

## **2024 Air and Space Power Conference**

### **Transcript – Panel: Readiness and Resilience across the Domains**

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HANNAH JUDE-SMITH: Thank you very much, Michael. Welcome, everyone, to the first panel. First, I will introduce our five eminent panelists today. From the Air Domain, we have the Deputy Chief of Air Force, Air Vice-Marshal Harvey Reynolds. From the Space Domain, we have the Commander of Space Command, Major-General Greg Novak. From the Cyber Domain, we have the Commander of Cyber Command, Major-General Ana Duncan. From the Land Domain we have Brigadier Sean Parkes. And from the Maritime Domain, we have Commander Australian Fleet, Rear Admiral Chris Smith. Please welcome our panelists today. So, to start the session, I would like to give each of our panelists the chance to introduce their domain's readiness and resilience challenges and opportunities, and then we'll open it up to questions. So, just as a reminder, if you think of a question, I have my EventsAir app right here ready

to go, and we can also open up to take some questions in the room as well. So, I will pass to you first, Air Vice-Marshal Reynolds, to speak with the it Air Domain.

HARVEY REYNOLDS: Thanks, Hannah. I see what the previous speakers were saying about not seeing up here. This morning, when the Chief of Air Force and the Secretary talked about the strategy of denial and deterrence, and the focus on the deterrent effect we're trying to create strategically as Defence across the domains. And it really speaks to the importance of readiness and resilience from the air domain, in particular, but across all the domains I think you'll hear a similar discussion. Because our ability to deter relies pretty heavily on the resilience of our force, and it needs to be demonstrated how resilient and ready we are to respond in order for deterrence to be effective. But it's no mistake that all the domains are represented here, and we talk about readiness and resilience, because a weakness in a particular domain, with the interdependence we have in the Integrated Force, presents a strategic vector of opportunity for a potential adversary to exploit which will weaken the other domains. Very appropriate we talk about this collectively because we're all in this together, in this readiness and resilience mindset that we need to adopt in order to deter effectively. So, for the Air Domain, resilience first, there's a quote from - I think it was a US officer from World War I, Hoffman Nickerson, and it was in a book I read decades ago called Team Yankee. It summoned it up well - "Air power is a thunderbolt launched from an eggshell, invisibly tethered to a base." In that statement, it summarises the reach of our power, but integrated well. We've heard this already under the NDS, but the ability to withstand disruption, damage if required, in order to effectively deter coercion, we have to be able to actively demonstrate we can do that. Advancing weapon technology across domain threats, all threaten the strategic paradigm we've rested on for years with our geographic advantage, with our sanctuary we can operate from with relative impunity, it's no longer the case. So, we focus on projecting expeditionary air power out of the northern air bases, and we can't afford to do that under the assumption that we can operate exquisite, high-tech, lethal platforms from a pristine main operating base environment. Those conditions

have changed. We will not be able to deter effectively operating under that legacy mindset that we have been guilty of in the past. One of the critical things we can talk about with resilience, the Chief mentioned it this morning - agile operations - is a manoeuvre concept which he outlined very well that we're using to project air power from the north of Australia. And beyond a manoeuvre concept, networks of air bases allows us to flow forces from one place to another, to complicate targeting cycles, and to be able to predict - sorry, to be able to operate in a more unpredictable manner operationally and tactically to propose dilemmas to deter. The reason agile ops is so important, because it provides operational and strategic effects, but of equal importance, the mindset shift for our Air Force has been critical in implementing agile operations. The aviators love it. Lord Peach mentioned empowering the workforce and managing risk. Agile operations is how we're doing that. It is creating conditions where junior leaders can make innovative solutions to complex problems - sometimes simple problems - operating in austere locations across the north to project air power. When we talk about readiness, it will be talked about tomorrow afternoon. He will tell you we're always on, always operating. We see that every day. Everything we do in the modern environment is subject to surveillance, is being judged, measured by potential adversaries or competitors. Accordingly, everything we do needs to have a deterrent effect, and often does. And we have taken a very deliberate effort after the Defence Strategic Review to hone down our focus to that end. You can see through our Air Command Activity Plan that the Air Commander provides his force generation cycle for two years. We've re-prioritised something in the order of dozens of exercises to focus on the focus force mission sets that we were tasked to get after by Government.

A couple of highlights - Talisman Sabre, a large force, major conflict operations across most of Australia, all the domains are integrated, commanded at the joint level, coalition level, and is a key deterrence-focused exercise for us. Pitch Black later this year, heavily leveraging relationships in the region, providing regional security effects through the north of Australia, and that activity allows us to build relationships now before we need them in a crisis. We move at the speed of trust in a crisis, not at the speed of process. And in order to create those conditions to be

successful in a crisis, we need to build those relationships and operate with each other now, and that's what Pitch Black is all about. And probably the final point - but there will be a panel on this tomorrow morning - our people are the key to all of this working. Absolutely critical. Without the trained and skilled workforce that are empowered to make decisions, and that are ready and resilient and resourceful, then we won't be able to achieve any of the things I've alluded to. But that's all I've got for opening comments.

HANNAH JUDE-SMITH: Thank you. Major-General Novak.

GREG NOVAK: It's a pleasure to be here. Thank you for the opportunity to sit on the panel on day one. I am glad I'm second in the order and not sixth, because there's a lot of commonality in what Harvey has gone through. You might have seen me readjusting my notes. It's a good thing, as we sit here in an Air and Space Power Conference, to have a lot of the same themes coming up when we're talking about resilience and readiness. So, I will work very hard to make sure I'm not duplicating information unless there's a key point to be made there. The other thing I like to do is always make sure you lean in and support your boss. General Frewen spoke this morning in his opening remarks about four focus areas that we are looking at in the Space Domain. Those focus areas have come from - we are still a young command. For those international partners or those that are not tightly plugged into the Defence Organisation, Space Command is coming up on about 2.5 years since it was first raised. I am the second commander. I'm coming in, in December of last year, after the first commander, Cath Roberts, many of you will know. We've done a lot of thinking for the domain. We've got very clear direction from the Defence Strategic Review of last year. We've got our own strategy which predates the DSR but is still a document that provides a comprehensive framework for how we're going to take the domain forward. A lot of that - in fact, almost all of that has been reinforced by the released NDS and how we're going to respond to that. So, that thinking we've done really has been focused on, "What do we do to really establish space as a domain in its own right? How do we meet the DSR recommendation to have it as a peer of the other domains that are represented here around the table?" And that's driven a lot of the thinking and a lot of the

work we've actually been on for the last five months. Those four focus areas are related to what we're here to talk about today. The first is integrated operations. Harvey has spoken about a bunch of that, and we know it will be spoken about tomorrow in the program. The second one is force generation, and that's probably where I'll focus my remarks here this afternoon. It obviously directly enables our readiness and we're trying to take a deliberate approach as part of this domain approach. We also have design and delivery of a contemporary space workforce. I understand that's again a topic that we have another opportunity to cover in the program. But, again, if it comes up in Q&A, happy to talk to that because it is absolutely a foundation for everything else we're going to do. And then the last area of focus is that modernisation and uplift of our space capabilities. So, with those four focus areas in mind, just reinforcing what CJC covered off this morning in opening remarks, I'm very lucky, I think, in Space Command. It's a great command. Two primary reasons. The first one is that I've got a pretty clear strategy, a pretty clear strategic guidance of what Defence and Government and Australia needs me to get after. That's actually translated into a really defined and clearly understood mission. It's a train and prepare mission. I'm a force generator for Space Forces for Defence. And both of those things directly enable our ability to realise and mature our approach to space as a domain in its own right. As we look to the topic of today's panel - readiness and resilience - they're at the centre of all of that thinking. And I might, just as I said, alluded to before, use force generation as one of the areas I can see a very clear path forward and I can also see tangible outcomes that are achievable. You can actually get after them in quick time. As we set up and integrate operations and start to force generate, what I would like to do is to use that process as an opportunity to better integrate with the other domains so that they can understand what we're doing, but also to leverage off the long experience, particularly air, maritime and land have in force generation. What do I mean by that specifically? First and foremost, as we plug into the force employer at Joint Operations Command, I'm going to get a better read of what is the standing demand signal for space? What capabilities does my domain need to deliver to the integrated and focused force? Once we understand that demand, then it becomes a very deliberate process of, "OK, now let's design what force elements we need, what capability bricks we need to meet that demand." When we've got them designed, next step, let's establish them, stand them up, let's train them, move them through

an exercise progression. Let's do some sort of certification and assurance process. And then once we've done that, let's hold them at the requisite notice and move when we need to so they're ready for force assignment when tasked or called for by the Government. An important part of managing our tempo is we've got a clearly understood and communicated force provision task. And we're doing that from deliberate planning and we're delivering in a sustainable and repeatable manner that people get familiar with, OK? So, we're able to roll out quickly, with known capabilities, known quantities, and we're actually able to sustain them should we need them for more than one rotation, as an example. That's an enabler for resilience in itself, I think, if you can do that in a sustained and protracted way, then you're making your force more resilient, just as an outcome of that action. But we heard the Secretary, and we all know from our own reading of current strategic guides, we are absolutely in some more challenging strategic security circumstances than we might have been in recent years. For the Space Domain, that translates to what we've often heard as, "We're going to be operating in a much more contested and congested competitive environment." Translating that into, "OK, what does it mean for me? What's the planning consideration that falls out of that?" OK, so the space capabilities, the capabilities in, from and through space, that plug directly into the integrated force, and don't just enable it but establish a supporting-to-supporting relationship across the components and across the domains, the capabilities that we deliver in that context aren't going to be as readily assured as perhaps we might have enjoyed in previous years, OK? There will be a bunch of reasons - some of them will be from the environment, some will be from competitors - where capabilities that we've just taken for granted in the past as always being there at the level and capacity we need when we need them, perhaps that won't be the case. So, if we accept that as an operating environment that we're going to face, what do we take forward in terms of resilience? I think there's a couple of things we can do specifically, and happy to explore these further in Q&A. I'm just conscious of time. First and foremost, as we get new capabilities or we look to uplift through sustainment our in-service capabilities, how are we making sure we've got hardened capabilities that are survivable by design? That should be a design criteria for all of the capabilities we're taking forward, especially if they are high-value capabilities that underpin critical services to the integrated force. We want to look, in terms of our contest of employment, leverage every opportunity we

can to disperse. That can be our terrestrial infrastructure, ground-based sensors, supporting communications networks, on orbit it could be different constellations, different orbits themselves, it might even be different frequency ranges. We're dispersing capabilities, trying to avoid single points of failure, and trying to make sure that we complicate any potential adversaries' targeting processes should things escalate to a crisis or conflict. Where we're able to, we should look to establish redundancy and depth in our capabilities. That's a key part of resilience as well. And perhaps for some of those really high-value, niche capabilities, we perhaps want to look at some way of how might we more rapidly constitute those capabilities should we start to experience attrition or loss at a rate that we weren't expecting? Again, more detail could be explored in any of those. It's probably a common narrative to many of the international partners who are here, who work in the Space Domain. But I think if we look at those as ways in which we can achieve resilience, we see what opportunities we've got as we take our force forward in response to the NDS. And I would just echo Harvey's closing points as well - I did have some points here on workforce, but they are clearly underpinning everything that we do and how we build that workforce, train and sustain them, and give them progression pathways is equally important work. So, in this time, I will pause there, Hannah. Thanks very much.

HANNAH JUDE-SMITH: Thank you very much. Major-General Duncan.

ANA DUNCAN: Distinguished guests, ladies and gentlemen, it's wonderful to be here today. I'm going to do something a bit different, I hope, to the other four domains. The Cyber Domain has been around and used by you in warfare, conflict, humanitarian assistance for over a hundred years. Remember, the cyber domain in our context is the electromagnetic spectrum and cyberspace. I will say that again - electromagnetic spectrum, you might call that communications and electronic warfare, and cyberspace. Too often, we get put in this box over here. You've enjoyed those effects in your profession and your militaries for well over a hundred years. Cyberspace, perhaps decades. This command is six weeks old. So, I'm gonna share with you very briefly and I will explore more in our questions, some of the enterprise-level resetting that Secretary Moriarty and our Chief of

Defence, General Campbell, personally led. In 12 months they've cut through to make sure that we are ready and resilient in this domain. It's really interesting because the threat we're preparing to face is ubiquitous, it's not just state actors, it's non-state actors, it's criminally motivated groups, it's individuals. Cost of entry is low. And some might say it's the latest global commons, because the resources and capability of it are available to all. So, readiness and resilience is not a new concept, but the way our force has decided to set, reset for it, to balance the effectiveness for five war-fighting domains is worth sharing. I will put to you, if you turn to the ADF member in the audience next to you, they're probably not yet up to date, and that's OK. So, we are responding in many ways, and you heard today the Secretary and the Chief of Space and Cyber Force, my chief, shared some of the Australian Government's new policy settings. So, in short, what we've done in a previously federated way for good purpose, through our three services, through our Chief Information Officer Group, we have analysed and decided that's no longer contemporary. So, we have our senior leaders - have created a single service-like entity, and you have been introduced last night and today to this new Chief of the Space and Cyber Force, General Frewen's organisation, of which General Novak and I are environmental commanders. In short, this system reset says, "You've now got a chief whose role it is to force develop and to force-generate the technical mastery for the electromagnetic spectrum and cyberspace." Once the purview of services. And it's not to say that people won't still produce these effects in the services and still be commanded and controlled by the services - that's absolutely what happens. But we are going to get more resilient and more ready because you're suddenly cohering a federated, disaggregated capability in on a centre of excellence. And I'm reminded, if you go back to the 1920s after World War I, we had the then senior service of the Navy and the Army arguing over there was this new asymmetric capability - air power. What were its characteristics? Highly technical, competent workforce - not many of them. Highly technical discrete operational technology, whether it was the sustainment systems on the ground or the aircraft themselves. And there wasn't enough of them. So, we created a new force. So, think of the Space and Cyber Domains in the service-like entity that the Australian Defence Force decided



to wrap its arms around, as being like that. I would share that that required orchestration at the very highest levels, it's almost like an internal machinery-of-government change. We absolutely leverage, day in, day out, the goodness that has pre-existed in our lived experience here in our service origins. And there are common themes you should pick up on today about what we do. Responsive to threats, establishing concepts and doctrine, generating professional mastery through individual and collective training - all of the domains do that. But I would like to explore with you today a bit more, as we go through the questions, why did we do what we did? And why is there such a sense of urgency? And I might wrap it up on that.

HANNAH JUDE-SMITH: Thank you. Brigadier Parkes.

SEAN PARKES: Thank you. Good afternoon, ladies and gentlemen, and thank you to the audience and those online. I would like to firstly talk about land power in the context of readiness and resilience, and through five characteristics. The first one is presence, and the requirement for Army to operate regionally in the environment with trust and commitment to our regional partners. The second is in terms of persistence, and that's the ability to operate on the land in high-threat environments against a high-threat adversary. And to do that, in a scalable and modular model, all the way up to divisional level. Asymmetry is our third characteristic, and that's really the harmonisation, particularly some of the capabilities out of the National Defence Strategy. So, how we deliver manoeuvre, special operations to deliver an asymmetric threat against a pacing threat competitor. How we do that with versatility, and in particular, how we structure to do that, and how we use all the elements of Army, but in particular the integrated force, and then finally the fifth characteristic, how we do that for value for money. That's not just in a dollar sense, that's how we force structure and we do that as an integrated, scalable force. One of the challenges we've identified for readiness and resilience is actually - and I guess over the last four years we've all faced this - is support to domestic operations. On the one hand, we demonstrated, hey, we were ready and resilient for that. I'm talking

fires, flood and COVID. But interesting when you look at the world - and we are at a flection point - and when I look at land combat and I look through the lens of places like Gaza, Ukraine, how we prepare for that particular fight and how we're resilient. So, the Chief of Army is really focused on, one, combat readiness. Two, combat resilience, and I'll offer up a third R, and that's combat relevance. And that's a really important one, particularly in terms of how we integrate as part of the integrated force.

The strategic direction for Army is clear. We have been on a clear line of march, a clear compass bearing from the Defence Strategic Review through to the National Defence Strategy. One of the ways the Chief is building resilience and readiness and relevance in the organisation is through our C2 structures. Really focusing on the division as a unit of action. And so that sees the 1st Australian Division really with a laser-like focus on preparing for potential large-scale combat operations. The 2nd Australian Division focused on homeland security and resilience. And Special Operations and Aviation Command continuing their modernisation vectors but in particular their niche capabilities. Finally, the organisation I work for, Forces Command, really orientated on the race to try and sustain function for Army and in particular how we train and prepare our individuals and teams.

The second point in terms of readiness and resilience is the priority for Army - and Government has given us really clear direction on terms of being an enabled army by air, land and sea. And coupled with a long-range strike capability, land-based, and land-based maritime strike. That effectively sees us able to force-project and strike at distance which we've never done before. We've also seen the largest recapitalisation of our Army in generations. World-class armoured capability, world-class aviation, strike capability, special operations capabilities. That's all fantastic, but we know to make this win on a future battlefield, this will have to be done through an integrated outcome. You know, constructively, when we talk about the Air and Space Power, hey, in terms of our integration with Air and Space, we have been doing this for 20 years through a counter-terrorism fight. I know my experiences with the DCAF, air land integration, well-versed in. But as we've modernised as an ADF and built sophistication across five domains,

how we better integrate that. The other example I use is integrated air and missile defence, owned by the Chief of Air Force, but that will be supported by all domains, and particularly land. To finish, I'd like to sort of cast back into history and World War I. And if you go back to the combined arms fight, the father of that was General Monash. And that was a combination of artillery, infantry, engineers to deliver an effect, or a decisive effect on a land battle. The combined arms teams has not gone away. But the reality of the future is it's going to be all domain. I think as a Defence Force, we've now amalgamated a whole lot of sophisticated sensor strike capabilities. The ability to orchestrate that and apply that on a battlefield - and I use this in the context of a land battlefield - will take a lot of effort. Working left of that bang, how we work that piece - and the Chief of Army talks about integrated by design - that actually has to happen now. And this is the benefit of a forum such as this and a panel such as this, is where we start to get after it. And to circle back in terms of my responsibility from a training system perspective, I think that's where a really good opportunity to begin. So, how we train and prepare to build resilience, readiness, and also relevance, from an individual training system, a collective training system, an advanced collective training system and a joint collective training system will actually set the conditions for success. Thank you.

HANNAH JUDE-SMITH: Thank you. Rear Admiral Smith.

CHRIS SMITH: Number six, fantastic! We'll start with we are an integrated force. There is nothing that any ship, plane, mission system within fleet does, it never leaves a wharf or airfield without significant contribution, interaction across all domains. And paradoxically, this presents its own readiness and resilience challenge, as we are becoming increasingly reliant on each other to generate the capability and the resilience that we need. And from a fleet perspective, that is requiring us right now to look at how we do business; how we have generated maritime effects in the past is no longer relevant in the current context. So, we are in a point of inflection, how we generate those and how we integrate and how we can do that in a way that maximises the use out of the resources that we

have. What I'm going to do is I'm not going to repeat all the comments, because so many of them are common. I'm going to go to a tactical example and talk about how resilience and readiness can be impacted on a daily basis in our roles. And then I'll talk about where we are at fleet and what we're trying to do to manage some of that.

So, earlier this year, we conducted our second submarine command course, which some of you may know as the old Perisher course. And this is how we generate commanding officers for submarines. Commanding officers for submarines are a foundational capability in terms of getting submarines to sea. Without them, submarines don't sail. Submarines, in themselves, achieve a number of things. Clearly, they achieve an operational effect. But they are also essential in supporting ADF and allied ASW capability force generation through the use of those submarines in support to exercises and training. And they also provide platforms to generate a submarine workforce, not only to support the current Collins-class submarines, but we need to generate workforce for the future nuclear-powered submarines. That is a significant focus for us at the moment and means we need as many submarines available as possible to be able to generate that. As we were going through the Submarine Command Course, which had a significant number of assets assigned to it, we coincidentally had a requirement to support a surge across Resolute - for those not part of the Australian system, that's our border protection operation to the north of Australia - where we had a significant uptick in the requirement, predominantly for us of service combatants, but also aviation resources, and other resources across the other domain. So, immediately, we now have a resilience and a readiness issue that needs to be managed, which not only has really short-term issues about getting a submarine CO available to take over a submarine in command, but also our capacity for theatre ASW force generation going forward, also other aspects. So, what do we do about that? We needed to make priorities across the organisation. And they were across the organisation. We recalled a frigate that was deployed in the Indo-Pacific, conducting international engagement activities, and significant ones, back to support that Resolute, because that was considered one of the lower-priority activities against that force generation,

against Resolute and the Submarine Command Course. We had to surge a number of aircraft from Romeo to fill the gaps of the aviation capability that went north to support that. And also a number of other platforms that were going through their own force generation cycles, as in major fleet units. We also used a number of our civilian support vessels going down there to add holes in the water to make it more complex going forward. All of them had a cost in their force generation, or against other priorities that were set across the organisation, including both in Navy and outside of Navy. We also called on our partners, allies and partners, to provide additional support, particularly around the MPA, and we got that from both our New Zealand and our US friends that were able to support that activity. Now, at the end, we were able to achieve the Submarine Commanders Course and we were able to achieve the Resolute surge, but that had a major impact across the organisation, both short term and enduring in terms of catch-up around that readiness and resilience aspect, how we then utilised the people that we surge and how to reconstitute those. Because at the end of every surge, you don't go back to business as usual, you need to do a reset going forward. And it wasn't just Navy, it was across all forces, and it was across our allies and partners, who also had to make that decision.

That's not an unusual circumstance. That's day-to-day business in terms of how we have to consider and manage readiness and resilience, because they are intrinsically entwined and it's a constant state of friction as we're moving forward. And if you think about current operations, whether it be Resolute or others, versus future availability in those high-end war fighting that we've heard about, whether it be current capability or the future capability that's coming, and looking at resources in terms of personnel, dollars, and time associated with that, deployable mission systems versus enablers and infrastructure. It is not a zero-sum game. We need all of those things and we need to balance them as we're going forward. The recent Government announcements have clearly provided us some really good focus and priorities through the NDS and IIP rewrite. And that gives us some clarity around what we need to do. But real world gets into the way constantly. Ukraine and Red Sea have significantly increased the cost of us doing business, and also drawn resources away. And even more closer to

home domestically, if you look at COVID, bushfires assist, or Resolute, constant pressure on our ability to balance readiness and resilience within our workforce and our systems going forward. So, they're always going to be challenges as we're going, and the balancing of that is always going to be dynamic, and decisions will always have consequences. Consequences going forward. So, fleet, as I said, is going through a significant shift and change. Our force generation used to be platform-centric and it would be very resource-intensive, focused on generating one system and then would move to another. That no longer is achievable in an environment where those resources are being demanded for operations and other aspects as we go forward. So, we had to work out what we were focused on. Fleet war-fighting operating concepts. What were the effects we needed to achieve, where we needed to achieve them going forward. And it wasn't platform-centric, it was inherently joint and integrated going across there. And it talked about THE fight, not a generic fight, because we needed to be able to look at the worst-case scenario getting after it. It enabled us to then focus in on the things we could and couldn't do, and where to go. We established the fleet war-fighting plan because the leadership job is really about resource allocation. And you don't have resource allocation effectively done, then you are not setting the priorities for your teams. The fleet war-fighting plan talks about what effects we need to do in a concrete, tangible way. It's not in functional lines. It's, "We need to be able to achieve that effect in that place at that time, prioritise and move forward as an organisation to get after it." That's enabled us to prioritise the work and also make sure that we optimise all of those concentrations of assets at any point in time, whether it be a joint exercise, our own or other, to be able to get the maximum amount out of it to increase our resilience and readiness, and also test it as we're moving. And then finally, the fleet C2 review, put really simple, it's about understanding our responsibilities and accountabilities, as set by those other two documents. And then getting our resource allocations and delegations aligned so that the person who is responsible for an outcome has the resources to be able to do it, has the authorities to do it, and then I can hold them accountable for getting on and achieving that outcome. Because in any of these scenarios, if you don't

have people that are accountable and empowered, then you don't have a system that functions and works moving forward. And so those are really important parts of it. So, this is how fleet is fundamentally changing to meet and align with other domains and other outcomes as we go forward. Our current context clearly requires that alignment and prioritisation. In addition to that, we are looking at reimagining how we get our work done. We are looking at how we force-generate. We've had a 30% reduction in sea days to generate a frigate going forward. I can then allocate those days to other systems and we're where going moving forward. We're looking at communities of practice - don't teach one person when you can teach crowds of many, move them into the space. Alternative sustainment. This is about moving our people, not sustaining our platforms back at the home base but going forward to keeping them in the operating areas and managing them. It will be contested, so that's contested sustainment, which to me is a step beyond contested logistics and those sort of outcomes. So, these are the sort of challenges that we are working through at the moment in a very dynamic system, and I think the opportunities with the new domains coming on, and focusing there, enables us to really leverage the work they're doing and getting after it. So, put really simple, to me, resilience and readiness can be characterised by a series of friction points. It's not feasible, nor desirable, to remove those friction points because they are important to us. What is important is that we deliberately place those friction points in areas where they can be considered by empowered people who have the capacity to do the resource allocation, make risk-based decisions on what we need to be able to do, and then - through that contested but collaborative process on those deliberately placed friction points - make decisions that reflect resilience and readiness across the organisation and moves us forward so we don't get into a series of circular arguments about what's important and what's not, and don't get that clarity as we're moving forward. I think the NDS and IIP have set really good foundations for that. I think it is now the opportunity for people, like those driving those force generation in domains, to work together now to see how we can achieve that in a way that gets the best bang for every dollar, minute, and individual we have in the organisation going forward, because that's what

it will take to achieve what they have set for us. I'll stop there.

HANNAH JUDE-SMITH: Thank you very much, sir.

GREG NOVAK: I know you've probably got a bunch of questions there, but something Chris said - if you talk about opportunities for resilience, I think one I would just like to add to this on a transmit front was, especially in this forum, one of the great opportunities and one of the great enablers we have is our relationships with international allies and partners and with commercial industry. The experience we have at the moment, perhaps a demand signal and then tasking that we might struggle in some circumstances to meet, that's an experience I would imagine many of the countries represented across this room is shared, and we therefore stand to get mutual benefit from all of us exploiting and leveraging fully those relationships we have with our partners and allies. And that's not just in operations, covering gaps and meeting needs, but it's also in exercises and training. And I use the Space Domain as a really clear example - many of my counterparts are here in the room. We regularly exchange personnel, attend each other's courses. We have standing programs, like the Combined Space Operations Initiative, where countries will come together to tackle like problems and work out ways ahead. So, I think that's one that Chris mentioned, allies and partners, I just want to highlight it equally applies across all of the domains in the integrated force. Certainly in space, the relationships I have been exposed to in the last five months, they were strong when I was in the space domain several years ago. To what I've seen them grow to and how much they've deepened in that time is really impressive. And I'm confident when I make the assertion that that's a mutual benefit to all participating countries. Same for industry and commercial providers. You know, what we're doing in Space at the moment to make sure we're tapping every opportunity to leverage commercial data buyers and commercial capabilities and integrate them into our domain approach is another opportunity we have to help build our resilience. Excuse me, and in doing so, get an indirect on to it as well.



HANNAH JUDE-SMITH: Thank you. That does touch on some of the questions about tapping into resilience beyond just the domains and into those national environments as well, which we might get to later. I might just ask if we can bring the lights up a little bit so I can kind of track if there are also questions in the room. But I think one of the questions that I've had come through on the app, which I'd like to pull the thread on first, is something that you said about moving at the speed of trust in crisis. And you've all touched on the importance of the interdependencies between these domains to be able to be ready and then to be resilient. I think I'd really like to understand better, how do you make sure that you don't get too siloed in your domain? What sorts of practical, day-to-day things do you think about so that you maintain that interdependency mindset and you don't just kind of get caught in your domain and the pressures that you have all outlined on that readiness and resilience? I'll throw to you first, sir, and open up to a wider panel.

HARVEY REYNOLDS: I'm just trying to think of the best example. I find myself in my job, so much of the time, one of the more challenging things, it's a tactical example we can all relate to - building an email distribution list! And I have a problem - the first thing I ask is, "Who else needs to know about this?" Invariably, it's a lot of people. That is the consequence of being integrated. And there is a risk there that you over communicate and you over-transmit and you saturate bandwidth with every problem that comes up. Where there is a legitimate cross-domain issue, it is important to talk early and often, and iterate, because it allows all the commanders decision space, to get to Chris' point, so that when we manage the resource allocation, we are informed, and everyone that is in the room has come there with the right, accurate information, and understands the relative risks and equities and competing priorities. I think Defence is much better at that and has gotten more so over the last five years or so than any of us have seen previously. So, you know, into more specific examples, if you think about agile operations - and not to harp on this, but it's just one that came to my head because I talked about it earlier - there are a number of stakeholders there. That's not an Air Force effort. So, if you look at Army, the 2nd Division, obviously

our Reserve contingent within Army, key role there in combat support, force protection, and also for us supporting them, the interdependencies are very strong in the Northern Air Base Network already, and will be even stronger as we manoeuvre through Northern Australia conducting agile operations and expedition air power is manoeuvring. They're gonna be critical stakeholders for us. Security and estate group as well, if we're seeking to change relationships with governments at state and local levels - they are critical to integrate into our decision-making cycle and we're already doing that. And our regional area development teams are doing that as well. So, those are the pre-conditions. And we're going to have a discussion from industry and the other from the Air Commander about northern air bases, so I won't go into logistical challenges. It's an austere region. Joint logistics and national logistics, and then beyond that, national resilience under the National Resilience Coordinator and Prime Minister and Cabinet, there's an example of as we start to pull the thread on agile operations, you can already see the amount of integrated work that needs to happen across Defence and outside of Defence.

HANNAH JUDE-SMITH: Anyone else?

ANA DUNCAN: I've got some ideas there too. Look, I'm going to go right to the heart of it. I think the one way you set the foundations for an integrated force is you go into professional military education. So that I hope when you see various people up here, you start to question, "Why do you need a communications officer to be sitting here as the Commander of Cyber Command?" I'm a combined officer and have been for 30 years. If you get to the PME of, "How much do I need to understand about the other aspects of the five admins?" Or tomorrow CJOPS will probably tell you, "I don't fight like that. I plan and fight through seven components." I would talk about an intellectual uplift that is required. And I think Lord Peach was intimating this. If you get to the very heart from a very junior age - and we think differently about how people can advance through work groups, through key roles. Long gone are the days where we must build through so many years' time in rank. When we get back to the days of Lieutenant Colonel Charlie Green, at the age of 25, if we're in a contested conflict situation, that's what starts to happen. The second thing I would like you to contemplate is I shared with

you that we are six weeks' young. I hope this has taken the best of reflections of my colleagues, because, remember, I would never do anything as a joint officer, as an Army officer, to impact certainly where I spent my whole career - Army - or where I fought alongside their services. And that is, have a look at the newer domains, the 21st-century domains, and a very senior person once said to me, "Success is those other more traditional domains come and look into space and cyber and pick the best out of what you're doing." Because we have no legacy. We are creating the doctrine, the concepts, but we absolutely rest on - as I said in my opening remarks - the foundations, over 120 years in the maritime and land, and more recently just over a century in air - there is goodness there and preparedness. But I want you to think differently about educating yourself, ourselves, and then what's a 21st-century readiness and resilience system look like for a truly integrated force? And we need creativity. And sometimes hierarchical organisations like armed forces stifle creativity. That also means, go to the heart of the National Defence Strategy and the Defence Strategic Review, understand the environment, understand threat, and absorb the risk.

SEAN PARKES: It's really two words - openness and inclusion. I'll cite an example. We conduct our recent Army Training Board, the business of Army training. Importantly, we made sure we included all domains. It was a really interesting experience about how we saw the other training systems from the other domains. What we learned from each other, what the domains learned from Army. Speed of trust and speed of integration, you can't see this to the senior leadership. Where this will be sped up is the integration at junior levels. This is where you need an open and inclusive approach. It's really at risk of you can operate in rice bowls. But I think from a junior level, if we go from an integration perspective, you'll get trust and integration.

HANNAH JUDE-SMITH: Alright. Did you want to add? Go for it.

GREG NOVAK: Rightly or wrongly, I'm known as a simple guy, so I think this is worth adding into it. I think one of the best things we can do to inculcate that interdependency and avoid stove pipes is speak the same language. There are instances in my domain where there are deep technical specialists. If you ask for

a document, you will get that, full of deep technical expertise. Absolutely essential. We're blessed to have them on the team. When speaking to other professionals, they're really useful. When we start talking about force generation, commonality in training, speaking the same language is important. That goes down to org, processes, authority delegations, even the tools and templates you're going to use for operational staff work. The last thing I would add to it is, OK, if that's how you want to operate, well, then let's exercise every opportunity we have in that context because we don't want to be doing something like that for the first time when it's on operations. If you look at what we're doing at the moment and look at the conversations we've had around here, I think we're actually in pretty good shape. Not just across the domains here in Australia but also with our allies and partners.

HANNAH JUDE-SMITH: Yeah, thank you. I'm just going to give a chance for any hands to come up in the audience. I'm going to go to a question from the app, which I think sort of touches on some of the tensions that we've had discussed already. Rear Admiral Smith, you pointed out the tension between readiness and constitution to be able to build capability and force-generate. There's a question here that tries to unpick a tension, and this one is between hardening by design, which is going to invest in needing a lot of time and a lot of money, and I think can tap into building redundancy, but how do you do that and also keep innovating at a pace that's going to match the threat and a pace that's going to match technological innovations as they're happening as well? So, how do you balance those tensions when you're thinking about force-generating in your domains? I'm going to throw to the end! Initial thoughts?

CHRIS SMITH: There's a lot of research into it, actually. And you go down that pathway, and in terms of innovation, if you try to innovate in the main business, the main business will generally kill off any innovation very, very quickly. See it as a threat, seen as low-value, and therefore they are generally motivated by the success in the business that's going forward. So, you need to think about where you're doing your innovation, you need to think about how you - the

ideation that's required, the incubation of those concepts going forward. And I think generally we're pretty good at that in Defence. We have innovation hubs and we heard about Jericho and we've got it in Navy and all those areas. So, we come up with good ideas and play with those ideas effectively. What we've failed to do is scale them back into the system. I was talking to some Special Forces guys the other day, and I see that as a really good model, where if you look at an infantryman of today and the outfit that they wear, that looks very much like a Special Forces person in the not-too-distant past. So, we have an organisation there that are at the leading edge of innovation, due to an absolute requirement to do that due to the operations that they're doing, they come up with concepts, test them, they have a high-risk profile, they quickly succeed or fail and then integrate. And then once they've proven them in the operational fields, that then slowly moves itself back into the main system and they pick it up and it scales over time. To me, that's a really simple example of where we get it really right in the organisation, and have for a long period of time, based on that process. So, I do think that if you try and innovate and come up with a bunch of great ideas to change the way that ships run, and all the rest of it - I've done this recently and failed terribly at it - you will get a lot of pushback, and it's almost impossible. So, you need to think about setting a really strong demand signal for why you need to do it, you need to get senior leadership engagement across the board to be able to support it, you need to give them space to be able to prove that system through the incubation and go forward and then drive it back into the system there. And then you need to work out a way of driving it back in there. But there will always be a tension. And, again, going back to it, friction is good if it's put in the right place, it's managed, it's collaborative and contested, and then you have people moving forward. If friction is across the organisation, it just breaks down really quickly.

SEAN PARKES: I would say, hey, it's all about investment, and it's co-investment. So, part of it you've got to harden, at the same time you've got to innovate. It's easy to drop the innovation off. Part of it is also building systems and structures that are sustainable. I guess an Army example

here is the relationship that's developing from robotics and autonomous systems coordination office, really getting after the Chief's priorities around technology. How that now links within the new experimentation test and evaluation unit, which is actually a re-rolling of our first armoured regiment, and how that links into our battle lab, which I own, which then looks at how we take that into doctrine, build lessons, and overlay threat. When you build a system like that, that's when I think you start to reap the dividends. But also, also how you integrate that system. And a really good example is the air warfare centre, which is already down a road on this under one roof. There's a real opportunity to learn how we innovate and harden from each other.

HANNAH JUDE-SMITH: Thank you. Did you want to touch that at all, General Novak?

GREG NOVAK: Innovating, I think, has been covered. That hardening versus capability, cost, I think that's at the heart of resilience. You might recall I talked about the number of different ways you can achieve resilience. I outlined a couple. The answer is it's not one or the other. It's a combination of them. You will need to have certain core capabilities that are hardened because you want them. They're high-value, expensive, might take a lot of procurement time, so you want to make sure they're there in adverse circumstances. But one of the ways you make sure that capability isn't a single point of failure is that you have another, you know, wider suite of capabilities that might help with gradual degradation should you have attritional loss. They might be things that are perhaps cheaper, quicker to procure, more prevalent in your system so you can afford to lose some and not have the same level. I think it's both. Look, I think innovation as well. We know we've got the major capital procurements under the IIP, and they are delivering all of the things that NDS requires them to deliver, and we'll be ready to receive them as they come on board. That's just one way we uplift our capability. Another one is, I think as my colleagues have already discussed, is that innovation piece. Just making sure where you've got in-

service capabilities, you're making sure that you're constantly looking at how they're being employed, what are they integrating with, what are the tactics, techniques, procedures our people are employing, how do we train to get best effect? There's a piece of innovation there which is not free rein, it's facilitated, but it's a way in which we can make sure our in-service systems don't just keep the lights on, they also uplift in capability as they can while we wait for the major projects to do what they need to do.

HANNAH JUDE-SMITH: Thank you. Hands, another check. No? I have another good one on the app that I wanted to bring out. And it talks about building resilience. And the question is: With regards to resilience, can we expect to see activities pushing to the point of failure? And actually not necessarily always getting to succeed and to have victory out of our ops and exercises. But where are we using failure to actually build our resilience in our systems? Anyone want to open up?

CHRIS SMITH: I'm happy to have a crack at that. I think if you don't push to failure, then all you're doing is what you did last year. I think we need to reframe it. We need to stop saying, "Let's go and fail," because no-one likes failing, it's fundamentally not us, particularly uniform people. I think we need to see where the extremes of our capabilities are, and we need to design it in a deliberate way that says, "Your job is to go away and find out where the edge of that envelope is, whether it be a missile profile, a fatigue management around our people, whether it be any other kind of activity, go in a deliberate way, find me when it fails, or when it ceases to be effective. And once we've done that, we'll do the analysis around it and then we'll see if we can open up the envelope next time around and push it further." So, I think from a perspective, as soon as we send our people out to fail, they fundamentally cringe and don't want to. And so I think we need to reframe the way we set our things up and we reframe the way that we do it in terms of our exercises, and, again, if we are rinse-and-repeating our exercises to run through the same elements, that's good in force-generation, if you need to build a level of capability, but it will not get you those

step-changes and innovations going forward. So, it's as much about language as it is about anything else and how we frame it.

SEAN PARKES: I truly think you butt up against military culture here. No-one likes the F-word and I think you need to reframe the term. It's all about splitting up your learning loops, where we have a culture of that and where you capture those lessons and you have the systems around it. One of the things is I think "failure" would be a really uncomfortable word to get after. It's all about learning.

ANA DUNCAN: Lord Peach touched on this - so, Australia for those now visiting, we are a large island at the bottom of the world, with no borders to anyone else. And if you ask the general Australian, they would say, "Defence? Oh, you're in the ADF? Why do we have a Defence Force? We don't need one." So, that national culture and compare that national culture and mindset - I'm generalising here - with what Lord Peach raised about the total defence model in Finland. Finland has for many years been surrounded by the bear, who's aggressive. Russians go in, occupy suburbs, change the street names to Russian names. So, when your national psyche is so affected and the only way public servants in Finland advance - because I've studied this - is they must do national security studies. And they also understand the impacts of information activities, specifically information warfare because they feel it day in, day out. So, for our Defence Force - and I'm talking in an Australian context - we, you, have been in conflict in campaigns in the Middle East for the last 20 years, but it was against a non-state international actor. And for many of you, your perceptions of war fighting is not as real as those of our predecessors. And yet why is it that there are parts of the Australian Defence Force that, for many decades before those campaigns, were doing just what was suggested? They deliberately designed their exercises to productively fail, and those two - when you put those two words together as a leader and a commander, you create a culture and a permissive environment, but you have to be aggressive



in driving that through. So, this part of the Australian Defence Force has consistently, deliberately, by design, always tested its forces, and constructed the exercise so that they knew there would be a point of failure here, and then they aggressively evaluated all the tactics, techniques and procedures that surrounded that. They went back to, "What if we did this analogue?" So, I put to you, as leaders, it starts with you. And any high-performance team, whether it's industry or not, adopts that. I also think we've got a real opportunity as a Defence Force to put aside any organisational hubris. Because we have had a lot of success in a range of spectrum of conflict that we have been engaged with over certainly the lived careers, I think, of many of us here today. But we need to have a look at putting - and CAF talked about this - responsible stewardship of resources, and so did the Fleet Commander. If you as a leader apportion your resources in a way that enables you to synchronise your priorities, adjust the levers, then you'll get exactly what you want out of your team. Otherwise, because it's a human condition, we want psychological safety. We'll go and create normative patterns of training that are safe. "I can come to work, I know what I'm doing. I'll get after that." That's not what's being asked of us under the National Defence Strategy and our changed geostrategic circumstances. So, culture, absolutely believe we've gotta mix that up.

HANNAH JUDE-SMITH: Alright, thank you. I have one here to, I guess, continue on the discussion about national resilience that we touched on before. And I'd be really interested from your domain perspectives about what you see is necessary to start building that strong foundation of national resilience that we need to support the resilience of our ADF. And I'll throw to you first on that, DCAF.

HARVEY REYNOLDS: National resilience?

HANNAH JUDE-SMITH: Yeah. To inform Air Power from that perspective.

HARVEY REYNOLDS: Thanks for that question. It's a great question. If you look

outside Defence, one of the areas that is immediately obvious to us as a technical service is what we call STEM, which for those who don't know what that acronym means, it's science, technology, engineering and mathematics. That base of our society's literacy in STEM is insufficient for the demand signal that is levered upon it through industry and Defence at the moment. And Katherine Bennell-Pegg's video touched on it last night - she might talk to it when she does her presentation. But I think that's one thing from a national resilience perspective, not just for Air Force, but every domain has technical experts in it - we need to be working with industry and with academia. Ana mentioned professional military education, all of these things, to increase the literacy of STEM through our junior workforce, Navy technical trades at the moment are under pressure - this is one of the reasons why, is the insufficiency of the base of the cake to build the icing on. It's something we need to get after as a country. I think that's one area where national resilience would be improved by a strategic focusing of the skilling of our workforces for the needs of the country rather than personal choice of the people. Now, of course, the ideal situation is to combine both. I'm not suggesting we press-gang people into being engineers, but I think there's a happy medium there to incentivise education, industry, through, you know, government grants, there's lots of processes there we could look at nationally. But again, I alluded earlier, there is a national coordination effort going on across the whole of government that will be looking at these areas and it's already well-understood by Department of Education and everybody else. So, I guess that is an initial point for Air Force, that would be probably something that's pretty obvious to us. The logistics system, I've touched on. I won't go over that again. I think that's common for all of us. We've got a country the size of continental United States with the population of Florida, so we don't have the tax revenue to have the same infrastructure, funnily, as continental United States. So, accordingly, our basing, our lines of supply, our infrastructure, is going to be expensive to maintain. So, national resilience in terms of infrastructure uplift, Space Domain resilience, cyber resilience, national infrastructure, these are all things we need to look at.

**GREG NOVAK:** Building on from that, I think one of the lines of effort in our Defence Space Strategy is about building the national awareness of just how important space is and what space brings to us. Building that national narrative

would enable and help some of the things that Harvey just spoke to there. I note in the audience - I can't see because of the lights - a number of our colleagues here from the Australian Space Agency. We work with them closely and regularly on their efforts to build that national narrative for the wider Australian population and community, also for government. We make sure that Defence's voice is in that and we include where we can to help build that narrative. But as an example, we know in Defence - and it's rattled out in TPs all the time - what the Space Domain brings to integrated operation. We know we get comms, ISAR, PNT, targeting, the list goes on. A similar reinforcing by repetition and getting into the right levels and deeply understanding what Space brings to the wider Australian population, I think would be a body of work we could get into. You know, what it does for everyday life in terms of GPS and banking, what it does for the agricultural sector, which underpins our economy, and what it does for finance that then manages that economy. You know, logistics, the list goes on. There is our US colleagues will be very familiar with some of the YouTube product that's getting around on the "never a day without space", where you start to show through some narratives and some vignettes just what it would mean if we lost space services for a period of time. I think that sort of national narrative, that's something we could do, and are now working under the Defence Space Strategy and with the ASA, is looking and will have a tangible outcome on national resilience in a wider context than just space.

ANA DUNCAN: I'll just briefly add I think there's a role for the armed forces in any liberal democracy to - in the pursuit of national resilience and preparedness, really - is to lead from behind. Yes, we are parts of the departments of states of our nation, but there is a time and a place, and most times and most places, the M in DIME - diplomatic, information, military, economic - is there. What we can bring as the leaders and the planners, and if I share with you the Australian context over the last four years, we've had catastrophic floods, bushfires and, like you, COVID, and in all instances the national task forces that were established by government were led by military officers. That's quite an unusual setting in a nation like Australia, but almost now

it's become more normative. I would offer we can lead from behind, we've got good leaders and planners, and when asked upon, you need to be ready in a liberal democracy to lead in a different way, in a whole-of-government setting, than what you're probably used to in a very hierarchical military construct. And my second point very briefly would be there is a role for armed forces who read intelligence each and every day, who are constantly scanning our environment and threat, to remind gently others who do lead in government, in the cognitive information warfare space, you know, how do you remind people that this is on now and it's very confronting? Because we believe in privacy and freedom of speech - all those things as citizens that are vitally important. But there are some things that other states are doing at a span and a speed and in a nature that is not in accordance with what we would describe in terms of laws of armed conflict. It's on now. So, things to contemplate and how do you become part of that? And then if you have the opportunity to do a short or a longer secondment in another part of your nation's government apparatus, I would encourage you. You learn so much and you come back, I would posit, a better military officer because you see your armed forces in a very different light. We are extremely well-resourced compared to other departments of states. We are extremely slow at making decisions - I'm just offering my personal perspective. And yet when I come back in, I think, "Gosh, we did that really quickly. We don't have enough resources." So, understanding that and balancing yourself and always checking yourself, "What's the other stakeholders' view?" I think that's really healthy as a leader.

SEAN PARKES: Yeah, I think if you link resilience with threat, and I think General Duncan's point there with Norway, when you have an existential threat sitting on your doorstep and you see that Israel and Gaza, the resilience thresholds are a whole lot different. The benefit of being an island nation at the bottom of the world is I think our resilience thresholds are lower. I think, as those threat spectrums start to elevate, where we'll have to become resilient, particularly in terms of context of scaling and mobilisation. How you scale a Defence Force and potentially how one day you might have to mobilise it.

HANNAH JUDE-SMITH: Yeah. Did you want to add anything?

CHRIS SMITH: I can give you a list of the infrastructure I need, but that won't help! I go back to guns and butter. I mean, you know, the comments around our capacity to do so much, and the general population in Australia is not going to stand for a whole bunch of investment and a lot of stuff that does all that resilience and building on that kind of capability until they see that threat at the door. And I don't blame them that. I'm a big fan of schools and hospitals and all those sort of things. Also I think we need poets as well there. But that's another one. STEM is good. But when I look at those things, when I start to look at national resilience, you need to understand where your risks are. And you need to try and leverage those on a broader global system. And we have a system of allies, partners, both from a military sense but also economic sense, and a whole range of other things, and when you build that system, you are building resilience in your ecosystem as well. So, from a perspective of us at the moment in what stage we are, we should identify what our risks are, we should do what we can within a reasonable resource limitation, but then we should also look at how we can hedge our bets across the global system so that we can build that broader resilience going forward. And I do think that we undersell the Australian creativity and ability to think through problems, and all the rest of it. And sometimes too often we look for somebody else to tell our solution. So, I think when push comes to shove, I back the young kids of Australia to come forward with some awesome ideas and concepts and really elevate us really, really quickly. So, I think they're the sort of resources that we have, that we will be able to tap in when motivated as well. So, I'm a little bit of a glass-half-full guy in that space.

HANNAH JUDE-SMITH: Well, that's good. So, we have time for one more question, if there is yet anyone brave enough to put their hands up in the audience? Oh. I heard a "yep". Where was it?

>> You've got good hearing, ma'am!

HANNAH JUDE-SMITH: Right at the back.

>> Lieutenant Colonel Jimmy Groves from Strategic Policy Division. Hello. We've had a really intriguing conversation with regards to what I would characterise as fighting power. The physical, intellectual and moral components of fighting power. My question for the panel is, on one hand, a little bit complex, but otherwise simple: If you could do one thing through your domain, if you could do one thing to enhance the moral component of our fighting power, what would it be? Thanks.

HANNAH JUDE-SMITH: Who would like to start? Yes, go for it, Brigadier Parkes.

SEAN PARKES: I think I will. The CF has been really clear, particularly in terms of his philosophical doctrine. So, character, leadership, ethics and culture. It's a requirement that is really defining the moral aspects of how we will fight, from a doctrine point of view. And then, in particular, how we then see that through our training system, and then in particular how we apply that on a future battlefield.

ANA DUNCAN: I'll add on to that. The moral component of fighting power, of course, relates to reinforcing the will to fight. And I'm gonna add, the latest adjustment to our doctrine - hot off the press! - we now in Australia subscribe to the intellectual, the professional mastery, the moral, our will to fight, and we've just adjusted the means. We talk - introduced to physical, now we've also got the informational. Hot off the press in our capstone doctrine. But in terms of the moral component and making sure our people have the will to fight, I would offer being clear when a government commits boots on ground - sorry, it's a very green analogy - but commits forces to any effort, is articulating the purpose. And we've got some wonderful retrospective reflections that we have learned out of Afghanistan, understanding the purpose - but, of course, understanding as well as combatants that there are political decisions, and the commitment of military power is policy through other means, right? So, I think,

if I could do one thing, is making sure our people understand the purpose for why we're committing cognitive information warfare effects or cyber domain effects.

GREG NOVAK: I think I might be saying the same thing but in different language. My team from Space Command in the audience will recognise this. Jimmy, I think it's a great question. It might even tie to some of the workforce discussions tomorrow. But I think organisationally, as a domain, absolutely every opportunity you can to carve out simplicity, and once they know what the job is, not only are they doing it, but are also able to directly trace it back to the mission. "I've gone to work, gone to the bays, logged on, done this and that, I can see how that contributes to the mission." I think that builds on and supports what General Duncan was saying. That is what we're focused on in Space Command at the moment.

ANA DUNCAN: He said it better!

HARVEY REYNOLDS: The moral sort of aspect to capability, I think is really critical. But I think a lot of it is in train in the Defence College and some of the uplift of the PME, those military ethics education gaps. But I would pick two things, but if I had to pick one, it would be education and training. I think the other one is I would say to the junior leaders I work with is delegate well beyond your comfort zone. Delegate aggressively. Delegate things that would scare you to delegate, but have support networks around those people. You will push them beyond their comfort zone but they'll be better leaders. If they encounter moral hazard, you need a way to support that leader. But by exposing people to controlled risk as leaders, with that education framework supporting them, and the support structures that we have in Defence, they will - by the time they progress to the more consequential leadership positions, although there's no such thing as an inconsequential leadership position, but the senior ones, they will well-stepped in how to deal with moral dilemmas and military ethics will become far more normalised. I do think we've had a gap in how we've focused the

ethical training in compliance ethics rather than the war-fighting ethics, which is stepping up and now improving.

CHRIS SMITH: I think I'm saved by the bell!

HANNAH JUDE-SMITH: I will take my cue from my esteemed colleague! I want to thank all our panelists today for really committing to answering so many questions across readiness, resilience, force-generating in your domains. I think that last question is actually a really great segue into our panel tomorrow, which is going to look into what is obviously fundamental to resilience and readiness, is our workforce as well. So, please join me in thanking our panelists today. (APPLAUSE)