Chief of Navy Address to Williams Foundation Seminar

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National Gallery of Australia

Integration design requirements for Navy's future systems and ships

Members of the Board of The Williams Foundation, friends and partners from industry, fellow Service personnel and Defence colleagues, ladies and gentlemen.

I have been asked to speak about *Plan Pelorus*—as well as the integration requirements of our future platforms and systems.

As I look out I can sense that you're eager to hear what I have to say. But let me be honest. I will not be discussing what is in the buyers' guide for Navy. All you need to know is that we need to get on and cut steel for ships and submarines sooner rather than later. I can't recall a Chief of Navy who has ever had this luxury.

So my aim today is to really get you behind this endeavour, because it's not just a navy endeavour, it's a Defence endeavour…it's a national endeavour. I want you to understand how Navy, as part of a Joint Task Group or Combined force, must evolve if we are to build the 2016 Defence White Paper right force that's fit for the right purpose.

By this, I mean how the future Navy fleet—which is actually a complex system—will work systematically as a Joint Force—alongside our Air Force, Army, Defence and other government entities to achieve, or contribute to, the dominance we require in the future maritime domain.

Plan Jericho

These are important times and I have closely followed the development of *Plan Jericho* and watched it quickly evolve. I believe Air Force is certainly on the right track to prepare for an increasingly sophisticated operating environment.

You will not be surprised, therefore, to learn that Navy is also working towards becoming a more agile, integrated networked and potent force.

Plan Pelorus

Last year I launched *Plan Pelorus*, which is Navy's strategy to prepare for a very complex future strategic environment. If Air Force's plan evokes images of 'walls tumbling down', Navy's plan evokes an historical navigation instrument which, for those who enjoy a bit of trivia, was named after the navigator who got Hannibal across the Strait of Messina and towards his destiny.

In the 21st Century Pelorus will aid in navigating the RAN towards its destiny.

Pelorus acknowledges the changing character of global affairs, and recognises the need for us to set a heading for a fifth generation Navy and beyond. It recognises the need for a force capable of generating and deploying self-supporting and sustainable maritime and joint task groups.

This should sound familiar.

Like Jericho, *Pelorus* demands innovation at all levels of our organisation and recognises the need for technologically advanced naval systems to combine in the modern fleet system and integrate *seamlessly* across the joint and networked environment.

But I hesitate to add. That is not the endstate. Its what you do with this network that is important.

Importantly, *Pelorus* is not focused on individual ships, submarines or airframes. It recognises that our platforms need to operate as a system—indeed as a system of systems.

A task-group oriented Navy

So why are we transitioning to a task-group oriented Navy, and what will it look like?

While individual ships can meet many of the Australian Government's requirements, a task-group oriented Navy provides Government with options: *significant* and necessary options to meet the full spectrum of threats that may challenge us in the maritime environment and to enable government to implement Australia's strategic policies..

In reality, the Navy is—as it has always been—task-group oriented.

As recently as 2003, we were deploying two and three-ship task groups to the Middle East as part of Operations SLIPPER, FALCONER and DAMASK, and task group mentality dominated our operational and doctrinal culture.

However, we must look forward and now recognise that the nature of 21st Century task group operations has changed markedly from what they were a little over a decade ago.

This new reality has been mostly brought about because of the changing threats and the change in Navy capabilities and operational concepts.

Task group operations are aimed at maximising capability, reducing risk and achieving operational success.

It's about building a powerful and influential force that can pack a real punch.

Importantly, it enables the concept of "distributed lethality" to be woven into our design and enable interoperability with our US Ally.

Distributed lethality is about maximising the adversary's vulnerability, while reducing ours. It's no longer about concentrating effort as a close-knit force. Its now about complicating the adversary's picture by distributing our capability across a much broader medium.

The upshot is that our ability to deliver lethal effect is distributed across the platforms, which operate together in a system. This also means, since one platform can defend another, that our risk is managed and distributed across the task group—ultimately providing greater resilience.

The recent public release of information regarding the USN's development of Naval Integrated Fire Control – Counter Air (NIFC-CA) system gave an insight to what may be possible when a specific system is successfully integrated within a Task Group.

Using existing sensors, networks and combat management systems, together with a new generation of more capable weapons, NIFC-CA rebalances the battlespace between our maritime force and the adversary's aircraft and weapon systems.

While we are not likely to achieve distributed lethality in exactly the same manner as the USN, it serves as an example of what can be achieved—particularly when we consider the commonality of systems and operational objectives we share with the USN and USAF.

But we do need to know how we will fit into ADF joint and allied operational constructs, and to incorporate these requirements into our force design at the drawing board.

Interoperability

At the Air Power Conference earlier this year, I spoke about Navy's approach to integrated multi-domain operations—and the challenges of maintaining Australia's technology edge and capability superiority over potential adversaries.

If we are to maintain our technological edge and capability superiority—as was well defined in the White Paper—then we need to ensure we are not just thinking and theorising about multi-domain operations.

We need to turn it into reality by enabling our technological edge at the capability planning, operational and doctrinal levels.

The complexity of modern C4ISR systems and maritime weapons means we must acknowledge our interoperability requirements at the drawing board. We must, therefore, acknowledge the interdependent nature of our force from the outset.

The key to military effectiveness will rely as much on our skills at the drawing board as on the battlefield.

This means that Navy's ability to integrate the fleet with Wedgetail, JSF, P-8 Poseidon, Triton, Growler and other mission systems will be essential to realising the force supremacy potential of these platforms.

And interoperability with comparable US systems will also be fundamental to achieving success in the broader *distributed lethality* system.

We must design our forces to be capable of coherent, independent ADF operations—what I describe as decisive lethality— while also being capable of contributing individual ships, submarines, aircraft or task groups to coalition operations at both the regional and global levels—delivering distributed lethality.

As I said earlier, this level of integration must be factored into our forces from the outset. Let's face it, it's now so much more about the 'glue' if we are to build our fighting system.

It means that Navy is just as committed to Plan *Jericho* as we are to Plan *Pelorus*.

Fortunately, Government—through the White Paper—has given us the chance to redesign the way that we do business in delivering the defence capabilities the nation needs.

Force design

We have the opportunity to ensure our future fleet's combat and weapons systems are *designed* to work together as one, and that our people are trained to realise the potential of this fighting system.

It must be *interoperability by design*.

The next generation of air and naval forces will be characterised by technologies that enhance our situational awareness and tactical reach.

Each individual platform will have significant enhancements over the capabilities of today. But it will be at the system level that significant force multiplier effects will become apparent.

Our people remain the most significant factor driving success in operations. Plan *Pelorus* addresses those serving now and those we need to recruit because they have skills we need if we are going to operate the systems we will be acquiring.

For the Navy, the nation's industrial baseline will be the foundation that enables us to keep pace and stay ahead. Like Air Force, Navy is a materiel system that requires an innovative and agile industrial base so it can meet the ever-evolving challenges ahead.

Air-sea integration and joint warfare

So what will be possible for the future ADF?

Hopefully by now you can see that we aren't just a Joint force. We are an integrated force, joined at the hip as we move to deliver what the government has mandated for us.

The key to understanding the strategic impact of our air, sea and land forces is the synergy implied in the phrase "the whole is greater the sum of the parts".

I fully support the remark made recently by the Chief of Air Force when he said that 'the sum of the Services operating together is clearly greater than any of us operating individually.'

Leo has identified five distinct areas in which Air Force will focus its efforts over the coming decade to become a fully fifth-generation, networked and integrated Air Force.'[1] Unsurprisingly, the first of these is *Joint Warfare*.

What the ADF is developing, in sum, is a maritime capability to be reckoned with by any adversary. And one that will be welcomed by our friends.

The end result of this collaboration means that the variety of technological developments—when batched together as a warfighting system—brings a substantial advance in fighting power and consequent lethality.

Perhaps this discussion is best described through the example of *cooperative engagement capability*, or CEC.

While we have had significant exposure to systems that expand situational awareness, Navy is just starting to see the potential for remote cueing of weapons with the introduction of the Cooperative Engagement Capability in the *Hobart* Class.

CEC is a about a systemic approach to collective defence and offence.

A cooperative engagement capability is essential across the ADF and indeed across our Allies. CEC makes us more lethal and more effective.

[1] ASPI National Security Dinner, *A 10 Year Plan – An Air Force Strategy*, Air Marshal Leo Davies AO, CSC, 19 July 2016.

As I have said in previous addresses, lethality is the key to our ability to wage war and, subsequently, key to how we deter.

The Joint system we build **must** complicate the planning of our adversary.

This is the central driver of all defence capability planning

Continuous Ship Building Strategy

But achieving the level of systems integration necessary will not be easy.

We will need to clearly define the capability requirements for the integrated Force, and ensure we are prepared to exploit and leverage new technologies and systems.

The Continuous Ship Building Strategy is the necessary means – the *only means* – by which we will achieve the level of systems integration and maintain the technological edge required for Navy to function as task groups.

And to achieve this successfully, our design philosophy must be *thinking ahead*. We are no longer just buying ships off someone else's production line.

This is particularly the case in the C4I and weapon systems we choose, *and evolve*. We now need to be thinking and designing ahead – and I will need to see Navy, Industry, Defence, Army and Air Force at the planning table! Our new One Defence enterprise will allow us to do this with much more gusto than previously.

This is not just about how we design the right systems and equipment. It is about how we bring together the necessary information to decide how we are going to evolve and fight with these new systems.

We need the right information to maintain decision superiority, to focus our efforts in science and technology activities, and drive optimal investment in our infrastructure and estate.

The Defence Industry Policy Statement identified Industry as a Fundamental Input to Capability.

This recognised that resources were provisioned to enable industry, academia and government to work together—to mature innovative concepts and technologies to enhance capability.

Information to support our decisions

Maintaining our technology edge will demand the ongoing development of the necessary Intelligence Mission Data (IMD) systems.

This will require comprehensive data inputs—including EW libraries, orders of battle, characteristics and performance of our potential adversary and geospatial intelligence.

At the same time we need to fully appreciate the impact of these changes on the way we train and fight within Australian and Coalition Task Groups.

This means:

- We need to define and understand the roles of our different platforms in a coalition task group
- We need to develop tactics and training to deliver decisive lethality
- We must reduce the time taken to make a ship Unit ready and focus our training efforts on Task Group readiness
- We will need to fully exploit synthetic training environments to achieve this
- And, critically, we will need to work seamlessly with our allies to deliver distributed lethality.

I recognise that this is a paradigm shift that the Navy must lead and own.

Conclusion

The ADF is on track to become a highly integrated, networked and capable multi-domain force.

Our responsibility now is to ensure that we understand and drive these integration requirements at the drawing board.

This means that we need to understand the importance of Force Design.

We must also develop the necessary information to continually challenge and validate our requirements at every stage of the capability and materiel acquisition process.

And above all, we must do this together.