required air combat capability ahead of non-Partner customers.
- The unprecedented opportunity for Australia to participate in, and influence, the design and capability of an advanced fighter aircraft.
- The opportunity to take part in the JSF test program (the most comprehensive flight test program ever).
- Australia is already involved in defining what will be included in the first upgrades to the aircraft after the current development phase is complete.
- The opportunity for Australian industry to be part of the global supply chain of the world's largest defence project.