

**SPEECH BY THE CHIEF OF AIR FORCE
AIR MARSHAL GEOFF BROWN, AO
TO THE WILLIAMS FOUNDATION DINNER
CANBERRA, 10 JUNE 2015**

Errol McCormack, members of the Board of The Williams Foundation, friends and supporters from industry, ladies and gentlemen; I am always delighted to address events hosted by the Williams Foundation. The support that the Foundation has delivered to me during my term as Chief of the Air Force has been sustained and impressive. I have valued your work enormously.

Often you have led debate on many issues pertaining to air and space power in Australia. Unfortunately, in Australia, these remain somewhat esoteric areas of research and scholarly output. That has made your insightful contributions through seminars and published papers ever more valuable. In particular, your seminar last year which allowed us to hear from US Marine Corps pilots who had flown the F-35 Joint Strike Fighter (JSF) was a unique contribution to the strategic debate in this country.

Tonight, however, my delight at accepting your invitation is tempered by sadness for my term as Chief of Air Force is drawing rapidly to a close. I have loved every minute of it. Air Force has given me far more than I could ever dream of giving back to it. Nonetheless, my sense of loss is offset by two considerations.

First and foremost, I hand over leadership to my deputy Leo Davies—a loyal, hard-working and good-humored man who has been a joy to work with. And he has been a source of judicious and discrete advice on important decisions. I know Air Force will be in very capable hands. Secondly, I am satisfied that I could not have achieved one more thing to set up Air Force for the challenges of the coming decades. I leave the Air Force on the cusp of an incredibly exciting era—the era in which we will introduce 5th generation aircraft into operational service. So I leave, confident that we have never been better equipped, better trained and better postured to deliver air and space power to Australia.

Errol mischievously suggested that the topic for tonight's address should be 'My Brilliant Career'. Modesty prevented me from taking up that suggestion. Rather than Miles Franklin, I think my story owes more to another Australian author Albert Facey. He wrote 'A Fortunate Life'. That resonates with me. And it accurately represents the truth that everything that I have achieved over my career has been the result of teamwork and the support of my family; not to mention a lot of incredibly talented airmen and women too numerous to name here. I have indeed been fortunate.

I will leave nostalgia and gratitude to my official farewell. But it is inevitable when reflecting on the state of the Royal Australian Air Force today that I do draw on my memories over the past 35 years. We have come a very long way.

Just over a year ago, I stood here and talked about my experience as a pilot who had flown Chinooks then converted to Hornets and ultimately flew the F-111. As

my career progressed and I returned to various squadrons in increasingly senior roles, I noticed how patchy our take-up of technology could be. We still operate the Classic Hornet. Yet, the aircraft that our airmen are operating in the Middle East tonight resembles the Hornet that I first flew about as closely as an F-111 resembled a Canberra bomber. You may recall I held up my latest smart phone and compared it with an old Nokia. I expressed my concerns that if we employed the F-35 Joint Strike Fighter—indeed any of our modern platforms and enablers—as though they were merely replacement platforms for the Hornet and F-111, then we would be setting ourselves up for failure.

Averting that failure is one of the main motivations behind my determination to ensure that Air Force becomes a 5th generation—enabled air force, not simply an air force equipped with a 5th generation aircraft. That is the philosophy underpinning Plan JERICHO which I launched at Avalon earlier this year. JERICHO describes our vector out to 2025 and beyond. It capitalises on our current force structure while seeking to maximize those capabilities entering service soon. So while I will take up Errol's challenge to provide a State of the Air Force address, it is also vital that I convey that much of the 'now' is about transformation to meet the future.

Today, the Air Force is operating at a very high tempo. We are making a valuable contribution to Coalition operations against Islamic State (or Da-esh). Currently we are delivering kinetic effects through a combination of dynamic and deliberate targeting employing an Air Task Group (ATG) configured around Classic Hornets. The initial ATG, which deployed with very little notice last September, exemplifies everything good about our Air Force. It made me incredibly proud and vindicated all of the major choices we have made in procurement, force structure, doctrine and training, over the past decade. That deployment demonstrates why we are increasingly becoming the force of first resort for Australia in a very fluid and unpredictable world. Our speed, reach and readiness make us the long arm of Australian strategic policy.

The things that gave me the greatest professional satisfaction were the speed with which we responded. Even more impressive than the speed of the deployment was the fact that we delivered a completely autonomous, balanced, force package to the Coalition effort. Frankly, very few air forces in the world could have deployed their own strike, strategic lift, C4ISR and logistics and sustainment elements, over such an enormous distance and commenced operations in a very challenging environment, as quickly as we did. Indeed, very few air forces even possess that balance of capabilities in their inventory to start with. That we provided our own tankers, our own air battle management and were able to assist other Coalition partners with these very scarce capabilities demonstrates that we have a world-class air force.

And of course the most vital enabler was the skill, training, resilience and courage of the airmen and women who made it all happen. I have told some audiences of young officers and airmen and our young air cadets that I am envious of them for entering the Air Force at this time. Their opportunities are exciting and diverse. And from those young cadets who are starting out on the gliders right through to our senior ranks, our airmen and women are superb. That is why I have not

needed to dwell on cultural and behaviour issues during my term because I believe that we have a healthy diverse and affirming culture. That is not to say we can rest easy. But we have men and women working under extreme stress in the Middle East and they do so with pride, mutual respect and efficiency without incident.

Sadly, I do not believe that enough scholars and commentators have grasped just how balanced and capable the RAAF has become and how powerful a message our ability to execute and sustain Operation OKRA sends to friends and foes alike. We are in terrific shape. Nor was it merely our combat operations in Iraq that demonstrated our agility, flexibility and reach. Since the beginning of 2014, Air Force has undertaken a diverse range of humanitarian assistance and disaster relief (HADR) and recovery missions, as well as leading a multi-national Search and Rescue effort to locate the missing Malaysian Airlines Flight MH370.

Whether searching for that Malaysian Airlines aircraft, or the Air Asia flight missing off Indonesia, or repatriating the remains of Australians killed when flight MH17 was shot down over Ukraine, or urgently responding to catastrophic natural events in the Philippines or Vanuatu or Nepal, the enduring characteristics of air power were on display—speed, reach, freedom from the constraints of terrain and strategic weight.

To grasp the point about strategic weight, one needs to see an Australian C-17 arrive on task. The psychological impact of the arrival of our C-17s at Eindhoven in the Netherlands last July to support MH17 recovery efforts, and dwarfing NATO platforms, was incredibly powerful. It sent an eloquent message about Australian capacity, responsiveness and resolve.

So too, did our responses to other crises. Within 24 hours of the Category 5 cyclone which ravaged Vanuatu, an Air Force AP-3C was conducting an ISR task assessing runways for the follow-on effort. Within 96 hours, eight aircraft were providing vital humanitarian assistance—either delivering aid or evacuating our nationals. Within ten days, we flew 50 missions moving 722 passengers and 813 000 pounds of cargo. To our friends and neighbors, we constitute the long reassuring arm of Australia and its generous heart in times of crisis. And of course the same innate characteristics of air power allow us to place an adversary at risk over long range and at short notice. Those are vital capabilities in an era of strategic disruption that is the current reality.

My friend—another old Chinook man—Sir Andy Pulford, the Chief of the Air Staff, classifies this as an ‘Era of Contingency’ which he argues will eclipse an Era of Sustained Campaigning. I agree with him. The operations of the past two years exemplify this. Whether deploying as part of a coalition to degrade a potent non-state enemy or providing opposed humanitarian aid to the Yazidi minority or responding to natural disasters, we have been required to deploy balanced, self-contained air task groups with very little notice both within the immediate region and across the globe. These operations have spanned the entire spectrum of conflict. Only Air Force is capable of such agile responses across such vast distances.

Yet, some still insist that the geo-strategic context has not changed and that the future will resemble the past decade. I reject that entirely. Long term, land-centric counter-insurgency and nation-building operations have yielded very modest results in both Iraq and Afghanistan. Yet, paradoxically one still hears calls for ‘boots on the ground’ as a solution—if not a panacea—for every strategic problem. This has had an unfortunate effect on the professional confidence and professional mastery of airmen in ours and similar allied air forces. Too many so-called experts believe that air power is synonymous with Close Air Support and provision of Air Mobility to land forces. That grossly underestimates our unique and indispensable strategic capabilities.

Yet, no less an authority than David Kilcullen recently rejected the application of Counter-Insurgency theories to the conflicts in Syria and Iraq. Indeed, he called for a significant escalation of the air campaign against Islamic State with the most useful contribution of Western troops being constituted by enhanced joint tactical air control elements to allow more strikes in the complex terrain that is Iraq. I believe he is correct.

In that conclusion, we are both following the bold proclamation of our foremost air power thinker—Alan Stephens—who long ago contended that the era of long-term nation-building by western armies in Islamic nations was over. He did that in a Williams Foundation publication, as I recall.

In this Era of Contingency, air power will be increasingly our first and preferred response. Our vital sea lines of communication with our trading partners intersect some of the most contentious maritime zones in the world. Major power rivalry is leading to increased tensions both in South East and North East Asia. Our vital strategic interests are deeply engaged in both these regions through our trading relations with China and Japan as well as through our close security ties to the United States.

While in the Middle East, we are trying to contain the fallout from the collapse or fragmentation of functioning states, in Asia the growing strength of states is contributing to a real risk of state-on-state conflict. I believe that Air Force is ideally configured to respond to the range of contingencies from non-state actors to conventional war. We have strategic weight, global reach, and unique agility.

Against non-state actors, our full spectrum effects are our greatest asymmetric advantage. And against credible state adversaries, our ability to secure the skies, the electro-magnetic spectrum and even space, are the prerequisite for joint operations across all domains. I was interested to note Secretary Dennis Richardson’s sober analysis of the nature and salience of these challenges a couple weeks ago. It accords with what Air Force and The Williams Foundation have been arguing for some time.

So how will Plan JERICHO and our transformation vision posture Air Force for this dynamic and complex environment? Plan JERICHO is founded on the firm conviction that the JSF *is* a transformative weapons system. I have adopted Chip Berk’s phrase that ‘*The JSF replaces nothing but it changes everything*’. That is true. The JSF takes us into a new paradigm not merely a new era. Introduction of

5th generation technology will be disruptive. It constitutes a game-changer in the same way that the introduction of beyond-visual-range radar and precision-guided munitions were game-changers.

Throughout the history of the military employment of air power, airmen have striven to stay abreast of technological change. That is not technological determinism. Rather it is frank recognition of that enduring truth best expressed by a legendary airman George Kenney – ‘*Second best air forces are like second best poker hands. They cost you a lot of dough but they don’t get you anything.*’

War is the true chameleon. It takes on the hue of its prevailing social and political context. Fifth generation technology constitutes our response to the information age. Land power theorists point to the enduring nature of war. There is truth in their assertion that violence and friction are inevitable and that at its essence, war is an epic duel directed at forcing an adversary to conform to our will. But in the information age, information will define and bound the battle space as well as pervading the realms of tactics and operations. This is already occurring. Since the Vietnam War, the defining qualities of military aircraft have undergone inexorable change in response to technological change.

Recently, I was privileged to attend a commemoration of Australia’s contribution to Bomber Command during the Second World War. It was inspiring. Those men were forced to constantly adapt to the rapid changes in technology while actually flying dangerous missions. That commemoration also gave me pause to reflect upon how much air warfare has changed even in the life spans of those amazing men of Bomber Command. Advances in precision and lethality have permitted relatively small numbers of aircraft to consistently find, fix and destroy their targets. We no longer rely on saturation bombing executed by hundreds if not thousands of aircraft to achieve limited success at an enormous cost in lives of both aircrew and civilians.

Likewise, the requirements of air combat have changed. Airmen no longer need to position themselves within range and line of sight of their adversary to engage them with their guns or missiles. Engagement ranges are well beyond visual. The ability to acquire, process, and act on information is now decisive. Of course John Boyd derived those conclusions from his analysis of air combat in Korea. But 5th Generation technology is poised to transform Boyd’s understanding of decision superiority. Already, speed of response is less contingent on the physical abilities of the crew and their platform than on their ability to harness information through an intricate web array of sensors, many of which may be deployed in space or on other manned and unmanned platforms and on the ground. Even today, our Air Force is an intricate web of sensors and shooters linked through space, cyber and ground assets.

But the speed with which 5th generation systems and platforms collect, process and disseminate information is simply *revolutionary*. JERICO is our plan to adapt to this change and to harness the synergies of a fully integrated, 5th generation-enabled force. As I have already said, we have completed, or we are about to complete, a very effective modernisation program, which has delivered a balanced, modern and highly capable force. However, we are not yet a system of

systems to the extent that our technology permits or which our operating context demands. This must change.

The vast array of sensors in our manned and unmanned platforms and our land-based sensors and analysis capabilities are state of the art. But we must break down the stovepipes between them. We have to join up our Air Force and then link it to our joint and coalition partners. The aspiration of JERICH0 is that no airman and no platform will ever fight alone.

We are on a very positive vector on this journey as our current operations demonstrate. We are harnessing the formidable capability of the Wedgetail as an exceptional air battle management system. Through adaptation of Link 16 and tactical-chat, we are already achieving synergies beyond anything I imagined when I first flew the F/A-18. But the extraordinary potential of the JSF demands that we make a quantum leap into 5th generation-enabled operations.

I established a small team inside Air Force Headquarters led by two Group Captains—Jake Campbell and Rob Chipman. They have direct access to Deputy Chief of Air Force and Air Commander Australia. Together, they are charting the course to a 5th generation-enabled force by focusing on the enabling capabilities that will bind platforms in our future Air and Space Power system. But this is not the realm of future thinking. JERICH0 is already delivering improvements in our joint war-fighting capabilities, having successfully demonstrated an advanced satellite communications capability on the C-17 during Exercise JERICH0 DAWN. This capability was delivered in 63 days—the result of an innovative collaboration between Defence and industry representatives.

We are still discovering new ways to apply this technology, from providing real-time intelligence updates to Special Forces enroute to an objective, or conducting ‘tele-surgery’ to enhance the quality of aeromedical evacuation support following a natural disaster. JERICH0 is unlocking the innovative potential of our greatest resource—Air Force people—which is why I am confident we will remain a world-leading Air Force in any future operating environment.

We have had encouraging buy-in from Army and Navy. They understand that to implement extant strategic guidance, the ADF must be capable of executing a maritime strategy as a truly integrated joint force to secure the approaches to Australia as well as projecting force into our region.

In closing, I wish to reiterate my sincere thanks to you, Errol, and your team at The Williams Foundation. I also wish to thank our industry partners. You will be indispensable to our transformation journey. We need you now, more than ever.

I leave Air Force proud as well as wistful. The privilege of leading our brave, unselfish, patriotic airmen and women is one which I will forever cherish. They are poised to take this fine institution into its second century and the 5th generation of air power. I wish them well and an affectionate farewell.