

# THE WILLIAMS FOUNDATION

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## The Professionals Cast Their Vote

The Israeli government has announced its intention to acquire twenty F-35 Joint Strike Fighters, with an option for another 75 certain to be exercised in due course.

This is an air warfare statement of the first order. When the Israeli Air Force acts, professional airmen pay attention.

Since its foundation as a nation-state in 1948, Israel has to all intents and purposes been constantly fighting a war of national survival. Because their country lacks strategic depth – invading armies could reach vital centres within hours of crossing a border – Israeli defence planners have made air power the centrepiece of their military strategy. In turn, that has meant that the IAF must have the region's best pilots, technicians, weapons, and aircraft. Second best is not an option.

Achieving air supremacy and stopping any invasion force before it can enter Israeli territory is the strategy's non-negotiable start point. Once those essential objectives have been secured, the IAF can join with the Israeli Army in applying overwhelming firepower against the enemy's surface forces as and where needed.

Equally important to national security is the ability to conduct long-range, precision, strategic strikes. The best-known examples of this are the IAF's raids against nuclear facilities at Osirak in Iraq in 1981, and at al-Kibar in Syria in 2007. By any measure these were brilliantly conceived and executed operations. There is no doubt that plans exist for similar strikes against nuclear facilities in Iran should the need be perceived.

Senior Israeli politicians and military commanders have made it clear that the F-35 will be the key to this strategy in the future. In other words, the IAF expects the F-35 to be the pre-eminent weapon in one of the most dangerous military environments in the world for the next 20 to 30 years.

Given Israel's troubled history, it is probable that at some stage the IAF's F-35s will come into conflict with Russian-bloc aircraft, including the Flanker series of strike/fighters, and perhaps eventually the developmental PAK-FA. Against that background, it is noteworthy that Israeli Defence Minister Ehud Barak has stated that the F-35 will provide Israel with "continued air superiority", and that it will "ensure Israel's security when operating near and far away".

Israeli officials have also declared that computer simulations have "clearly demonstrated" that the F-35 will "effectively eliminate the threat from Russian-made S-300 air defence systems". Presumably that conclusion was derived from applying the F-35's low observable characteristics, inherent electronic warfare capabilities, advanced weapons, and situational awareness, against modelling of the S-300's known performance.

The point here is that the F-35 will take the concept of operating as a "system of systems" to a level well beyond any of its competitors, including the USAF's F-22. The F-35's combat advantages will come less from 20<sup>th</sup> century parameters, such as manoeuvrability and thrust (noting that these nevertheless remain impressive, more so following advice that the Pratt & Whitney F135 engine has exceeded its baseline thrust by 20%), and more from the pivotal 21<sup>st</sup> century air warfare parameter of situational awareness,

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which is derived from a combination of exceptional sensors, data processing and display systems, and sensor fusion.

Indeed, the F-35 will revolutionise the now-decisive combat capability of Intelligence, Surveillance, and Reconnaissance (ISR), to the extent that it is seriously misleading to badge the aircraft as merely a continuation of the “F” series of fighters. It will be far more than that, as leading air warfare commanders and operators have acknowledged.

Commenting on the changed nature of modern air warfare and the now-central place of ISR, one of the USAF’s outstanding combat commanders of the past 20 years, recently-retired deputy chief of staff for ISR, Lieutenant General David Deptula, stated that the F-35’s integrated ISR capabilities “will be game-changers in future conflict”. The USAF, Deptula continued, “must buy [the F-35] in large numbers”.

Similar sentiments have been expressed by US Marine Corps Top Gun fighter pilot, Lieutenant Colonel David Berke, who has flown the F-16, the F-18, and the F-22, and who is involved in developing F-35 conversion courses: “When you consider the fused cockpit of a JSF, you begin to understand just why all those [situational awareness] descriptors are really accurate. It’s an evolutionary leap. It’s a paradigm shift. It’s a game changer!”

In recent months the Williams Foundation has felt obliged to comment more often and at greater length on the F-35 than it would have preferred. Unfortunately, in our opinion, much of the most vocal commentary has been ill-informed. It has certainly been inconsistent with the approach to modern air combat adopted by the world’s best air forces, including those of Israel and the US.

Decisions about Australia’s air combat capability are too important to be influenced by amateurs. That is why the selection of the F-35 by the ultimate professionals – the Israeli Air Force – is so important.