Victory smiles upon those who anticipate the changes in the character of war, not upon those who wait to adapt themselves after the changes occur.

Giulio Douhet

With the first P-8 Poseidon due to arrive later this year and only Triton and the Joint Strike Fighter to come, the Air Force is close to realising the future force that was envisaged ten years ago. While new weapons and platforms have promised a technological edge, experience has shown that it is only through underpinning new technology with innovative thought, tactics and doctrine, that true potential will be realised. Noting that the introduction of new weapon systems, like the F-35, offer remarkable capabilities, our true potential to become a 5th-generation air force will be largely dependent on the weapon system’s integration into the broader Air Force capability through innovative and integrated thinking. The creation of the new RAAF Air Warfare Centre provides the mechanism to drive capability realisation by analysing and resolving challenging issues across the operational Air Force.

The experience of war has clearly demonstrated that the introduction of new weapon systems will not necessarily realise the immense potential they promised. Although the employment of air power in World War I provided a glimpse of what it could provide, it was not until air warfare operational concepts were developed between the wars that aircraft became a critical and effective capability in warfare. In Europe, post World War I scrutiny of the failure of trench warfare resulted in the aircraft being closely integrated with the tank and mechanised infantry to become a key component in a more decisive form of manoeuvre warfare. In the USA, the US Army Air Corps Tactics School developed the conceptual thinking for the decisive employment of US air power during World War II. Similarly, Air Marshal Hugh Dowding, RAF developed the notion of an integrated air defence system integrating fighter aircraft, radar, and command networks into a robust air defence capability.

The introduction of weapon systems such as the F-35 provide similar challenges and opportunities for the RAAF as it pursues development of a 5th-generation air force. For example, as a weapon system, the F-35 offers enormous potential with its capacity to excel in the air power roles of control of the air, strike and ISR (intelligence, surveillance and reconnaissance). However, to fully realise its potential in these roles, there is a need to develop operational employment concepts and tactics for its use across those domains. This requires the expertise of not just fast jet specialists but other subject matter experts such as ISR, targeting, weapons and communications personnel to collaborate in developing integrated tactics and capability.

The creation of the new Air Warfare Centre provides the RAAF with the tool to identify and analyse air warfare lessons, develop integrated tactics and then deliver the advanced air warfare training required to translate those tactics into 5th-generation operational capability. Through operational analysis, lessons will be identified to drive tactics development. Within the new Tactics and Training Directorate, subject matter experts from across the Air Force’s specialisations will, through
collaboration, develop integrated tactics that will then be taught, documented and form the basis of advanced education through a new Air Warfare School. This process will drive more realistic integrated exercises designed to validate tactics and capability. Further, the development of a live, virtual and constructive (LVC) training and evaluation environment will allow tactics to be tested and exercised in an artificial yet realistic and high threat environment.

Another key aspect to realising the desired integrated capability is providing rapid problem solving for challenging issues impacting Air Force operations. The recently completed Exercise Jericho Dawn 16-3, led by the Air Warfare Centre, demonstrated the value of such collaborative problem solving. Bringing together various stakeholders from defence industry, Army and Air Force, the exercise successfully evaluated the efficacy of a potential airborne gateway communications node to relay data and information between dissimilar datalink systems and communication paths. Such capability is key to warfighters accessing common data and information, and thus enabling them to operate in a more integrated battlespace despite the plethora of different weapon systems and communications links.

This bottom-up-innovation approach will also be valuable in addressing challenging air operations issues where a more holistic approach is required, rather than one focussed on a specific weapon. For example, the emergence of a new threat system will have, not only discrete implications for individual weapon systems, but also for the conduct of air operations as a whole requiring a collaborative approach to understanding the threat at a broader integrated level rather than a platform-focussed, stove-piped approach. The coming together of specific air-minded specialists to analyse and develop complex operational scenarios together will provide a more holistic, balanced and operationally focused approach.

In essence, this aspect reinforces the importance of the most basic element of warfare – the human element. While the rise of air forces and air power over the last century is partly one of technology and aircraft, it is also one inherently about the professionalism of its people. It is that human dimension that drives innovative thinking and translates technology into real capability improvement. People are what make an air force successful.

The creation of the Air Warfare Centre provides Air Force with the mechanism to promote the innovative thinking required to drive integrated capability across the operational level of the Air Force. The Air Warfare Centre is focussed on the delivery of rapid and innovative solutions and serves as a catalyst for organisational change. It is therefore key to our transformation into a 5th-generation air force. While air forces and air power have always been technology-driven, it is their people, through understanding not only their own tradecraft but also the nature of air power and air warfare, who have generated capability by fully exploiting the potential of technology. The Air Warfare Centre will bring these people together.

Key Points
- Experience has shown that new technology does not necessarily equate to increased capability
- The full potential of new weapon systems like F-35 will be dependent on their integration into overall Air Force and broader Defence capability through innovative thinking and implementation.
- The Air Warfare Centre drives integration and provides mechanisms to transform the potential of new weapon systems into 5th-generation capability.