

CHIEF OF AIR FORCE
SYMPOSIUM 2023



**AIR AND SPACE
POWER CENTRE**

Air Commodore Michael Durant, Master of Ceremonies

Ladies and gentlemen. Ladies and gentlemen, if you could please start to move in and take your seats, that would be appreciated, thank you.

Excuse me, ladies and gentlemen. Could I please ask you to take your seats so we can commence the session? Thank you.

Welcome back and I hope you all enjoyed your morning tea. Welcome to the first panel discussion for today. Which will be Boosting Capability Development and Delivery. Dealing with our complex threat environment, requires a fresh approach to understanding how to best employ the capability we have and develop the capability that we need. Our first panel discussion engages directly with the practical issue of how to increase and enhance capability development and ensure that we deliver what is needed when we need it.

Moderating the discussion will be Group Captain Michael Burgess-Orton, Director of the Jericho Disruptive Innovation program. We are very proud of our Air Force Jericho program which has been in place now for a number of years. And has enabled us to operate in a way that encourages the removal of barriers.

Jericho Disruptive Innovation brings together people and projects across defence domains to engage with technological innovators in Australian industry and academia. It is therefore fitting that we have an eminent panel of defence capability leaders to open up our discussion on defence capability.

To introduce our panelists and chair the session, I now pass you to Group Captain Burgess-Orton.

Michael, the floor is yours.



Group Captain Michael Burgess-Orton, Panel Moderator

Thank you sir.

Ladies and gentlemen, it is my privilege to introduce a distinguished panel.

Mr Chris Deeble CSC, AO, is the Deputy Secretary of Capability Acquisition and Sustainment Group in the Department of Defence. He has extensive experience spanning the Defence, industry and commercial sectors, working with government and he has served the first part of his career, 37 years in the Australian Defence Force and his most recent appointment as Chief Executive Northrop Grumman Australia and previously Air Services Australia. He is highly experienced to be on the panel.

Thank you for joining us.

Our second panel member is Air Vice-Marshal Wendy Blyth AM. She is the head of the Air Force Capability and has a background in delivering complex capital acquisitions and sustaining major capability programs. In her previous role as Director General Air Capability Enablers, she was the Capability Sponsor for Air Mobility fleet, pilot and mission crew training, air traffic control management, Airbases, Air Force Security, Cyber Warfare, Networks, Woomera and Jericho. A lot of experience Ma'am, in capability development and delivery.

Our third speaker is Air Vice-Marshal Leon Phillips OAM. He is the head of Aerospace Systems Division in the Capability Acquisition and Sustainment Group. As an engineer and project manager, AVM Phillips has over 30 years of experience in the Royal Australian Air Force and Defence in delivering highly complex aerospace projects and managing their service support. He has served a variety of strategic level appointments and as Director General Aerospace, Surveillance and Response, he led the acquisition and sustain programs for a multitude of Air Force Capabilities.

Our final speaker is Major General Andrew Bottrell CSC and Bar, DSM. In 2018, he assumed the role of Head of Land Systems Division and the Head of the Land Domain in the Capability Acquisition and Sustainment Group. His key appointments being Director of Logistics Army, Chief of Staff Army Headquarters and the Commander of the 17th Sustainment Brigade. He is also notably completed two secondments to industry with Lockheed Martin UK, Boeing Commercial Airlines US.

Ladies and gentlemen, we have a distinguished panel so without further ado, I invite the panel members to speak.



Mr Chris Deeble, CSC, AO

It is indeed my pleasure to be here with you today and I would like to congratulate Chief of Air Force for another great agenda for the symposium. I would also like to pay my respects to the Traditional Owners of the land on which we meet today, the Wurundjeri people of the Kulin Nation and pay my respects to the Elders past, present and emerging.

It is indeed a great pleasure to be the Deputy Secretary of CASG. My experience, I've spent some 37 years in Air Force; some years in industry looking back in and it is important to use that experience. I have spent 23 years in the Canberra bubble so to speak and I have watched many white papers, I have been involved in many reforms to the CASG organisation. And I think it couldn't be a more exciting time to be actually heading up CASG as we look to the future.

My experience in running big programs is probably encapsulated in this particular slide, some of those have been projects of concern. Making a project work, making a program of effort work, is part and parcel of my experience. It is shaping where I am taking CASG.

Now this is our place map and for many nations this might seem modest in many regards but for Australia, what we are doing now and the number of projects that we're are taking on, the complexity of projects that we're are taking on, the way in which we are trying to engage with industry. The nature of our workforce is very, very complex as we are moving into an era, and as noted by the Deputy Prime Minister this morning, a very ambiguous era where the speed of the threat is of concern.

Where the speed of relevance to our Defence Forces needs to keep up with the speed of the threat and you'll hear me talk today about speed to capability and how CASG, Capability Acquisition and Sustainment Group will be required to be able to respond to those challenges. So this slide is just meant to indicate the number of project is increasing exponentially, the complexity of programs is increasing exponentially. Our workforce demands a real issue for us to be able to work through in the future and as we look to Australian industry, harnessing Australian industry innovation in a way that makes sense will be equally critical for us.

So, delivering on the outcomes, delivering on our promises, will mean we need to be able to respond at the speed of the threat. I'll talk about speed to capability and these are definitely very challenging but for me, very exciting times. Someone said to me, why on earth would you come back to be Deputy Secretary CASG? It really is my dream job, I'm here because I want to be here. Some people have questioned my sanity for doing that but it is an important role and it could not be more exciting time to be able to respond.

To understand where I'm taking CASG, I want to talk at my formula for success. Getting the strategy for programs up front right, is fundamental, doing that in the strategy phase, not waiting for that to evolve through the life-cycle of these capabilities is really important. Harnessing those strategic relationships and aligning them to the strategy, making sure that everybody has skin in the game is a fundamental for a successful program.

Right strategy, engaging all of the stakeholders are the foundational elements of successful programs. The next step is getting certainty around requirements in a more classical sense. But in a more agile and flexible sense, making sure you get outcome certainty is fundamental to successful programs.



AIR FORCE

If you can get those first three right, then how you actually tailor the approach becomes fundamental. And tailoring of the approach, if you want to move forward in a more flexible and more agile way at the speed of the threat will be fundamental.

If you get that right, that makes for an executable business case. You can now deliver on the outcomes that you want and harnessing that then means you get organisational support. If you get organisational support, you get organisational buy in to be able to deliver the programs.

So as I think about these programs of work we are taking on, these very complex and at scale projects that we have to take on, then the successful outcomes that are achieved by getting that holistic strategy, getting that collaboration and the relationships right between defence and industry, and I will talk more about that later.

So what are the foundations for success of CASG, I'm talking about CASG 2.0. Someone wanted me to talk about CASG 3.0 because they want to see more revolution than evolution of where we are – but CASG 2.0 is about right. And when I look at the elements that I have to be able to harness and working with my team here, it is setting CASG up for success. I talk about the life cycle, we have not played properly across the life-cycle.

As a delivery manager, we are fundamental to the execution of these programs and we have to play the strategy phase. That will set us up for that executable business case at the end of the day. So looking at the One Defence Capability system we worked on, the capability life-cycle that underpins that, my intention is that we will play as a delivery manager in a more significant role and setting CASG up for successful outcomes along the lines I previously described.

We must be organised for success in CASG. We have already moved out, I have been in the role for six months and we have established two new divisions and re-purpose in one. We are moving fast. I moved out three months ahead for the establishment of the air defence and space systems. We have established probably three months ahead of plan, a new guided weapons and delivery division.

We are establishing a strategy planning and independent assurance division within CASG so we are moving fast. In terms of changing the way we are organised.

But clearly our workforce is a critical part of that. We have got over 18,000 people supporting the business of CASG and for my counterpart in the naval shipbuilding area. It is a very diverse workforce made of Australian public servants, of ADF and of industry, sitting above the line, supporting us in the delivery of capability. And sitting below the line, supporting sustainment of our capabilities and the acquisition of those.

So getting this right, making sure we think about a total workforce, will be fundamental.



Speed to capability, I talk about that as being a critical element of how we think. We have to change the way we are thinking about delivering capability. In the future, you will hear me talking about capability as an independent variable – fixing costs, fixing schedule, looking at minimal viable capability at threshold levels. How we evolved that with the capability manager over time to be able to deliver an objective level of capability.

It will be a different mindset in the way in which we move, the aim is get capability to the field in three years not eight to ten, and for us to be able to integrate capability through not only the acquisition phase but through the whole life-cycle in sustainment to make sure we are delivering capability at the speed of relevance, countering the speed of the threat.

This will require us to take on a new risk appetite across government, across central agencies, across Defence and the way in which we do business. We are also looking at the way we do our normal contracting frameworks with the notion of cost consciousness being important, not only the cost of industry to respond but the cost to us to be able to deliver.

And lastly, is partnering with industry for success. The success of CASG is really in the way in which we work with industry, establish those ecosystems that are fundamental from primes to small to medium enterprises and engaging early in the life-cycle with industry to make sure they come on the journey, our strategies are aligned which means we can get more bang for buck and deliver capabilities to the war fighter much quicker than we otherwise would.

Lastly this is the way I think about innovation and how CASG will need to think more programmatically. The small wheel represents innovation and I know Michael sitting here, represents the Jericho program, you want to spin that fast. But if you look at it as a clock it doesn't have the mechanical advantage to drive the big wheel, it can burn out. And what that means is the innovation, much of it can be lost on the floor and not bought through capability.

The big wheel represents the longer term slower grinding things which are so fundamental. Setting up the architectures, setting up those future war fighting concepts that create the context for innovation and the ability to pull that innovation through more rapidly will become critical.

The legacy will always be there and how that is adapted to keep this clock running will be really important. I'll be working very closely with Professor Tanya Monro, heading up the DST organisation, the Australian Science Capability Accelerator Program to work out how we can actually bring innovation through to capability outcomes into the future.

So thank you very much, thank you for the opportunity of being here and I'm looking forward to the panel discussion.



Group Captain Michael Burgess-Orton, Panel Moderator

Thank you very much. Plenty of food for thought, and now Air Vice-Marshal Blyth.

Air Vice-Marshal Wendy Blyth, AM

Thank you, am I, am I on?

Okay so boosting capability delivery, it can't be simple or quick or easy, because if it was, we wouldn't be talking about it, we'd have already done it and possibly taken out of copyright but we are not there. So we need to think about what are the key factors that help us in boosting capability delivery?

If you look at the slide, you'll see in the top left hand corner, a Wirraway, it was built in Australia, first flight 1939, a U.S. design, built in Australia under a U.S. license. But that particular aircraft is the product of a coming together, a collaboration of three Australian companies to develop the Commonwealth Aircraft Company. Roll forward a few years, the same collaboration of industries has built the Sabre in Australia, transonic aircraft, also a U.S. design, built under licence in Australia but by that stage we had learnt a bit more, we got a bit trickier, we innovated and that aircraft built in Australia had twice the thrust of the original design.

Roll forward a few more years, the C-17, definitely not built in Australia, but a collaboration of a different context, so instead of having a single source of supply for sustainment on a global scale, all users of that capability work together to create efficiencies and sustainment so that it's affordable, effective and efficient, and, it is the workhorse of our air mobility fleet. And so for any of you out there that wish to let any of them go, please consider Australia as your next disposal agency because we would love a few more.

And of course the MQ28, so it's the first aircraft designed and built in Australia in over fifty years, it's a collaboration from the OEM, Boeing Defence Australia, in conjunction with defence and over forty small and medium enterprises in Australia. It shows innovation can be done if we give the opportunity to have a crack and that is particularly important because it releases the capacity of our people.

And I think if we are going to boost capability delivery in Australia, we have to leverage the opportunity that comes with our people. People innovate, people communicate, people develop design criteria, people organise themselves, people develop processes, people develop bad processes and fundamentally it's our people that are our biggest strengths and our biggest weakness in our we're going to move forward. People are the key and if we are going to unlock the collaboration potential that's with our people I think that is a nut we will have to collectively crack.

Group Captain Michael Burgess-Orton, Panel Moderator

Thanks very much Ma'am.



Air Vice-Marshal Leon Phillips, OAM

Hey, good morning everyone.

Certainly it's my pleasure to be here today to speak to all of you and offer you an Australian perspective on some of the challenges ahead of us in boosting capability, development and delivery and also really, what are the challenges and opportunities to expedite capability acquisition? I think that is a topic we could spend days and months and years on, if we made it a project we would spend even more time trying to solve that problem.

What I do want to start with is that all of us are here as air power professionals because our forebears embraced technology as a disruptor over the last decade. That they recognise the growth in science, the growth in technology and the growth in engineering; offered us an opportunity to work together across research organisations, industry, with engineers and the war fighter to see if we could create a competitive advantage beyond what we had traditionally done in the land and maritime domain.

We are all here today because we still have that ambition, we still have that ideology and we continue to strive to do that, to make sure that our war fighters have the best technology, ahead of our adversaries and we have great people who harness that technology and can exploit it for our competitive advantage.

Now this is not easy, and it's not quick, and in the Australian context I think about our E-7A Wedgetail, you know that project was conceived, largely as an E3 replacement, using some modern MESA technology, a six-year endeavour which ended up being 10 year project that Chris and I worked on together with many others to deliver a minimal viable product, but that's not where the journey finished and it wasn't a simple case of turning the keys and operating that capability.

Our aviation community spent 10 years taking that capability, learning how to exploit it, optimising it, and even taking advantage of what it delivered beyond what we imagined in the first place, pairing that, coupling that, with F-35s and Growlers to create potent capability in our air combat space.

You know, a 20 year journey that started with an acquisition division but ended up having to be exploited by war fighters. So I guess my key premise here is, it's great technology and great people that need to come together to deliver great air power capability. And it would be remiss of me not to use an analogy for those who know me, so, and for that I really I turned to Formula One, and appropriate reference given we are in the city hosting it, the Melbourne, - the, Australian Grand Prix.

I will say that Daniel Ricardo, the great Australian driver is not gonna win a Formula One race driving a Toyota Prius. So our role here is to give him the best technology. Conversely I'm never gonna win a Formula One driving a McLaren. Now for those who follow F1, some of you may suggest that Daniel Ricardo's not gonna win in a McLaren either, so that's a topic for tonight and other times. So as I turn to one of the challenges and opportunities, there's been a lot of public commentary around how effective our nations are and certainly Australia at delivering capability to the war fighter, often it's how do we accelerate it, how do we do it, why are projects so late, why are projects so slow?



AIR FORCE

And often this discussion turns downwards into our acquisition organisation and why aren't we doing better in that space, but I think that is too much of a simple excuse and a pointed, uh, a pointed criticism of an organisation, I think we need to step back before that and really think about what we are after in our acquisition organisation. In the same way our war fighters will talk about freedom of manoeuvre, in many ways in the material organisations our freedom of manoeuvre comes from the fiscal left and right of arc we are given to deliver capability.

So I don't want a constrained, narrow pathway where everything is on contract and I have no latitude to move, I need a left and right of arc to play with so I can respond to emerging needs rather than going back and appropriating money.

As we talk about that, I will talk a little bit about the Australian context for how we fund acquisitions. You know, in many ways, probably like many countries, we have the Big Bang approach to that. We spend 9-12 months in a community process trying to acquire all of our capability, all of our C-17s, or 14 F-35s, and then another fifty-four or fifty-six later, very much a Big Bang approach rather than perhaps an annual or biannual appropriation cycle.

What that means with these large-scale singular approaches to government, they tend to favour certainty rather than opportunity as we go to approve them. You know, where the focus becomes around how certain are you that you will deliver that scope to the war fighter? You know, how sure are you the cost are not gonna blow out? So invariably that pushes us back conservatively into sorta brochure buying, where the scope can't be provided or described in a con-ops or in a vision but is best described in a brochure from one of our defence manufacturers.

In the same way in a cost sense we tend not to want to give ourselves latitude and room to manoeuvre but again, as long as we can get a fixed price contract from some company we're kinda happy to take that to committee and move forward.

Now, I think in many ways that has served our Royal Australian Air Force well. You know, we do have for a modest nation a fairly impressive range of capabilities. You know, things like our C-17 aircraft, Super Hornets, Growlers, you know, we've had more collaborative and cooperative programs for P8 and the joint strike fighter and in many ways we've done well.

In all of those programs, we kinda have a certainty and what we're after and in approving them, the latitude I have is 10-15% cost contingency, not a lot of room to manoeuvre. And I kind of wonder as we move forward, is that the right approach to take? Is that the cookie-cutter and is that how we should do everything?

So when I look for instance, at the 2024 structure program, I start to look at what is our investment moving forward?

And so in the air domain, you know, we are slated to spend and invest \$65 billion in continuing to evolve our airpower capabilities. And again, are all of those going to be off-the-shelf? Is that the right approach? Is that what we need to do? Does it support our Chief of Air Force's idea that we need to augment and surge? Do we have the latitude to do that?



And when I look at the challenges ahead of us, look at space and certainly when I look at integrated air and missile defence and I look at the development of the MQ-28A Ghost Bat, am I really going to get a fixed price contract? Am I going to have certainty in what that's gonna do? Or am I spending all my time running back to committees to get another \$10 million to keep that program moving and potentially being distracted from delivering it in the first place.

So then I turn to, what would be a better way to think about how we might acquire our technology and how I might have the financial latitude to go after some of our high risk technologies for high opportunities. So I draw parallels with things like personal investment, you know, as you think about your personal investment strategies, does all your money go in the bank? Does it all sit in bonds or does some of that end up being higher risk strategies leading to a higher return?

When I look at industry sectors, you know, is it just about producing and selling, how much of their money get set aside for research and development? And what do they do? If I look at pharmaceutical and software industries, you know, 13-15% goes into R&D, should we do that without \$65 million, should we be more adventurous with some of that?

When I look at companies like Samsung who've openly said they invest over 9% of turnover in R&D and the Boeing Company will say they spend 4%. And the general norm across aerospace companies, it's around the 4-6%. So with that mindset, as I look at our defence investment, should we be taking let's say 5% of the integrated inv-intergrated investment program and just calling it high risk? Sh-Should we be acknowledging that is high risk and those projects, rather than trying to fit them into a 10-15% contingency paradigm and a scope like this, why are we not targeting them to be more adventurous?

Why don't we say they are high risk and why don't we through our committee systems, do not look at them in isolation but look at them in the totality of the investment we are putting in the air domain? I wonder if that approach and a more systematic view might lead my organisation to better partner with industry, to accelerate some of those acquisitions with a license to innovate, the funding to do so, and the support and championing from the executives – myself included.

Now, I did say early on in my speech that wasn't solely about the acquisition organisation b-but absolutely, we need to do more in that space. If we have a framework that allows that high risk investment leading to high return, you know, then my organisation and I need to put our best people, our innovators, those who partner with companies, we need to put them on those projects, right.

We need to create a commercial environment that encourages success rather than, than it gets bogged down in the legalese and contracts. You know, we need to partner with the war fighters, we need those that have a vision for what the future might be rather than obsessing over the TTPs and whether it is perfect today.

And so in concluding my commentary today, it is always about great technology and great war fighters and I do wonder in an Australian context with the challenge we have, whether we might not give our acquisition organisations some latitude in a reasonably risk balanced portfolio to go after some of our high risk programs like MQ-28A Ghost Bat with financial freedom, and the organisational license to deliver those as effectively as we can.

Thank you.



AIR FORCE

Group Captain Michael Burgess-Orton, Panel Moderator

Thank you very much sir. Major General Bottrell.

Major General Bottrell, CSC and Bar, DSM

Yeahs sure, can I have the um

Alright uh, ladies and gents, great to be here. It is unusual for a middle-aged white guy to be the diversity ticket on the panel but here I am, it is nice to be here, Chief of Air Force thanks very much for the invitation.

And can I just say for the record, I am a huge fan of our Air Force, having been responsible for the drawdown of our forces in Afghanistan in 2013. We could not have done it without the RAAF so hats off to you.

Leaders and gents, what I'm going to discuss this morning is a small but unique element within the Land Domain of CASG which is what we call Diggerworks. If you have deployed with the ADF on operations over the last decade, chances are, in fact very high chances are that the equipment you deployed with has in some way, shape or form, been evolved or developed by, by the team at Diggerworks.

And I'd ask you that we're gonna focus on a couple of those this morning, I'd ask you to think about, just following on from Leon's comments, watch the role of leadership in setting up the environment for innovation to actually take. You know, we can all blame process but creating the environment and supporting people to innovate and to giving them the freedom to be able to utilise the flexibility within existing processes, I think is a large part of it as well.

Alright, so the Land Domain, like much of, of CASG is about acquiring and sustaining integrated land material in this case but for the soldier, sailor and aviator, they are at the heart of just about every single decision we take. And the tri-service APS and contractor team within Diggerworks really is the peak of that collaborative effort within the Land Domain. Diggerworks was born out of the realisation that the lived experience of our soldiers, sailors and aviators and the hard-won lessons from operations were critical to evolving our combat equipment.

It was modelled on the US Marine Corp's Gruntworks, and it had an initial remit of engaging and identifying and resolving material issues found in the field of operations.

Prior to this, I think it's pretty safe to say that we had a, a fairly arrogant approach to capability delivery. It was top-down and it was largely shaped by thinkers within Canberra and with industry feeding into much of that as well.

It was through this approach that we effectively, by, by the end of 2010, we had effectively recreated the modern knight. And I will show you this evolution of our soldier combat ensemble. So this is one of the systems we will focus on.



You can see up there, up to 28, we created what was called the MCBAS, Modified Combined Body Armour System, some of the best ballistic protection in the world but effectively, by the, by the end of 2010, we had created a knight less a horse, they could not move.

We had forgotten the individual manoeuvre and mobility was a key element of protection. So, and in fact Major General Jason Blain who was the first director of Diggerworks, he is in the crowd today as well, he was in operations at the time as one of our pretty influential senior officers who fed this detail back and I remember sitting in a meeting, I was in Canberra, we had Afghanistan online. And the issues we were talking about, with our soldiers who could not bear the weight of what we had created.

And we had forgotten, and we had, we hadn't learnt those lessons. So Diggerworks started in 2011 and you can see the development of our soldier combat ensemble through the following years starting with the tiered body armour, tiered body armour system through to 2023 where we are now and the fielding of the soldier combat ensemble 19 and that will continue to evolve from those lessons. And we regularly now engage with all soldiers, sailors and aviators and invite them to be able to bring those lessons back, including pushing our teams onto exercises and operations to be able to pick their brains and what does and doesn't work.

So Diggerworks was born, we have a, we have our formal MOU with the three services, and with our Defence Science and Technology Group, we keep their remit fairly loose. While they do have a range of responsibilities, we keep the remit fairly loose and try to engender in them a spirit of innovation to be able to get out to talk to industry, to talk to soldiers, sailors, aviators, to talk to adjacent enterprises.

So we've got a collaboration with the Australian Rules Football Association, who have been instrumental in helping us through particularly the injuries that women are suffering on the football field and how we can, how we can mitigate those and how we can bring those issues into Diggerworks as well. We also have arrangements with both Tommyworks in the UK and with Gruntworks in the US.

So one of the other bodies of work, and I'm really proud of this one, I came back from a Chief of Army Senior Advisory Committee one day and I said to the team, how can we contribute to our woman being able to perform better on operations? And had a conversation and finally said, OK, go back to basics – stop trying to adapt generic, read male, equipment for women. And the current Deputy Chief of Army, Natasha Fox, I can hear her in my ear now, because women have been complaining about our equipment for years and we have not been listening.

We set up their environment, they went back to zero, look at physiology, talk to organisations, went back to basics and brought women from all three services together. Started what was initially called the Women in Combat Program. You can see there on the slide, some of the elements that have been rolled out, simple things like a H-back harness to allow a woman with a hair bun to wear a proper helmet and wear it properly so that they can perform in operations.

Same with size of helmets and the size of our webbing harness and the belt system. Being able to change those and also being able to adapt and develop a specific alternate uniform that actually fits women. We then realise the next step from that is that it is not just about what women need on operations but looking at the ends of the bell curves – those particular tall, short, different shaped people in the different capabilities.

Same, same, with size of helmets and the size of our webbing harness and the belt system. Being able to change those and then also being able to adapt and develop a specific alternate fit uniform that actually fits women. We then realise the next step from that is that it is not just about what women need on operations but looking at the ends of the bell curves – those particularly tall, short, different shaped people need different capabilities.

It evolved from the Women in Combat Program to the Fit to Perform Program. Delivering a whole range of solutions and as you can see there. Some of the others have been delivered here as well, new large field pack, different combat boots, hygiene system for women. A simple thing called a she-wee, phenomenal piece of equipment that women when they come back from the field, they will tell you, some of the best piece of kit they've ever seen.

Cool weather sleeping bag, a four foot, five foot something human does not need to carry a sleeping bag for a six and a half foot person. So think about the space they save. So Diggerworks has been given a remit, they take advantage of every day, they get out, they talk to people, invite people in, it becomes a virtuous cycle of how they do that.

What we have done is paralleled that with some fairly deft commercial planning to be able to take prototypes and ideas and to be able to deliver them through an industry delivered solution much quicker than we would through a normal, straight open approach to market.

So, much of this is driven by specific operational requirements but we press, push the boundaries on that during day-to-day activities as well to look at, how can we continue to deliver capability in, on day-to-day operations? Some of the other systems we are delivering for the other services as well, female flying suits will be available from Q3 2022, we're involved in capturing the digital data in support of the trial with CLOSP0. The GPU Air Force alternate fit uniform, Q4 at 2022 was the decision. So looking forward to fielding that in the not-too-distant future.

Female field device, already talked about that. Team Wendy size zero helmet and the retention system and the Danner Prowess boots. Just a few other ideas that the team has got.

Look, I'm really proud of the team at Diggerworks but we do not crowd them, and uh they find a way through the gaps, we encourage them. There is risk involved but the risk is absolutely worth taking. I have to bear some of that risk at my level and I put some of that risk back to Canberra, I just hope we will have our backs when we need them to.

Uh ladies and gents, that's all I really want to talk about, I would encourage you if you are out at Avalon the next couple of days to visit Diggerworks team. Colonel Sarah Craig, who's here in the audience as well, will be out there, she is a ball of energy and uh you will learn a lot by spending five minutes talking to her.

Thanks very much.



Group Captain Michael Burgess-Orton, Panel Moderator

Great, great, well ladies and gentlemen, there is plenty of food for thought. We're now into the question time for our panel members with such a range of information that has been provided.

Hopefully you have got a few curly questions.

In the audience today we do have two roving microphones that, so if you do have a question, please raise your hand and a microphone will come to you. To uh any first takers?

We have got one over there. Here we go.

One question down the back. If you would just like to raise your hand, we will come to the next speaker with the microphone and we do have questions online as well so if you want to put questions into the EventsAir app, we'll be able to see them and raise them with the panel members.

Over to you, sir.

Question From The Floor

Uh, I'm Alex Bristow, from the Australian Strategic Policy Institute uh or ASPI. Umm, My question was about urgency, the early speakers were talking about the limited time frame we have to shape and deter, in our strat-, increasingly complex strategic environment.

Many of the solutions that we are putting forward today seem to be ones still relevant to platforms that would take years or decades to develop. What can we do in the next three to five years?

Group Captain Michael Burgess-Orton, Panel Moderator

Sir, over to you.

Mr Chris Deeble, CSC, AO

Well I think, I think the urgency is the serious part of the equation. I talk about speed to capability, things can't change overnight. You know, so we are going to have to be very measured in the way we do business. I talk about that in terms of managed urgency within the CASG environment as we look to change the way in which we do business.

And underpinning that most critically is the culture, that underpins that, both internal to CASG, within defence and working with industry. I think all of the other three speakers talked about, you know, what's required in terms of that culture. The willingness to think about risk differently, to have a different risk appetite, to be able to provide the opportunity, you know, for individuals to start to think about and do business very differently.



I often think about technology and some of the discussion was specifically about technology. Technology in an innovative way and getting people to think differently is actually the catalyst. I see, I use the word catalyst more specifically, because a catalyst is not spent in the reaction it actually speeds up the other components of that reaction, you know, to, to come up with a different way of doing business.

Managed urgency though, you know, will have to deliver capability within the next three years. For me, within the CASG environment, the big programs of work that this will need to be applied to with managed urgency will be integrated air and missile defence, and with space. This is where the notion of continuous capability development will need to be in there.

Because we need to have that capability fielded in the next three years. So my focus is on those two specific areas. To actually make sure we can respond with capability outcomes for the war fighter within the next three years.

I'll throw it open to other panel members.

Air Vice-Marshal Wendy Blyth, AM

I'll uh, I'll respond to the elephant in the room. The Defence Strategic Review will give us some pretty clear direction as to what it is we need to progress and potentially what it is we need to stop. I'll declare upfront, I am not currently exposed to what is in that review. It will take a change in the way in which we do our business, I have no doubt that as I said before, people will be the key. It will be hard for us to do some of those changes and we will need to find ways to deliver capability quicker than we ever have before.

Because fundamentally this is about risk. The reason we have the Defence Strategic Review is because a risk has been identified and our treatment and acceptance and understanding of the risks associated with the way we deliver capability into the future will be an important part of that collective response. I don't yet know what that looks like and I can't talk to it, but I have no doubt we will need to do things quicker and find new ways to help our people understand the urgency and deliver differently.

Air Vice-Marshal Leon Phillips, OAM

Yeah 3 to 5 years, that's a, a, great question. I think when I made my comments, I mentioned Wedgetail, I think the reality is, highly sophisticated, complex, capability and volume is difficult to deliver in 3-5 years. I mean, I think if we see what's happening in Ukraine, I think Western nations are trying to look at their um, speeding up their replenishment cycles for munitions, the reality is sort of high tech munitions, you know, you can't just click the fingers and they come tomorrow. I guess you're are building up an industry base and, you know, you're building up and expanding on your supply base and then you're actually building up your workforce to get after those things.



They are not easy to scale quickly. As I talk to my team and we talk about this issue of the DSR, what we can do in the next 3-5 years, I think the reality is the best DSR decisions the Air Force made was to buy F-35s some years ago, to buy Growlers some years ago, to knowing Triton is coming sort of next year because we've made that buying decision, to have tankers, to have strategic airlift; I think that's the best DSR decisions we've made.

Can we do more? I think our resilience and depth is absolutely something we can focus on more in the short term. Base resiliency, there's been public commentary around that, weapons stockpiling and I, I think we probably need to do more modelling around our logistics footprint and extending it. So I think they're probably the practical things we would look to get after to expand upon some of the great capabilities we have while we then think of the capabilities we are trying to get into service five years or 10 years after that.

Major General Bottrell, CSC and Bar, DSM

I mean, I uh, already mentioned there is some flexibility in our existing process but I'm mean I'm hoping there'll be more impetus to, to, to generate more flexibility in our existing process. You know, looking at things like the US middle tier acquisition process, some of the benefits that, that allows us to do, so it leverages some of the Diggerworks model but to a much, much larger scale, being able to go essentially straight from prototyping as it helps to refine requirements into contract.

Making more decisions up front. The decisions upfront that will circumvent time. Yes, they come with risk and industry typically doesn't like when they don't have an ability to be able to compete.

But we've got to be real about how important is the schedule. So I think, I think they are key. I can think of, you know, I was up until December, Head Guided Weapons and Explosive Ordnance as well, Gerry Van Leeuwen who's here, is now carrying that. In my mind there are some real things we can do in 3-5 years, large calibre munitions for example, depends on what the DSR says. There are some clear things that we can do within our industrial base right now.

Group Captain Michael Burgess-Orton, Panel Moderator

Thank you very much.



Mr Chris Deeble, CSC, AO

Can I just add one more point.

It's easy for us to talk about acquisition, we're actually talking about the whole life-cycle. You know, the sustainment, optimised it like many countries, optimise sustainment for efficiency. And as we're looking at preparedness, as we're looking at mobilisation, we need to think differently. I think the Chief said it in his speech this morning, and Admiral Nimitz was the quote about you fight with what you've got. We've got to do more about maintenance, repair, overhaul and upgrade in country. We have to think about Australian industry differently in that context to be able to do that. So it's easy to get drawn into acquiring new pieces of kit, it must, whatever we acquire must be integrated not federated as we're moving forward and we've got to think about the whole life-cycle now and think about what it means to innovate in sustainment. I think that's a critical element.

Group Captain Michael Burgess-Orton, Panel Moderator

Great.

Thank you, we're, we're going to go to a question online, from Luke Webb.

What are some of the key challenges in delivering and ensuring capability readiness? What are the practical initiatives that industry, academia and the broader policy community, what can they do to boost readiness?

Might start with Major General Bottrell.

Major General Bottrell, CSC and Bar, DSM

Right, uhh, okay, thanks.

Look, I think, I think it does demand greater willingness at the centre for us to, to be able to push the boundaries. Air Force has done a great job with Ghost Bat, I think that was a collaboration that sort of, demonstrated what can be done. More of that, more engagement upfront with industry on ideas but a greater willingness to be able to back ideas from, from the beginning rather than going for a long, you know, our current process as Chris said, very optimised for efficiency. It is quite efficiency

Our number of failures in acquisition has reduced markedly since the One Defence Capability System was brought in, but it is, takes too much time. That's the, that's the key issue, so I think exploiting advantages and trying to adjust that, would be my idea.



Air Vice-Marshal Leon Phillips, OAM

Yeah actually, I'm glad that Chris mentioned a point on sustainment as well, but, but I do think too often we focus on acquisitions and the complexity of the technology and I don't think we give enough credence to the complexities of establishing effective logistics solutions. You know, when I look at recent experience within our force, our Air Force and within CASG, you know, we bought 10 C-27Js, we bring them into service and, you know, we struggled to get more than two serviceable but through diligence, through dedication, through good partnership with our industry partners, and with the war fighters, we have lifted that to sort of 5 or 5.5 with plans to get 6/10. I think similarly we've seen that on our Hornet introduction and I think we'll see the same on our Joint Strike Fighter. And as I keep saying, It's not really how many aircraft you buy that's important, it's how many you make serviceable. You can only deploy serviceable aircraft, so, and as I say, I know that JSF folks will love me saying this again, the best extra, extra air vehicle I can buy is one I already own that I make serviceable.

So, so, my passion, my mission and my team, we are here to partner with industry to maximise the availability within the resources we have to offer the Chief and our Air Commander, you know, all those options available to them.

Group Captain Michael Burgess-Orton, Panel Moderator

Great, thanks very much, Ma'am?

Air Vice-Marshal Wendy Blyth, AM

I think there are two parts to this question. So, what, what can we do to make sure we have the right capability readiness? Well firstly, we actually need to understand to be ready to do what? We are ready to do a lot of things and we're really good at it, but perhaps we need to prioritise what some of that readiness is, and that's not easy for us, because we do like to be a jack of all trades and that's gonna be a bit hard for some of us in terms of what it is that we like to do versus what it is that we're going to need to do.

So, we need to be clear eyed about what it is government expects of us in the first instance. And in the second, what practical initiatives can industry and academia and the broader policy community do to boost readiness? Well I think, first, it's understand we are going in a specific direction and that we need to act. Where can they identify impediments, that need treatment, where can they offer opportunities?

I talked earlier about, the need to maximise the opportunity associated with our people, the harsh reality is we don't have enough. So how do we, how do we train an industry base, how do we attract the right kinds of people and importantly, how do we retain the ones we already have? Because they're the best investment we've already made. So how do we maximise those opportunities, and we have to do that in a collaborative environment. We are inherently reliant on the opportunities that come through industry and through academia to realise our fullest potential, we can't do it in isolation.



So what can we do? The question I would ask, is what should we do? What would you recommend of us? What would you recommend could be taken on from an industry academic perspective that we don't yet realise we should be asking you for? Sometimes it's not ignorance on our part, sometimes we just didn't know you were ready for the question.

Mr Chris Deeble, CSC, AO

And I think lastly, there's a couple of things that are really important to me, I spent time in industry as well as many, many, many years in Defence. The first one that's important with industry and academia is the alignment of values. If the, if the two organisations or organisations working together don't have that alignment in values, then you will never get there. And what I've seen across the industry base in Australia and the way we are working with, you know, international primes or otherwise is that alignment in values is the precursor to a successful outcome, it creates trust and respect, which any path forward must achieve.

I talked before of CASG 2.0. CASG 2.0 has to dovetail exactly with industry 4.0. The way in which we do business needs to be much more efficient and effective and if I look at industry 4.0, the Digital Transformations that underpins that, that's what I want to be able to leverage in CASG so we can do things much more efficiently and much more effectively.

And the last thing goes to that point I made, my model for success. The key underpinnings there is alignment strategically, not at the point that you deliver an RFT or an RFP, you know, to industry to deliver something from the get go. In Australia, you know, we have gate 0, that's the strategy phase. And the alignment of the strategic alignment between industry and Defence becomes fundamental.

Because if you get that alignment from the get go, you get more than the sum of the individual parts. The investments made by industry and the investments by defence can deliver different outcomes. So getting the values alignment, ensuring trust and respect is fundamental to being able to do business differently. Aligning the way we do business, CASG 2.0 dovetailing exactly with industry 4.0, and then most importantly, engaging throughout the capability lifecycle, getting the strategy right and aligning that through acquisition into sustainment is critical.

Group Captain Michael Burgess-Orton, Panel Moderator

Great, thank you very much. Are there any questions in the room? Just put your- I've got a hand up over on the right hand side, I'll come to you. Please can we bring a microphone over to that gentlemen please.

Question From The Floor

Colin Clark from Breaking Defence. A tremendous amount of discussion about sovereignty and how it's going to be factored into Australian procurement. How do you measure this? How do you weigh sovereignty? How do you tie that into practical decisions about parts and what you can import and what you can't?



Major General Bottrell, CSC and Bar, DSM

Um well look, I'll have a go, uh the uh, it's a much debated discussion. In my mind sovereignty is about our ability to be able to, to make a choice, to be able to, to execute, to be able to pull a lever and know when we make a decision, when we want to apply any intent that we have the influence over that expanse, that capability, to be able to achieve what we need.

Where as to beholden to supply chains or someone else's ownership model, or some other decision, then there are implications and not every, not every consideration of sovereignty is the same for every capability. So what are the things that are most important and what things do we need to have choice and influence over that's in the boundaries of how we approach sovereignty.

There is a, from a military logistician's perspective there is absolute virtue in establishing capability in Australia for the sustainment of capability into the future. So when I think about, in the land environment, we've got a Rheinmetall MILVEHCOE, a military vehicle centre of excellence in south east Queensland, Hanwha establishing for the building the self-propelled howitzers down at Geelong, we've got Talus out at Bendigo. Those three centres are strategic assets for Defence because we can not only introduce the capability but sustain and evolve them, that goes to the core of what sovereignty is because we have choice and ability to be able to influence in the future.

Air Vice-Marshal Leon Phillips, OAM

The only other comment I'll make on sovereignty, it is a vexing issue, particularly when you're getting into highly complex capability. You know, Australia has benefited from partnering with other nations, Joint Strike Fighter as an example and with the US to get economies of scale. It is always a vexing scale – our dollar goes so much further but do we want to build everything in this country? Probably not.

So when I think about sovereignty, the first thing I think about really more resiliency. You know, really, are we giving the Chief and the Air Commander, enough bandwidth and time so he can make decisions to manoeuvre with? So when I think sovereignty, I think field holdings, I think spares, think having a deeper maintenance capability that can search and leaning into operational maintenance so we can expand what we've got.

But the reality is, we are probably not going to build an engine for an F-35 or a Hornet in this country but we might hold the parts and the capability to do a level of repair for that. But I think ultimately in a protracted campaign, you start to get the point where you are mobilising your industrial base and that of the coalition.

But in the first instance, I think sovereignty is about making sure you can have at it for a while before... While in parallel, you ramp those things up.



Mr Chris Deeble, CSC, AO

I think lastly and noting the time, I'll need to make a couple of comments quickly about this. And I think Leon sums it up, it is a vexing problem. When I talked before about alignment with industry, starting in that strategy phase, that's critical. That's where you are making decisions about what the research and development is, what innovation is, what the Australian industry capabilities that are required. We're not doing that well at this point in time and that is my focus, making sure you get that alignment up front.

We are about delivering capability at the end of the day. It is about ensuring that our war fighters get that world-class capability. There will be and as many in this room are aware, a new defence industrial development strategy. I expect that that will guide us in terms of what sovereignty should look like from an industrial perspective. It will state our priorities and the way in which that needs to be done.

And that will be a critical driver for how we think about it. But I don't think we have thought about resilience enough. I'm not sure we have had the discussion around what truly must be sovereign and we talked before about many things like maintenance repair overhaul and upgrade – what does that mean for Australia? How do we work with our allies, how do we think about the a regional context? What does that mean from a forced posture perspective?

But indeed, it has been a great pleasure for I think all of us to be here today and to be able to talk. We'll be in the crowd and look forward to the opportunity to talk to you over the coming days. Thank you.

Air Commodore Michael Durant, Master of Ceremonies

Ladies and gentlemen, a fantastic discussion from our panelists. I'd just like to paraphrase briefly some of the key takeaways from these astute capability leaders that we've heard about. The criticality of speed to capability, that our ability to be innovative is found in the confidence to have a go, something we are doing for the first time in over fifty years with the MQ-28 Ghost Bat. Innovation to support air power has synergies in the other domains and by working in a joint sense to be truly innovative, we can think broader than stove piping in domains. These are, there are synergies and lessons in capability innovation that we can share in the join force.

And finally, boosting capability delivery, it's complex, it's not quick, not easy, if it was, we would've done it by now. But with great technology and great people working together, we can deliver great power through innovative technology. Please join me in thanking this eminent panel and Group Captain Michael Burgess-Orton.

Ladies and gents, that brings us to lunch. There will be two lunch sessions held today, the first for the broader auditorium will be in the same room that you had morning tea but there is also a service Chiefs luncheon and if the service chiefs could proceed at the back doors, to the right, you will be directed to your lunch which is in a room towards the back of the building.

We will be rejoining in here at 1:15 PM, the same bell system is in play. If I could have you all seated by 1:15 PM. That would be greatly appreciated, enjoy your lunch and thank you.

