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Air Power Conference

21 March 2018

Good morning ladies and gentlemen. And let me begin this morning by acknowledging the traditional owners of the land on which we meet, and pay my respects to their elders past, present and future. Let me also thank Aunty Tina for your very informative welcome. For those of you who are visitors to Australia, I think that was one of the most educational welcomes to country I have ever enjoyed. And let me also thank Uncle Harry very much this morning as well. It is always a pleasure to see you. Thank you for your recruiting efforts and please keep it up.

To members of the International Military Leadership who are here today, to senior members of industry; to current and former members of the Australian Defence Force, particularly the leadership of the Royal Australian Air Force: the Chief of Air Force, Air Marshal Leo Davies; the Deputy Chief of Air Force, Air Vice-Marshal Gavin Turnbull; the Air Commander Australia, Air Vice-Marshal Zed Robertson; I see Air Vice-Marshal Tracy Smart right in front of me as well.

Welcome to you all. Chief of Air Force Leo Davies, thank you very much for the opportunity to address this very important conference today - the largest ever Air Power conference, I believe, you indicated on my arrival this morning. I want to acknowledge your leadership and I want to acknowledge your very pertinent remarks this morning in your opening speech. Thank you very much for setting the scene for the discussion, the conversation, about air power in a disruptive world. I want to welcome the Chief's - echo the Chief's welcome, to the delegates who are going to be participating in this conference over the next two days, and as I said, particularly welcome our international delegates and specifically the 11 visiting Chiefs of Air Force.

The Royal Australian Air Force has developed a valuable network of relationships throughout the region, reflected by your presence here today, and the Government of Australia is absolutely committed to strengthening these links. So, it is excellent to see so many international delegates. Your presence here over the next two days is an important opportunity and also a reflection of the need to work together to address the challenges that we are facing in a disruptive world. This year's conference will, as the Chief of Air Force has said, address some of the most significant challenges that we face today, some of which have the possibility to change, quite fundamentally, our approaches to, and understanding of, security on a national and global scale.

That you have been able to assemble a program of speakers with such diversity and depth of expertise, speaks volumes about the degree of integration we can achieve to make best use of a fifth generation force. I spoke at the 2016 Air Power Conference - just a few days after the Prime Minister and I launched the 2016 Defence White Paper, which set out our plans to modernise the Australian Defence Force, including the RAAF, so that we are best able to respond to the increasingly complex strategic environment. It's fair to say that only two years ago since that speech, feels like an eon in strategic terms.

The Defence White Paper at the time identified six key drivers shaping the future security environment for Australia, and having the greatest impact on Australia's strategic interests. First of all, the roles of the United States and to China, and the relationship between them. Secondly, challenges to the stability of the rules-based global order.



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Thirdly, the enduring threat of terrorism. Next, state fragility, including within our immediate neighbourhood. Then, the case of military modernisation and the development of more capable regional military forces. And finally, the emergence of new conflicts, non-geographic threats, such as in the cyber and space domains.

So, since I last addressed the Air Power Conference, all of these drivers have continued to affect the security of the region, if not the world. For instance, we know that North Korea has made significant progress towards an intercontinental ballistic missile. We have seen Daesh itself try to get a foothold in our region, as demonstrated by the siege of Marawi in the Southern Philippines. We also continue to see unprecedented technological disruption, which is affecting all parts of society, including the military and the Air Force. But whether you're in any service industry, the accommodation sector, in transport, in communications, or the military, technological disruption is having a profound effect on the way that business is done.

For Defence, unmanned systems, hypersonics, laser technology, are some of the areas presenting new challenges and opportunities. While some of the technologies to be discussed over the next two days remain somewhat futuristic - requiring significant development before they would be considered viable, let alone mature - history shows science fiction can become science fact very quickly. We are, without doubt, living in a period in which the rapid advancement of technology is fundamentally re-shaping the way air forces receive and process information, the way we communicate with each other, and the way we protect and promote our national and regional interests.

Technology has always played a major role in Australia's approach to national security. We're a large country with a small population that takes an active role in our region and globally. This presents us with unique demographic and geographic challenges, and we rely on technology to enable us to defend Australia and contribute to regional security. In what is a period of rapid challenge, we must continue to embrace the benefits of innovation, and this has a number of implications for Air Force.

First, air power can no longer be viewed in isolation. It must be integrated. We are in the process of completely modernising almost all of the Air Force's fleet. We have the new Spartan Battlefield Airlifter aircraft in service, and the EA-18G Growler electronic attack platform. I'm pleased to announce that our P-8A Poseidon maritime surveillance aircraft has reached Initial Operating Capability five months ahead of schedule. It is already on operations. And of course, from December this year, the first two Australian F-35A Lightning Joint Strike Fighters will be permanently based in Australia. These platforms will underpin the creation of a fifth generation Air Force that will enable these platforms - the Wedgetail, Poseidon, and the JSF and the Growler - to integrate their picture of the battlespace.

But it isn't just, as you well know, about Air Force. These new platforms are giving us the ability to work with commanders on the ground and at sea to deliver combined strikes and disrupt the enemy in ways that have not been possible before. Here, we will soon have a glimpse of the power of this, with the delivery of the second Air Warfare Destroyer, HMAS Brisbane, and the introduction of the Cooperative Engagement Capability, or CEC. In very simple terms, this brings together, as new capability, radar data from ships, from aircraft, and ground-based units, and combines this information into one integrated picture. This single picture then provides all units with CEC, in the taskforce, with complete visibility in to the battle space. This significantly improves their defence capabilities, not by adding new radars or weapon systems, but by distributing existing sensors in a significantly more effective manner.

Currently, our new P-8A Poseidon and Growler aircraft are equipped to integrate into this system. As part of our White Paper plans, we'll look to upgrade other Air Force platforms such as Wedgetail. We're also investing in a number of complementary technologies for Air Force, including the recently announced investment in the world-leading Jindalee Operational Radar Network. This investment will extend its life and provide better situational awareness. While the JORN is run by Air Force, its surveillance of Australia's northern approach benefits all three services, and contributes to our ability to work as an integrated and a joint force. JORN is also benefitting from our recent government investment in the development of Australia's space capability. In September last year, defence invested over \$10 million for Air Force in the University of New South Wales to develop new ways to enhance Australia's future defence space capability.

In November last year, I announced the successful launch of the Buccaneer cube sat by a US Delta-II rocket, in a collaborative effort between Defence and UNSW. This low cost, miniature satellite will perform calibration activities for JORN. The investment in JORN and space-based technologies will benefit all three services with improved situational awareness.

Australia: The region and the US Alliance - Speech to the Sydney Institute
(/minister/marise-payne/speeches/australia-region-and-us-alliance-speech-sydney-institute)

29 September 2017

Sixth Seoul Defence Dialogue Keynote
(/minister/marise-payne/speeches/sixth-seoul-defence-dialogue-keynote)

11 September 2017

Minister for Defence Marise Payne address to Defence & Industry Conference Gala Dinner 13 June 2017
(/minister/marise-payne/speeches/minister-defence-marise-payne-address-defence-industry-conference)

15 June 2017

Minister for Defence - 16th IISS Asia Security Summit: The Shangri-La Dialogue
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Longer term, our additional investment is planned in space-related capability, including new radars and sensors to enhance our space situational awareness. This will give us a better ability to protect our space-based assets, which underpin the vital communication links for our military in the field. But there are of course risks to our comprehensive embrace of technology. Twenty years ago, our thoughts would not necessarily have gone to the need to protect our aircraft from cyber security threats. But that is exactly what we are now doing for our F35s and other aircraft. And 35 years ago, when the secret US military space-based navigation system called GPS was first opened up to civilian use, we didn't really contemplate that one day all emergency services vehicles and virtually every new car, every new smartphone, even smartwatches would have satellite navigation built into them. So much so, that our economy now depends on GPS satellite navigation for safety and productivity growth. And in saying that, it's worth noting that smartphones, as we know them today, only arrived on the market in 2007. This exemplifies the challenge of technology. As we increase our reliability on it we also become vulnerable to attacks on it, and then we have to defend it.

The second challenge I think is information overload. How do we process, prioritise and share the information we collect? How do we ensure the relevant and critical information is not buried in a sea of noise? So, solving these complex problems is going to require us to re-purpose, to grow, to train cohorts of the defence workforce.

As we also announced in the 2016 Defence White Paper, enhancement in intelligence in cyber and in space, will require around 900 ADF positions, including in intelligence collection and analysis, in communications, in supporting the information requirements of new platforms like the JSF in surveillance aircraft and navy ships, and defence support to special forces and cyber security. All of these areas will require a workforce with skills in STEM: Science and Technology, Engineering and Mathematics. Developing the talent and skills of Australians in STEM areas is one of the key pillars supporting our national approach to innovation; to maximise the benefit of emerging technologies or minimising the threat they pose to national security. It is also a personal passion of mine.

So, Defence, in the development of the White Paper and since, is placing the priority on STEM engagement and equipment. We have one of the largest STEM programs in Australia and promote STEM-related roles to school children, provide work experience opportunities and scholarships, as well as maximising career learning and development for STEM occupations. We have made progress, but there is absolutely more to do. This is the challenge not just for the ADF, not just for Air Force, but for all of you, too. Our specific defence initiatives include partnering with the Australian Mathematical Sciences Institute to provide internships for up to 100 post-graduates over the next four years; to hold Defence Technical Scholarship camps with year 11 and 12 students, their teaching staff and their parents to showcase Navy, army and Air Force Engineers and technicians at work. We'll offer employment for early career post-graduate researchers in priority science and technology areas such as computer sciences, autonomous systems, electronic warfare and information systems. At ADFA, the Australian Defence Force Academy, students in non-STEM related degrees are required to undertake STEM subject irrespective of their primary degree stream. This provides our future leaders with a foundation in scientific and technical knowledge upon which they're able to build throughout their career. Our educational institutions provide the building blocks - the intellectual building blocks - but it's up to the individuals and the organisations within which they work to build on these foundations and to support the drive for innovative thinking and creative problem solving that will be the key to success into the future. They need to be given the opportunity to be innovative.

On this, I note, and I commend the Air Force on Plan Jericho, which has succeeded in a few short years in energising organisational spirit within the Air Force, as well as across the joint force and defence industry. By encouraging bottom-up innovation, Air Force has created an organisational culture that supports divergent and disruptive thinking. Aligned with technological and engineering solutions with an understanding of the operational and organisation challenges that Australian air power is facing. What this highlights is that if we provide the opportunity for Australian creativity and innovative spirit, the sky is no longer the limit.

Our relationships and our ability to integrate and work with our international friends and allies is critical to addressing the challenges that will emerge of the years and decades to come, some of which we will be able to anticipate, others that we will not. Our international defence relationships and arrangements are vital to reducing the military conflict and in developing new culpability we get our partner forces to respond, to share the challenges of maintaining the international rules-based order, combating terrorism, and providing humanitarian assistance in the region.

Indeed, in our own region, in recent weeks - in fact in the last fortnight, in this example, our Royal Australian Air Force C-17 delivered aid to Papua New Guinea in the wake of their tragic earthquake. Army CH-47 Chinooks, C-130J, and B3100 King Airs continue to transport supplies and personnel between Port Moresby and the Southern Highlands of Papua New Guinea. In February, RAAF C-17s delivered approximately 140,000 kilograms of aid to Tonga in the wake of Cyclone Gita, while an AP-3C Orion conducted damage assessment flights for the same cyclone over the outlying Fijian islands at the request of the Fiji government.

Australia was also able to provide P-3 Orion support to the Philippines during the crisis and siege in Marawi last year. The commanding general of the Philippines Army, General Bautista, made clear to me just a week or so ago when I met him in Brisbane, that when his ground troops were fighting in Iraq, knew the AP-3C was overhead, their morale, their confidence in combat actions improved because they instinctively knew timely intelligence, surveillance, and reconnaissance information would soon be available to their ground battle planners.

There is though, room for improvement. We want to move from “soon to be available” to sharing data in real time. With new platforms and integrated capabilities, this sort of data will be part of in-flight air service downlinks and near real time uplinks of updated surface sensor data feeds. This new technology is a genuine combat force multiplier on land and at sea.

Beyond technology, our rapid assistance to friends and Pacific neighbours was made possible due to the mutual trust between our nations, through our continued bilateral engagements and participation in institutions that were part of the regional architecture, such as the Pacific Islands forum and ASEAN. It is a reminder that against modern national security threats, no single nation can stand alone and hope to defend itself completely.

We are deepening our already strong relationships with our partners to develop our war-fighting capabilities to meet the demands of modern conventional combat. Later this year more than 2500 personnel from more than 13 of Australia's partners and allies will take part in Exercise Pitch Black 2018 in the Northern Territory, to build our understanding and our interoperability in high end war-fighting. The month-long exercise enables us to test and improve our ability to integrate with partner nations in a range of offensive and defensive scenarios. These exercises reflect a strong relationship that Australia has with partner air forces. In fact the Royal Australian Air Force, the ADF, and the government have built as well as the high value we place on regional security and fostering closer ties throughout the region.

I want to end briefly with one final thought. Some of the concepts to be discussed at this conference and this weighty program, algorithmic warfare, digital natives and security, would have seemed based in theory two decades ago. Twenty years ago, the idea of artificial intelligence, of AI as a serious consideration to national security, might have been regarded by some as something out of a Hollywood movie. But, today in 2018, we find ourselves discussing these matters with the consideration and attention that they rightfully deserve.

This year's Air Power program is a graphic picture of the breadth of the challenges that face all of us in the decades ahead, from space to cyber, from energy security to digital advancement. Through this period of intense disruption, the Australian Government is investing heavily in our Defence Force to ensure that it stays on the cutting edge and we are building a workforce that is able to exploit the full potential of this new technology. We can't master all the challenges alone and we will need to leverage our international partnerships. We want to have the most effective Air Force possible. So, over the next two days I encourage everyone to embrace the spirit and innovation and collaboration that will be required to successfully navigate the challenges of technological disruption. You have a very impressive array of speakers ahead of you. I'm sure they will challenge and provoke. I certainly hope so. I wish, in fact I would much prefer, to be able to stay and enjoy some of those addresses, but the senate is in session this week and I must attend that. Ladies and gentlemen, thank you very much for the opportunity to speak this morning and I wish you all the best for the Air Power program.

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