

2024 Air and Space Power Conference Transcript – Opening Address

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ROB CHIPMAN: Well, distinguished guests, ladies and gentlemen, welcome to the 2024 Air and Space Power Conference. It is a privilege for Lieutenant-General J.J. Frewen and I to host such a prestigious gathering of air and space chiefs from across the globe. We deeply appreciate your commitment to travel Down Under and to share your experience and expertise as we explore how to build readiness and resilience in air and space power across the spectrum of competition. It's a timely discussion. Fear, honour and interest once again dominate relations among states. Rupturing fault lines, reshaping alliances. We are all investing in technologies of pace that are simultaneously perplexing and imperative, compelling us to a future we cannot see. Compounding challenges like climate change present threats across all domains and all areas of public policy. Our assumptions and expectations, even our understandings, are being challenged and contested. But conflict is not inevitable, it is not preordained. Imaginative state-craft can avert war. It might be useful, then, to start this conversation by framing what we mean by the spectrum of competition. At one end, cooperation. Perhaps in recent years, we might have thought of cooperation as occurring between nations at peace, but that would be systemic. Cooperation occurs wherever interests align. It might be more frequent among allies and partners, but it can also occur among competitors. This has certainly been the case in space, where historically US and Russian astronauts have worked side by side in the International Space Station, despite the volatility in their nations' relationships. Often creating a pathway for dialogue to defuse tension. We should always look for these pathways to dialogue, to build trust, to cooperate where we can despite our differences. At the other end of the spectrum, though, is conflict. Recently, the Australian Government released the National Defence Strategy. Australia is taking a new approach - national defence - to meet the challenges that we face, including the threat of conflict and the prospect of coercion

in the Indo-Pacific region. Australia's Strategy of Denial is to deter conflict before it begins, focusing our force generation effort on the capabilities we need for conflict in the Indo-Pacific region will establish the best prospects for deterring it. When I talk of force-generating air power, it's for this purpose, it's in this context that we consider how we might build ready and resilient air power. By projecting strength, the ability to impose cost, readiness, the ability to respond quickly and deny strategic opportunism, and resilience - the ability to absorb punishment and outlast our adversaries. That might cause them to pause and consider the wisdom of pursuing their interests through war. As a middle power, Australia recognises that our efforts alone will not be sufficient to deter conflict. We recognise our prospects for preserving peace and security, a stable of balance of power, are optimised by working with our allies and partners, demonstrating our collective commitment and resolve. That is why the National Defence Strategy directs Defence to strengthen our alliances and partnerships across the Indo-Pacific region and around the world. This is our strategy of denial. To invest in our strength and the strength of our partnerships is also the domain of deterrence. For deterrence operates across the spectrum of competition to the point where it fails and conflict begins. It operates to constrain military adventurism to grey-zone tactics, in the same way that it operates to prevent crisis deteriorating into conflict. Deterrence is there for dynamic, it plays on every contemplation in the minds of our potential adversaries. While we don't force-generate military capability for deterrence alone, we play an active role across the spectrum of competition to optimise our deterrence posture. Now, deterrence itself relies on escalation, the threat of imposing greater cost. Applied, though, through a strategy that is non-escalatory. If we're successful, deterrence will succeed in preserving a state of competition. The anxiety, therefore, that we feel today in our strategic circumstances will be the enduring experience of strategic competition. This, then, is the spectrum of competition - a complex co-existence of cooperation, competition, and crisis, enabled by deterrence, integrated across our war fighting domains and all elements of national power, instrumented through the art of whole-of-government campaigning in cooperation with our allies and partners. This recalibration to a constantly operating force, strengthening deterrence across the spectrum of competition, changes the way we think about

force generation. When I came into this role as Chief of Air Force, I made clear my priorities were to build a ready, resilient, and resourceful Air Force. It was recognition that, having missed the indicators and warnings of a deteriorating strategic environment, it didn't matter what capabilities we wished we had or what we intend to acquire, we had to achieve deterrence with the capabilities that we have in service today. I am in the fortunate position to lead an Air Force that has undergone major recapitalisation in recent years. But we're still at risk of capability stagflation, low preparedness, workforce hollowness, and ongoing budget pressure. Our first challenge is to strengthen our workforce more specifically to address the shortfalls in those specific mustering and experience levels that constrain our capacity to grow. We are finding inefficiency and obstruction throughout our people system, in recruiting and retention, in training and professional development. Our experience has been that the interventions required to improve workforce health operate over a very long life cycle, demanding far-sighted workforce intelligence and long-term strategies. Our challenge is to find a way to shorten that life cycle for our workforce interventions. Our efforts to build readiness are focused on maximising the productivity of our assets, lifting our force utilisation rate, strengthening our stockholdings and inventory of spares and weapons. Our capability investments strive to balance modernisation of current capabilities with the development of future technologies that might render current capabilities obsolete. We're also considering investments in complementary capabilities, such as the MQ-28 ghost, which next year will demonstrate the potential of crewed and uncrewed teaming to improve the survivability of our air combat system in an operationally relevant scenario. In a similar way, our investment in integrated air and missile defence seeks first to deliver the underlying command-and-control architecture to bring all our existing capabilities into a coherent war-fighting system. As the United States Air Force and allies have demonstrated recently in the Black Sea and the Middle East, modern combat aircraft perform superbly against drones and cruise missiles. When integrated effectively with ground-based and maritime missile systems, we can achieve much with our existing platforms, even as we recognise the need to grow this system in response to a rapidly evolving threat environment. Australia's ability to exploit our strategic depth, while projecting air power to achieve our strategy of

denial, relies on our network of northern air bases. Sustaining air power effects from austere and remote locations across our north is central to our thinking on resilience. We have adopted a manoeuvre mindset, manoeuvring air power across our network of northern bases, exploiting active and passive defence, to preserve our force and foundations for projecting forward. This is agile operations t, which many of you are familiar with here today. We are now routinely practising agile operations from coast to coast across northern Australia, without the use of strategic airlift or air-to-air refuelling support. We've built confidence through precedent, practice and iteration, operating on runways with reduced pavement strengths and shorter lengths, using civil-grade fuels. Further, we've developed the concepts to reduce our maintenance footprint, exploiting reach-back diagnostics and rapid response teams to optimise our reliability away from our main operating bases. This is driving new approaches to command and control, with greater focus on distributed networks. It is also demanding a new approach to logistic support, with greater integration across the joint force and our national support base. We've recently established regional air base development teams across our northern region to develop these networks that will underpin this work. We're also experimenting with new technologies. Air Force's Jericho team are developing a range of concepts for uncrewed and autonomous systems, including camel train, which will provide autonomous logistics support across Northern Australia. Camel train delivers operational resilience with the strategic resilience of a sovereign-developed and manufactured capability. It is a tangible demonstration of the latent capacity of our national support base. Nurturing this capability and building this national ecosystem so that it can rapidly scale production of uncrewed systems offers substantial potential to strengthen our readiness and resilience. Together, we are changing our approach to generating, sustaining and employing air power, building our readiness and resilience, delivering deterrence. There is a cognitive dimension to this work. It's not reliant on new investment but, rather, resourceful exploitation of the capabilities we have in service today. We are learning as a force to out manoeuvre our adversaries, to build resilient mission threads and integrate our efforts across other war-fighting domains. This is a high-performance culture and relies on a diverse, inclusive, and creative workforce, and a leadership network

that empowers their solutions. It's a dimension of our work that demands equal attention. We have much more work to do. Indeed, the goal of building readiness and resilience has no end state. And for a middle power like Australia, seeking to advance our security and prosperity in this era of great power competition, we will always aspire to a level of readiness and resilience that is beyond our capacity to deliver. Our task, then, is to apportion our resources widely and to manage strategic risk over time. Let me pass now to J.J. to hear what we're also doing in space.

JOHN FREWEN: Thanks, Rob. Well, good morning, everybody. Many of you will know me as the Chief of Joint Capabilities, which is my primary, overarching role. As Chief of Joint Capabilities, though, I have two key responsibilities. The first is a functional role, delivering theatre logistics support and sustainment to the entire ADF across the national support base. The second is a domain role, and in this I lead on the force generation of ADF capabilities in the space and cyber domains, in a similar way that the service chiefs do in the maritime, land, and air domains. And we've now grouped all space and cyber entities within Joint Capabilities Group to achieve this end. And it is in this capacity, as the lead for the Space and Cyber domains, as the Chief of Space and Cyber Force, that CDF has asked I address you today. Thank you, Rob, for those observations, which I believe set the scene well for the conference.

I will take a similar tack to briefly explore what the operating model looks like for space, and how we can build the necessary readiness and resilience to enable that. The National Defence Strategy and the integrated investment program provide a clear strategic direction for how Defence should continue to evolve to ensure Australia's security and to contribute to regional peace and prosperity for decades to come. The National Defence Strategy and the Integrated Investment Program amplify the initiatives and priorities for our Space and Cyber workforce, bringing a greater focus to the critical capabilities that they deliver for the ADF. The contribution they provide centres on delivering our space and cyber capabilities to a fully integrated ADF force. Under the National Defence Strategy, and in response to Australia's contemporary strategic circumstances, investment in space capabilities is a high priority for Defence, and

this includes investment in capabilities that enhance intelligence, surveillance and reconnaissance, as well as provide resilient communications and counter emerging space threats. The National Defence Strategy acknowledges that protecting Australia's security interests is no longer bound by geography as developments in cyber, space, nuclear, and long-range precision strike have altered the strategic environment in which we operate. To provide security in the space domain, we are focused on strengthening our situational awareness by enhancing our space capabilities of intelligence, surveillance and reconnaissance, providing resilient communications, and having the ability to detect and counter emerging space threats. These effects support Australia's primary strategic defence objective of deterrence. Delivering Australia's strategy of denial requires credible Defence Force capabilities that complicate the calculus of potential adversaries. The global nature of space capabilities and operations means we cannot achieve this alone. Working with our international allies and partners to enhance interoperability and create a collective deterrence is critical for success in the space domain. Much of our deterrent effect is coordinated through the Combined Space Operations, or CSpO, initiative. Australia works with like-minded nations to nurture global recognition of the importance of space and the need for nations to operate in a responsible manner. Together with other CSpO participants - United States, United Kingdom, Canada, New Zealand, France, Germany, Italy, Japan, and Norway - we aim to generate and improve cooperation, coordination, and enter operability opportunities. In doing so, we seek to sustain freedom of action in space to optimise resources and to enhance mission assurance and resilience, and ultimately prevent conflict. Unlike the other traditional war-fighting domains, operating in space provides a unique set of challenges. Much of what we do in space is constant or always on. The reach, coverage and endurance of space systems is clearly a defining strength. As a demonstration, it is worth reflecting on the Battle of Midway in World War II, where the Japanese fleet was first discovered visually by an American patrol bomber, a PBY Catalina. Set against the vastness of the Pacific Ocean, the discovery was akin to finding a proverbial needle in a haystack, and I think it's fair to say that for much of the past hundred-plus years of modern maritime

operations, forces of all sides enjoyed the ability to conduct operational manoeuvres with some level of concealment. But the introduction of sophisticated and constantly operating space-based ISR sensors now challenges this advantage. Historian Geoffrey Blainey popularised this in *The Tyranny of Distance*. This was three years before Armstrong walked on the moon. While significantly enhancing the prosperity and everyday lives of Australians. I note that the 2022 Air Power Manual cites ubiquity, the state of being everywhere is inherent in the air domain, as it always touches the entirety of the Earth's surface, the edge of space, and everywhere in between. From this, you can see the interfaces and synergies between the two domains, and not only that, but between the space domain and the entire integrated force, both as an enabler and an effector in its own right. In comparison to that PBY Catalina at Midway that somehow managed to thread the needle in a haystack, the ubiquity of space now working in concert with a technologically advanced air domain, and with and through the cyber domain, leaves far less to chance encounters. The synergies between the two domains are also seen through Air Force's application of its agile operations concept - space services such as satellite communications and position navigation and timing, or PNT, underpin Air Force's ability to conduct agile operations by providing global communications, command and control, and force tracking capabilities, covering vast regional and global basing situations. Our joint PNT directorate is establishing foundation PNT capabilities to deploy multi-layered alternatives, including space-based systems beyond GPS into the future. Our focus is on providing our Defence Force with a persistent information and decision advantage that may prove decisive in a regional conflict. The space domain is now a vital element of the integrated force for every ADF operation and activity deployed and at home, from satellite comms to precision-guided weapons, to situational awareness across all battle spaces. The ability to protect and defend our interests in the space domain is vital. Space domain awareness and services are essential. Therefore, space control is needed to assure access to the domain, and we cannot afford to be complacent. Our competitors are highly adaptive and are moving quickly, and this drives an imperative for the integrated force to think more deeply about

protecting its space capabilities, to build resilience, and to manage our own signature. So, how do we build resilience and readiness in the space domain? Resilience and readiness are central to our operationalisation of the space domain and the realisation of Defence's space strategy. Accordingly, our efforts are focused on four key areas: Integrated force operations, force generation, building our space workforce, and modernisation and capability uplift. For integrated force operations, our efforts are about maturing our arrangements for operational planning and command and control of space capabilities. And we do this in concert with our colleagues across Defence in Joint Operations Command. Ensuring integrated operations requires an approach to space force generation that is repeatable, sustainable, and aligned with the well-established processes employed across the other domains. In terms of workforce, building and sustaining a trained defence space workforce with defined career pathways is a key priority and is critical to our Space Command achieving its mission. Examples of our efforts towards workforce development include establishing career pathways for space specialisations and categories. Space training courses in partnership with the University of NSW Space Canberra, space master's with the University of South Australia, participation in space training and exercises with overseas and international partners. In terms of modernisation and capability uplift, with space capabilities now centrally managed under Joint Capabilities Division, JCG is actively leading progression of Defence's major space projects. Concurrently, our Space Command Team is exploiting every opportunity to incrementally uplift in-service capabilities through innovation in training, contemporary operational employment, and constantly evolving tactics, techniques and procedures.

It is worth mentioning that bringing together space and cyber into one group has delivered a number of advantages. These two domains are interrelated, interdependent, fully contested, and always on. The workforces of these two domains are highly specialised and technical, in short supply and in great demand. Our space and cyber capabilities will remain closely dependent on industry partners, even during conflict. This has been most recently evident by the Ukrainian dependency on Starlink. Collaboration with industry and our allies and

partners is a key part of developing our space workforce, enhancing military relationships, and improving tactical interoperability. Our future in space is about agility and adaptable. It's changing rapidly and sophisticated technology and data, once of a select few, is now ubiquitous. We need to change our thinking about the advancement in space, the advancement and implementation of destructive technologies are going to be increasingly important in this regard. And just as the air domain was poorly understood in the 1920s, we are only just beginning to understand the full potential of the space domain and its inter-relationship with the cyber domain, and the other three traditional domains. Effectively synchronising effects across all five domains will be one of our greatest challenges. And this conference is an excellent opportunity to further consider the role of space and how we will fight in the future. Achieving and integrating effective space power requires operational concepts, doctrine, tactics, techniques, procedures, logistics, and, most importantly, creative and disruptive thinking that can leverage technology, asymmetry, and opportunity. Rob, thank you for the opportunity for jointly opening the 2024 Air and Space Power Conference with you, which in my mind is an exemplar of the integrated force. I look forward to the insights that the fabulous array of speakers assembled here this week will share on building readiness and resilience, international air and space power, across the spectrum of conflict. Thank you. (APPLAUSE)