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Speaking notes - check against delivery

Distinguished guests, ladies and gentlemen, I am very impressed with the work the Australian Defence Magazine (ADM) has and continues to do, in filling a vital role as a ‘communications bridge’ between industry and Defence.

The coverage that ADM provides on Army’s modernisation efforts has been consistently timely, balanced and accurate.

Priorities

I’ve previously outlined my four key priorities for our Army:

• support to operations,
• assisting our wounded, injured and ill,
• modernising the Army, and
• continuing our efforts at cultural renewal.

Given this forum, I will focus my remarks today on modernising the Army and some of the key projects and capabilities we are pursuing over the next decade and a half to maintain our capacity to prosecute joint land war fighting – the Army’s unique contribution to national capability.

Pictured here is a Joint Fires Coordination Centre – usually mis-described by its First World War codename – the Tank.

A connected, lethal, deployable and sustainable armoured capability is at the core of the ADF’s joint land war fighting capability.

The M1A1 Abrams main battle tank is an essential element of our close combat combined arms team.
Army is determined to maintain the combat advantage that the M1 affords through upgrades, maintenance programs and integrating it with other major capabilities such as:

- the common land and ADF network,
- Land 400, which will replace Army’s other armoured vehicle families, and
- Strategic lift, in the form of the RAAF’s C-17 aircraft and RAN’s Landing Helicopter Dock (LHD) Ships

In May this year, load trials will be conducted to certify the LHDs to transport the M1.

This will enable the M1 to be transported by sea as well as by air, road and rail, providing a wide range of deployment options.

Over the last year, Army has integrated the M1 tank capability into two of its three combat brigades, with an Armoured Squadron now resident in Townsville.

The final Army combat brigade will likely include tanks as part of its structure from 2018.

In addition, Army will consolidate the Armoured Cavalry Regiment currently located in both Darwin and Adelaide, into Edinburgh in South Australia from mid 2017.

Army is also looking at the options available to better posture it to sustain the current tank capability prior to its upgrade under Land 907 Phase 2.

That project will ensure Army maintains the capability to successfully conduct sustained mounted close combat in the future.

It may include Australia aligning our baseline tank configuration with US Army tank development pathways (M1A2 Systems Enhancement Package Version 3).

The Land 907 Phase 2 upgrade will occur over the next 10 years with the intent to have a fully operational capability by 2025.

This upgrade will provide improvements in lethality, protection, mobility and importantly command, control and communications systems which will ensure that the M1 is operable with Australian and coalition land forces.
Importantly, the timing of this project aligns with key milestones in Army’s other armoured vehicle project, Land 400.

**Land 400 - public commentary**

There are a range of views about Land 400 in public commentary. This copy makes for enjoyable reading, and might sell newspapers, but I think the views expressed quite misunderstand modern land warfare.

As I remarked at the Royal Australian Navy’s Seapower Conference last October, commentary about stabilisation/insurgency versus conventional operations is moot – we have to master both, because Australia’s national interests are or may be challenged in both settings.

With respect to Land 400 the simple fact is that the conflict environment baseline, in any conflict, has changed. Our recent and ongoing operations demonstrate that technology has dramatically increased the lethality available to an adversary, while markedly lowering its cost.

Protection is the price of credible participation in the contemporary battlespace, no matter what the role.

By protection, I mean the combination of materials, design, passive, active and reactive systems and tactics.

Land 400 is not about narrowly prescribing what roles the Army undertakes. I suggest the debate on the future shape and weight of the Army, centred on Land 400, should be about whether we give our soldiers:

- The firepower, protection and mobility to operate effectively in the range of missions that might be directed by Government,
- A vehicle with the sensors to differentiate targets in crowded urban and semi-urban environments,
- The protection to withstand a blast from an Improvised Explosive Device (IED) or Rocket Propelled Grenade (RPG) – to ‘take the first hit’ - and still have a functional crew if not vehicle,
- A vehicle with the operational maneuverability to deploy on our LHDs and C17s, when and if required,
• A vehicle with the range of integrated systems that will allow soldiers to harness the collective capabilities of the broader Army, Navy and Air Force; an essential requirement for an Army and a Defence Force of our size,

• The ability to train on the vehicles systems in an efficient and cost effective manner in what is always likely to be a constrained budgetary environment, and

• A platform that maximises the effectiveness of simulation in our training systems and can be affordably sustained.

So, as we progress through various government decisions and the acquisition of Land 400, these are some of the issues that have informed, and will continue to inform, Army’s input into Defence’s capability acquisition process for Land 400.

**Improvised Explosive Devices (IEDs)**

The proliferation of lethality, both hardware and know how, means that for as little as $30 Australian dollars our enemies have the ability to target our forces using highly effective and highly lethal improvised explosive devices.

The consequences of IED attacks can be devastating to our people and our mission.

One of the first lessons of recent conflicts is: flat bottom and thin armour – everyone dies.

This is what surprises and disappoints me about the public commentary of defence acquisition issues in Australia.

I want the best fighter aircraft for Australia, in part because it will protect our soldiers, and I am delighted that media commentators are vociferous in their discussion about which is the best fighter for Australia. It’s the JSF by the way.

Similarly, I see an excellent discussion arguing the merits and challenges of our submarine program, focussed on identifying the best submarine for Australia’s strategic circumstances. This is also as it should be.

Unfortunately, I don't see an argument about which land system is best for Australia. Rather, the tone of media commentary seems to focus on what’s good enough.
All the vehicles pictured here were destroyed by IEDs. And despite the tragic loss of life that this destruction entailed; the vehicles were I’m sure, considered good enough at the time of their acquisition.

But that’s not good enough for me and commentary that sells the lives of our soldiers so cheaply is I think, very inappropriate.

While the Bushmaster protected mobility vehicle, prevented the deaths of Australian service personnel in Afghanistan, the ‘threat’ continues to evolve.

The challenge for me is to guide Army development to remain ahead of likely threats, both now and into the future.

**Land 400**

Land 400 is very much Army’s flagship modernisation program and goes to the heart of Army’s fighting capability.

Over the next 15 years, Army will introduce into service a fleet of more lethal, better protected and more capable armoured fighting vehicles that will underpin our contribution to the joint force.

Most in the audience here will be aware that, in the next few weeks, we will be making a down selection on what has been a very competitive and very comprehensive Land 400 Phase 2 tender evaluation process.

Later this year, our soldiers will have their hands on vehicles from one or more industry partners, from the tender down selection process.

They will put them through a series of trials and risk mitigation activities before we enter contract negotiations.

Following this, we should expect to see a new fleet of around 225 Combat Reconnaissance Vehicles being delivered into service from early next decade to replace our ageing but consistently reliable ASLAV fleet.

**Land 400 future opportunities**

Further, Land 400 Phase 3, to replace the current fleet of M113 APCs, is currently a decision for government through the Defence White Paper.
In preparation, Defence released an open Request for Information (RFI) to industry on 27 November 2015 to ascertain the price and availability of solutions to satisfy Army’s future infantry fighting vehicle and manoeuvre support vehicle requirements.

At this stage we think approximately 450 vehicles will be required. Responses were requested by 22 February 2016.

So, Land 400 is becoming very much a reality and I’ve been very impressed with the cooperation, interest and capacity of industry to respond to Army’s requirements.

The existing legacy B vehicle fleet was initially purchased in 1982 (Landrover & Mack) and 1984 (Unimog) for a Life of Type of 12-15 years. Some 30 years later, the Landrover fleet is being withdrawn as its part replacement rolls out in the form of the Mercedes Benz G Wagon.

Investment by Government in Land 121 will increase Army’s access to protected mobility with the percentage of protected general support vehicle / B vehicles increasing to around 35%.

This allows the ADF to provide Government a range of deployable options from low to high threat environments.

**Digitising the Army**

Army continues to make significant progress towards becoming a digitised, jointly integrated force.

I don’t shrink from admitting we’ve had our challenges as we’ve been on this journey. Our efforts to date have largely focussed on retrofitting digital communications and battle management systems into our legacy equipment and somewhat cumbersome dismounted systems for our people.

This has brought with it design and integration challenges, but we have learned as we’ve gone.

We’ve also faced some considerable technical challenges in incorporating all of our operating systems into a single digital architecture.

Our helicopter fleet, for example, was designed to operate on a completely different C4I system and we continue to look for technical
workarounds to best incorporate these systems into our digital C4I networks.

But I am pleased with some of the progress we’re making in this critical area.

Army’s participation as observers in the US led Network Integration Exercise (NIE) last year and our preparations to participate fully in the re-named Army War fighting Assessment (AWA) in El Paso Texas this year has already seen us achieve outstanding levels of digital integration and interoperability with our most important ally.

Our participation is based largely around the 7th Brigade in Brisbane and I am very pleased with the lessons we’re learning and experience we’re gaining in working in a networked, digital battlespace.

The Army’s Land Network Integration Centre (LNIC) has been instrumental in enabling much wider experience and appreciation of the considerable benefits to Army of a digitised and integrated C4I system.

Could I also make mention here of our partners in the Air Force, who are equally committed to ensuring our systems are configured to best enable air-land integration. We’ll be demonstrating our progress in this area as part of an Army / Air Force capability demonstration in Puckapunyal late next month. Our work with Navy is similarly advanced.

Finally, the journey we’re on, creating (rather than retro fitting) a vehicle such as Hawkei gives Army the opportunity to more comprehensively define the common vehicle architectures and integration standards we will need to see in our future vehicle fleets, including Land 400.

As Army continues on this journey, we’ll need to maintain a keen eye on joint and coalition interoperability and some of the changes we’re seeing through the First Principles Review will help us achieve that.

Let me be clear in what I’m seeking – an effective partnership with industry as we move towards more federated and open C4I architectures, what our friends in the US refer to as “mission system architectures”.
Open hardware and software architectures, shared integrations and more modular systems will be central to the manner in which our Army will train and fight as a digitised, joint force into the future.

I urge you to continue to work in a collaborative and constructive manner to help us realise that objective.

You may have had the opportunity to read my capability manager’s statement on Land Platform C4ISR Integration signed off in December last year.

I commend this statement to you as the method the Army intends to pursue within major equipment modernisation programs to realise a common vehicle architecture end state.

Amphibious Capability

A current focus for the Australian Defence Force is building a modern, robust amphibious capability. As this capability continues to develop, the Army will continue to play an important role in enabling this capability.

Some of the key milestones we’ve achieved to date include:

- The ‘sea’ series of exercises during 2015, which allowed the declaration of an Interim Operational Capability (IOC) in November last year, and

- We have achieved all the objectives necessary to support humanitarian assistance / disaster relief and non-combatant evacuation operations in a permissive environment.

Throughout 2016 and 2017, the Army will support a number of further training activities including:

- first of class flight trials for the Armed Reconnaissance Helicopter (ARH) and CH-47F Chinooks,

- M1A1 tank & M88 Ship to Shore integration and a beach recovery trial, and

- further development of command and control systems integration; as we continue to move towards delivering the Final Operational Capability in 2017.
Not surprisingly, there is considerable international interest in the ADF’s developing amphibious capability.

The LHDs provide an important opportunity to work closely with allies and regional partners.

**Special Operations, Army Aviation and Reserve Forces**

I have spoken extensively today about our ground vehicle programs, digitisation and ADF amphibious capability development. Similarly important work is underway in areas such as Special Operations, Army Aviation and the Reserve Forces to ensure the Army remains a balanced force, providing a range of contingency options for government.

**Training, education and doctrine**

Of course, modernising the Army is about more than platforms and systems.

Our people are the critical element in realising the full potential of modernisation. Training, education and doctrine remain the key to developing a highly effective fighting force.

**Innovation**

One of the Army’s modernisation efforts that I’m particularly proud of are our *Innovation Days*.

These events represent our commitment to a more iterative, ongoing conversation with industry, about what they might bring to the Army in shorter time frames than what we might normally see in major capital acquisitions.

We have already seen examples of small unmanned aerial systems (SUAS) deployed on operations in Iraq after first being displayed at the 2014 *Army Innovation Day*.

Army will sponsor a series of trials throughout this year based on the outcomes and displays from the 2015 event. Themes profiled at the 2015 event were:

- Immersive and adaptive training technologies to better develop combat shooting skills across Army,
• Individual physiological and health state monitoring technology to better manage injury prevention in training,
• Load sharing equipment for our dismounted combatants, and
• Cultural and language trainers.

Our message here is clear – the Army seeks an enduring, iterative conversation with industry to ensure, where possible, we remain open to the most innovative and effective capabilities on the market that can be rapidly brought into service to improve the manner in which we execute our business.

**Small Unmanned Aerial Systems – Rapid Acquisition**

The WASP AE small UAV was acquired following the 2014 Army Innovation Day to begin the process of introducing an unmanned system to broader Army, ahead of an enduring solution to be delivered through Project Land 129 Phase 4 (Battle Group UAS). In many ways, this acquisition serves as an exemplar as to how the Army can be more agile and adaptive in its procurement of new capabilities – especially highly technical systems with relatively short life spans due to the pace of technological change.

The time from observing the capability for the first time, to fielding a Brigade (minus) worth of equipment – and all of Special Operations Command – was less than eight months, which includes four months to build the systems and the Christmas and New Year break.

The introduction of this capability within these timeframes tested our acquisition processes and taught Army much about how we might be more agile in the future.

**Standard patrol imagery**

This slide shows you what we could achieve using standard patrol imagery.

**Unmanned areal system imagery**

This slide shows you the improvements to capability that we were able to realise by giving the same patrol a small UAV.

**Conclusion**
Our Army has embarked on a major period of significant modernisation that will recapitalise the force over the next 15 years.

This period of renewal is essential if we are to continue to meet the range of increasingly complex tasks set by government in a challenging strategic environment.

From our armoured fighting vehicles and enhanced tank fleet, to more capable and better protected field vehicles, and a 21st Century digital C4I system, a key aspect of my tenure will be to ensure we chart an effective course to not only deliver on these key capability initiatives, but to ensure they are integrated as part of a more capable joint force.

We will look for opportunities for faster acquisition cycles. This, of course, is one of the key objectives of the First Principles Review. A strong relationship between Defence and Industry, based on trust and common understanding, is an essential pre-requisite.

Our objective is:

“Army is a trusted joint and coalition partner, designed and prepared to support ADF objectives within our maritime strategy, and capable of making a leading contribution to the joint land campaign.

“We have realised the potential of a networked, inclusive, ethical, innovative and resilient combat force. We live our values of courage, initiative, respect and teamwork.”

To this end, Army and more broadly the Australian Defence Force, needs industry as a partner.