

# The 2009 Defence White Paper: What It Means for Australian Industry

The Prime Minister, Kevin Rudd, launched the 138-page 2009 Defence White Paper (DWP'09) and accompanying 46-page Response to the Report of the Defence Procurement & Sustainment (Mortimer) at Garden Island (in Sydney) on Saturday, 2 May 2009.

Both documents have subsequently been made available as downloads from the [www.defence.gov.au](http://www.defence.gov.au) website, and we recommend readers of this document broadly review the content of those texts as preparation for reviewing the following script.

Herein follows an extensive analysis of new (and enhanced) capability acquisition proposals announced by the Government (*refer DWP'09 Chapter 9*), subsequently cross-referenced with local industry development & support proposals (*refer Chapter 16*), and research, science & technology proposals (*refer Chapter 17*) of the 2009 Defence White Paper.

The document is intended to provide Australian and international defence-industry stakeholders with a window into the 2009/10 Defence Budget, to be brought down on 12 May 2009. The contents of this document and its accompanying chart-based analysis will also be reviewed, and potentially re-issued, following publication of the 12 May Defence Budget; and again following release of the 2009-2019 Defence Capability Plan (DCP) at the D+I Conference in Adelaide, on 1 July 2009.

## Defence to watch its 'pennies' for 20 years

Prime Minister Rudd confirmed at the DWP'09 launch that the Department of Defence would be funded in future (excluding the net costs of major overseas operations) to build a new 'Force 2030' vision, as governed by the following broad parameters: 3% real growth in the Defence Budget through to 2017/18; 2.2% real growth in the Defence budget from 2018 to 2030; the application of 2.5% fixed indexation to the Defence budget from 2009/10 to 2030 (replacing the non-farm GDP deflator); and the implementation of a Strategic Reform Program (SRP) to yield savings for reinvestment into priority defence capabilities.

The main proviso is that any shortfalls in future White Paper funding – from either the Government not providing the necessary funds, or projected savings not being realised – are to be offset by Defence internally (ie: by other savings measures or cuts to lower priority programs). The fixed indexation rate is also significant in terms of military inflation rates, which frequently run at a quantum higher than the general rate of inflation. Should this end up being the case over the next decade, and without the full savings dividend, there will be less money for Defence – hence, less platforms – which is the general direction laid out in the White Paper for the ADF of 2030.

To fund the new investment effort, the Government has directed that Defence undertake a substantial program of reform, efficiencies and savings - amounting to some \$20 billion over ten years - to underpin the achievement of White Paper objectives. Hence, the 'Force 2030' vision will either stand or fall on the ability of senior Defence managers to achieve the required savings. The savings pool will also be drawn upon by Defence to correct long-term

ADF 'hollowness', and remediate the enabling functions of the Australian Defence Force (ADF). Savings are to be initially placed into a Defence Strategic Investment Reserve (DSIR), for subsequent re-allocation.

Kevin Rudd confirmed 2 May the 'remediation' component would constitute approximately \$30 billion over the next decade for "fixing the existing force." Sub-components include: \$6 billion for more than 50 new projects to fill crucial gaps in equipment and protection for ADF personnel; \$18 billion to top-up existing projects said to have been "under-funded in the past", and \$6 billion to fix systems and infrastructure that support ADF personnel (*see more below*).

## **Building an ADF for All Seasons**

Beyond the merits of the strategic debate contained in the first six Chapters of DWP'09, the distillation of argument has concluded the principal task of the ADF moving forward is to "deter and defeat armed attacks on Australia by conducting independent military operations without relying on the combat or combat support forces of other countries."

The familiar 'Defence of Australia' script, however, is then said to not necessarily entail a purely defensive or reactive approach, with the future 'Force 2030' ADF also viewed as needing to be prepared to undertake "proactive combat operations against an adversary's military bases and staging areas, and against its forces in transit, as far from Australia as possible ... (utilising) combat aircraft, long-range missiles and special forces." Hence, DWP'09 directs forces are to be prepared strictly for the 'Defence of Australia', whilst operations in pursuit of this cause are to be undertaken far beyond our borders (ie: a touch of 'Forward Defence').

Subsequent priority tasks for the ADF are next said to be: contribute to stability and security in the South Pacific & East Timor (including leading coalitions); contribute to military contingencies in the Asia-Pacific region, including in relation to assisting our Southeast Asian partners to meet external challenges, and to meeting our alliance obligations to the US (as determined by the Australian Government from time to time); and contribute to military contingencies in the rest of the world, in support of efforts in the international community to uphold global security and a rules-based international order, where Australia's interests align and where we have the capacity to do so.

Conditions subsequently imposed to the above four priority tasks include: in the Asia-Pacific region – at the highest end of the scale – Australia might need to be prepared to engage in conventional combat, in coalition with others, in order to counter coercion or aggression against our allies and partners. DWP'09 goes on to state that current defence planning, however, "does not assume that Australia would be involved in such a conflict on its own."

The Government has also decided that it is not a principal task for the ADF to be generally prepared to deploy to the Middle East, or regions such as Central and South Asia or Africa, in circumstances where it has to engage in ground operations against heavily armed adversaries located in crowded urban environments, as this brings with it "the risk of an unsustainable level of casualties for an army the size of Australia's."

## **Force Structure of the ADF of 2030**

Distilling the discussion in Chapter 6 of the White Paper, Australia in future is considered to require a defence force that "can meet the requirement for self-reliance for our direct defence and our unique strategic interests, with a capacity to selectively do more in relation to our wider strategic interests ... Defence should focus on developing a force that meets the primary obligation to deter and defeat attacks on Australia."

Consistent with the launch of DWP'09 on the stern of HMAS 'Stuart' at Fleet Base East (Garden Island) in Sydney, the future defensive posture envisaged by the Government embraces a fundamentally maritime strategy, that foresees operations of 'decisive effect'

being undertaken throughout the northern maritime and littoral approaches to Australia, and the ADF's primary operational environment more generally.

Supplementary tasks envisaged for the ADF include the provision of appropriate support to civil authorities in relation to domestic security and emergency response efforts, such as border protection & counter-terrorism. Defence will also be expected to maintain specialised capabilities to deter and defeat attacks by non-state actors with strategic capabilities, especially should such groups acquire Weapons of Mass Destruction (WMD).

More generally, the White Paper anticipates the ADF will need to be able to adapt to unfamiliar operating environments, by way of mission-specific capability enhancements and modified operational procedures, all designed to increase the survivability and interoperability of Australian deployed forces. One significant additional civil-oriented capability expectation – to be provided “in the immediate neighbourhood and beyond” – involves the evacuation of Australian nationals from foreign trouble-spots when other Australian Government agencies are unable to fully respond.

As a result of the priorities outlined in DWP'09, the ADF by 2030 will be a more potent force in certain areas, particularly: undersea warfare & anti-submarine warfare (ASW); surface maritime warfare (including air defence at sea); air superiority; strategic strike; special forces; intelligence, surveillance & reconnaissance (ISR); and cyber warfare. A watching brief (in terms of hedging investments) is also to be maintained in: space capability assurance against counter-space threats; ballistic missile defence; and counter-WMD capabilities – in the event that a rogue state or non-state actor threatens Australia with such technologies.

## Deriving the 2009 Defence Capability Plan

The attached [Table A: 2009 Defence White Paper \(Interim Analysis\) - Composition of the Future 'Force 2030' Military Capability Enhancement Acquisitions \(ie: Insights into the 2009 DCP\)](#), outlines - in terms of reference to the 2006 methodology adopted for describing Defence projects and their related implementation phases – the major new (or enhanced) military capability acquisitions envisaged for the ADF by DWP'09 over the next twenty years.

As previously noted, the general orientation of DWP'09 (outside of submarines) is for the same number or less platforms. The mood of economy and efficiency across the document sees little growth in the quantum of the ADF, albeit with separate long-term proposals to significantly scale-up its punch by way of new sensors and strike weapons. In short, there is no confirmed 4<sup>th</sup> air warfare destroyer. Eight Future Frigates will replace eight 'Anzac'-class frigates. Twenty Offshore Combatant Vessels will replace 24 patrol boats and associated minor war vessels. Twelve 'H'-model 'Hercules' transports are to be replaced by only two 'J'-model aircraft. Twenty-four naval combat helicopters are to suffice for 27 'Seahawk' & 'Super Seasprite' helicopters.

In publicly releasable form, the attached [Table A](#) nevertheless encompasses the overhauled and strengthened (and classified) Defence Planning Guidance (DPG) which now – on the basis of the contents of DWP'09 - constitutes the Government's premier defence planning document giving effect to the task of aligning Australian strategic guidance, capability decisions and resources. Between the preparation of substantive White Papers (now to be undertaken on a five-yearly cycle), the DPG will be reviewed annually by Government and will look 3-5 years ahead to ensure Australia's strategic risk is being properly managed.

The new five yearly White Paper review cycle is described in DWP'09 as acting as “a series of gates” for the progression of key aspects of Defence planning. It will consist of the annual DPG cycle for the first three years; a strategic assessment, force structure review and independent audit update in the fourth year; and development and release of the subsequent Defence White Paper in the fifth year.

Importantly, in terms of the structuring of the 2009-2019 DCP, the Government has decided that **“no future force structure option will be considered unless it has been generated**

**as a consequence of this new improved process**, with proposals to adjust our strategic posture or force structure to be considered by Government through the annual classified DPG.”

To the extent this means that proposals in Table A have now received relevant ‘first’ pass or ‘second’ pass approval by way of the 14-month long DWP’09 preparation (and ‘Companion Review’) process, will only be revealed in the 2009/10 Defence Budget. There is a risk, however, that certain proposals described in the White Paper as ‘decisions’, may end up in fact needing to be cycled through the new approvals structure before they progress to formal capability acquisition.

## **\$30 billion Defence Remediation Plan**

Of the potentially \$130 billion of new spending outlined in DWP’09, \$30 billion is to be invested over the next decade to remediate shortfalls and underinvestment (blamed on the former government) in current capabilities. Some \$6 billion is to be applied to over 50 initiatives, headed by new electronic warfare and counter-improvised explosive devices (IED) technology. In addition, all ‘Anzac’-class frigates will be fitted with the mini-‘Typhoon’ gun for defence against asymmetric threats, such as small boats.

A further \$18 billion will be spent over the next 10 years on 20 initiatives directed at maintaining the current force, including addressing Net Personnel Operating Costs (NPOC) associated with the introduction of both approved and planned capability enhancement projects, submarine sustainment and funding the Australian Federal Police presence at the new Joint Project 8001 Headquarters Joint Operations Command, in Bungendore, NSW.

A further \$6 billion is to be spent over the next decade to address hollowness and degradation due to the fast pace of technological change of the Defence enterprise ‘backbone’. Funds will be applied to bring capabilities and systems up to contemporary commercial standards, including remediation of the Department’s Information & Communications (ICT) infrastructure – the source of a long series of embarrassments for successive governments in terms of administrative failures.

Critical areas to be addressed as part of ICT remediation include: storage & loading facilities at ports; technology upgrades for key Defence research facilities; vehicle maintenance facilities; airfields & training ranges; and fuel & weapons storage.

## **Scrutinising New Capability Acquisition**

New capability acquisition or enhancement proposals flagged in DWP’09 have been listed in Table A according to Maritime (Sea), Joint, Land, Air and Defence-wide domains. Beyond the high profile new maritime projects (submarines, frigates and offshore combatants) utilised by the Government to profile the merits of DWP’09 to the public, it can be immediately seen that the majority of projects put up as underpinning the ultimate realisation of ‘Force 2030’ actually stem from previous Defence White Papers, Defence Updates and/or annual within Defence capability plan revisions.

In short, around three-quarters of DWP’09 proposals stem from either the 2001, 2004 or 2006 DCPs. A further 10% can be traced back to the 2006 Defence Capability Update (DCU), which subsequently yielded a (classified) 2007-2017 DCP refresh (albeit never released), yet elements of which – ie: additional ‘Chinook’ helicopters, C-RAM, MBT TUSK Upgrade, Non-lethal Weapons, etc – progressively slipped into public view as part of the 2007 Federal election campaign.

Some external defence commentators have suggested the high correlation of DWP’09 initiatives with those reflected in previous defence guidance is reflective (ie: positive) of consistency in each successive Government of the day’s acceptance of threat response

advice proffered by the military leadership, and the lack of any overt political interference in the military capability development process.

In other cases, however, the White Paper's representations as new (or re-branding) of military capability enhancement proposals previously advanced by former governments reflects accumulating systemic failures within the defence system, in terms of its ability deliver projects on-time, on-budget or to the specifications first laid down when the acquisition contract was signed (ie: project Sea 1390, project Land 106, project Air 5077).

Such failures have since led to certain military capabilities (ie: Project Air 5333) unable to be delivered by previously approved (ie: legacy) projects, subsequently being leap-frogged in the 2006 and 2009 DCPs by newer, more contemporary technologies (ie: wider resort to satellites for critical communications versus ground-based systems). In short, due to inertia within the defence materiel procurement system, taxpayers have been asked to pay twice for the nominated capability.

So what of the really 'new' military capability enhancements proposed in DWP'09? Considering the severe financial constraints now being imposed upon the Australian Government due to the impact of the global financial crisis on domestic economic activity and taxation revenues (ie: \$70 billion dollar recurring annual deficits, and the need to issue cumulative commonwealth securities of \$300 billion to fund them), the structure of the DWP'09 military capability enhancement profile – combined with the overtly political presentation of imperatives to remediate the ADF due to alleged neglect of the former government – suggests near-term defence expenditures over the next few financial years will mostly likely be focused on a multitude of smaller acquisition programs (albeit funded from savings), whilst substantive funding of the higher profile major acquisitions highlighted by the Prime Minister at the DWP'09 launch will fall, principally, well outside the 2009/10 Federal Budget's Forward Estimates (ie: post-2016), and in the large part, well into the next decade (ie: post-2020).

Some wider rationalisation of new defence capability acquisition proposals inherited from the former Howard Government is also on the way, and will most probably more clearly emerge on Budget night. As the White Paper clearly states, "Australia cannot afford to maintain a large number of narrowly applicable capabilities. The future development of the ADF is to emphasise, wherever possible, operational flexibility and multi-role employment in the ADF's systems, platforms and organisations. This might involve, for example, achieving greater platform flexibility by way of inter-changeable modular design and construction techniques."

Later in the new White Paper it is also said, "where it makes sense to do so, and it is cost-effective and in keeping with the policy setting in this White Paper, capabilities and systems should be designed to be interoperable from conception, not as and afterthought in the capability development process." The need for large numbers of platforms to sustain training is also to be reviewed (ie: to drive down costs of ownership, including future platform replacement demands), by resort to the "greater use of simulation, ... smarter maintenance and leaner logistics systems, improved information management and, where appropriate, a bias towards military off-the-shelf (MOTS) capabilities."

## **Defence Management & Reform**

The Defence White Paper's raising of the issue of increasing resort to MOTS in resourcing the prospective 'Force 2030' – and its prospective impact on demand for local defence industry products and services - leads next into Chapter 13's discussion of the need for reforms to Defence acquisition processes canvassed by the 2008 'Mortimer' report, and focused on yielding a much sharper definition of individual accountabilities for the outcomes Government is now expecting Defence to deliver, and the processes which underpin them.

DWP'09 says that, in future, "Defence must become a cost-conscious enterprise in which leaders and managers at every level understand and act on the need to free up the maximum amount of funding for reinvestment in current and future capability. To achieve this, the next

wave of reform must be planned, led and managed on a whole-of-enterprise basis. Defence leaders at every level must be clear about, and held to account for, their specific contribution to the success of reform and ultimately the organisation as a whole.”

This clearly will significantly impact Australian defence industry - including its prospects for profitability and the level of investment that can be justified in the pursuit of defence business opportunities – as at the end of the process, the Defence organisation plans to be larger than currently. Plans have already been canvassed for the termination of a large number of external contractors, with critical skill requirements to be filled by public service appointment. At a Canberra media roundtable hosted after DWP’09 release, the Secretary of Defence, Nick Warner, indicated to ADBR his view that artificial caps imposed upon Defence in setting the number of full time equivalent (FTE) positions, means the Department is carrying 57% more contractors than it needs.

Subsequent to the Government’s embracing of the Pappas report’s uncovering of the potential for \$20 billion of savings (incorporating Defence Minister Fitzgibbon’s earlier \$10 billion of prospective savings) over the next ten years, the Government has endorsed a Strategic Reform Program (SRP) based on yielding substantive efficiencies, but without compromising effectiveness. In broad terms, the new SRP has three key objectives: improved accountability; improved planning; and enhanced productivity. To underpin improved accountability and better resource management, Defence will move to provide its senior leaders with greater authority to manage their budgets and non-financial inputs through the introduction of an outputs-driven budget management model.

This measure will see relevant funding in future allocated to capability managers (ie: the Service Chiefs). Such managers will be expected to agree an appropriate level of affordable and sustainable services with the relevant internal Defence provider (such as the Defence Support Group). On the basis of these agreements, funding will then be transparently transferred to the provider group. Central to this model, there is also to be a push for consistency and standardisation of support services across Defence bases and establishments. Variations to agreed service levels will be fully costed, and only pursued if they represent value for money.

DWP’09 anticipates that through the introduction of output-based budget management, capability managers and service providers will be able to cut unnecessary costs and achieve value for money in delivering the outputs for which they are accountable. This initiative will be based on clear, precise and documented service level agreements and other performance management arrangements. Remediated ICT systems will be able to deliver much greater visibility of the true costs of goods and services used within Defence, without the need for complex transfer pricing arrangements. At the same time, Defence will continue to consolidate, centralise and standardise shared services.

## **Enhanced Defence Organisation Productivity**

The Defence leadership is similarly proposing to yield major productivity gains by pushing managers to become more businesslike, efficient and prudent in their use of resources, with the aim of saving time and money and achieving better economies of scale. Leaders and managers at every level will in future be expected to promote cost-conscious workplaces “in which everyone is mindful of the need to free up resources for investment in current and future capability.”

Wherever possible, Defence will introduce more centralised and standardised support services and processes, make greater use of e-business, reduce internal red tape and simplify business processes. Changes will also be made to the maintenance of military equipment and inventory management, to deliver ongoing productivity by redesigning work practices and focusing on the continual reduction of waste from: overproduction; maintenance waiting times; transportation; over-processing; and excess inventory. A rationalisation of the supply-chain network will also streamline and strengthen the backbone of military operations.

An Information, Communications and Technology (ICT) reform program is further proposed to deliver business efficiencies and lower costs via resort to a single Defence desktop environment, an improved network to support higher speed connectivity and the consolidation of Defence's data centres. These measures will be supplemented via the introduction of an improved, integrated workforce management system.

Adopting lessons from previously under-performing Defence revitalisation initiatives (ie: DRP, FSR, etc), the Defence leadership has committed to developing detailed implementation plans for all reform measures, for which senior leaders will be held accountable. Nick Warners' actual brief to defence managers in this respect was, defence leaders "needed to sell this message. They needed to get on board, or get out". In addition to these specific savings, Defence has also factored into its projected employee costs an allowance for productivity targets that have been judged to be feasible. Managers will be funded for their budget, less this productivity dividend (which commences around the middle of the decade), when the specific savings measures are judged to have been achieved.

In the case of the Defence Materiel Organisation (DMO), the planned reforms are said by the Defence leadership to be entirely consistent with the intent of the 2008 *Defence Procurement and Sustainment Review*, (Mortimer), which will remain structured as a prescribed agency under the *Financial Management and Accountability Act, 1997*. The role and functions of the former Defence Procurement Advisory Board will now be rolled into a new Defence Strategic Reform Advisory Board, to be chaired by a person from the private sector. The new Board will report to the Minister for Defence, who will in turn advise the National Security Committee of Cabinet of progress in Defence reform.

## **Australian Defence Industry Capacity**

Having now mapped out the broad direction of ADF new capability acquisition for the next 20 years – and subsequent to its consideration and decision on the Mortimer Report's observations and recommendations - the Government has directed the DMO to launch a significant internal change program on top of those measures implemented from the 2003 Kinnaird Review. Four key principles will underpin the DMO's more businesslike approach:

- 1 - The entire Defence portfolio must become more accountable to Government and more transparent in managing the billions of dollars invested in developing and acquiring military capabilities.
- 2 - As the key implementation body within the Defence portfolio, the DMO must strengthen its capacity to provide independent advice on the cost, risk, schedule and acquisition strategies for major capital equipment.
- 3 - The DMO must develop a stronger businesslike culture to deliver projects on-time, on-budget and to the agreed requirements. To complement this, there will also be substantial change within the rest of Defence to improve the way the capability development process is carried out.
- 4 - The already strong procurement relationships within the Defence portfolio must be further strengthened. In particular, Defence will clarify the authorities, roles and responsibilities of the Defence capability managers, the DMO and other Defence stakeholders, and ensure earlier engagement between the DMO and the Capability Development Group.

The implementation plan for building a more businesslike and commercial culture in the DMO is expected to be released at the D+I Conference in Adelaide (scheduled for 1 July), and is expected to: set quantifiable key performance indicators and measures of success, in particular by providing directors of the DMO's Systems Program Offices with a charter of responsibilities and accountabilities; identify the individuals who will be accountable for delivering the cultural change plan; specify necessary structural and staffing changes within the DMO, which will include a strengthening of the DMO's senior level commercial expertise; and develop an appropriate framework for the DMO to report to Ministers and the Parliament.

Heading the productivity gain agenda will be the reform of internal Defence maintenance activities focused on eliminating waste, and reducing incidental work in supply-chain processes. Defence is proposing to roll out a program of established efficiency management techniques to be canvassed both internally (by Defence) and externally, by defence industry. Defence will also develop appropriate incentive arrangements in its future maintenance contracts to encourage industry providers to implement ongoing productivity improvements. Defence will expect industry to make commensurate productivity improvements to maintain their long-term supply opportunities.

## **2009-2019 Defence Capability Plan**

The fostering of a new Defence White Paper and prospective 2009-2019 Defence Capability Plan (also set for release at the D+I Conference) by mid-year, will also provide a new platform for debate about the role of local industry in the delivery of new military capabilities.

To the extent the proposed shift to a larger volume of MOTS acquisitions undermines the confidence of private industry managers in the future viability of local defence industry capability investments, publication of the new DCP (which will also encompass changes to the presentation of individual projects and their budgets) will likely spur further adjustments within the structure of Australian defence industry, including some exits, further consolidations, as well as the emergence of new entrants.

For example, the 2008 merger of Tenix Defence into BAE Systems Australia now means all the top-tier players in Australian defence-industry are majority overseas owned, excepting the 100% Government-owned former Australian Submarine Corporation - trading as ASC Pty Ltd. Changes in the structure of second tier firms have also been progressed over the last year with the entry into local defence business of UK-based Ultra and Qinetiq, whilst US-based Northrop Grumman has crept up its equity stake in CEA Technologies.

DWP'09 indicates the Government anticipates that a significant proportion of the funding allocated to the procurement of defence goods and services required to advance 'Force 2030', is likely to go to locally-based companies. It does not, however, make any assessments as to how the expenditure of funds is likely to impact on the breadth and depth of local defence industry, in terms of new investment. At the same time, the Government communicates an expectation upon Defence that, in rolling out new acquisitions, it will ensure 'best value for money' in Defence spending, based on a preference for procurement to be conducted by way of 'open and effective competition'.

Reflective of the continuing patchy record of delivery of major military capability acquisition projects right up to the eve of DWP'09 delivery (ie: Air 5077), the DMO and Australian industry are said in the White Paper to "face many challenges in delivering the required capability to the ADF." In recent years, schedule delays have frequently been blamed on constraints in the availability of sufficient skilled Defence industry workers. Whilst this may experience some temporary relief as displaced workers relocate to southern cities from far North mining and oil & gas developments, longer-term as economic recovery proceeds, Australian industry (including defence) can be expected to return to the pre-GFC environment of critical engineering and industrial skills shortages.

DWP'09 says that while Defence in future will seek to maximise spending in local defence industry – the anticipation of longer-term labour supply tightening – is expected to see such expenditure being "managed within the acceptable cost, schedule and risk constraints of the strategic guidance. Project requirements must ultimately reflect the demands of operational performance, but they need to be tempered by an understanding of cost, risk and what the market can deliver, including 'off-the-shelf'. The Government needs to make informed decisions about the appropriate mix of cost, risk and capability."

Subsequent to the Mortimer report's observations, the Government has also decided as part of its DWP'09 deliberations that military-off-the-shelf and commercial-off-the-shelf (COTS)

solutions to Defence's capability requirements "will be the benchmark against which a rigorous cost-benefit analysis of the military effects and schedule aspects of all proposals will be undertaken." Accordingly, it can be expected that the application of this principle will have a major impact on the future structuring of Australian defence-industry, hence, demanding some further guidance from Government as to the nature of priority local industry capabilities that will be supported.

## **The PIC of Defence Industry Policy**

Growing the capacity and competitiveness of local defence industry is clearly stated as remaining a policy objective of the Rudd Government. DWP'09 accordingly proposes that elected representatives and officials will remain closely engaged in the formulation and carriage of defence industry policy "to ensure that Australian industry provides the maximum support possible to the ADF, while maintaining control of cost, schedule and quality." The White Paper also considers that the best way to manage, over time, a real increase in local industry capacity and competitiveness "is to continue to grow local industry at an achievable rate."

As a consequence, the Department of Defence moving forward is to adopt procurement and industry strategies to grow local industry capacity and competitiveness, including: increasing industry capacity and competitiveness through targeted productivity and workforce growth initiatives; building greater flexibility into DCP reprogramming to mitigate the adverse capacity and capability impacts associated with large expenditure peaks and troughs; and if necessary, "increasing the amount of offshore expenditure, to a level that allows for a more managed, sustainable and achievable local industry growth rate."

Within this context, DWP'09 considers 'total self-sufficiency' in defence industry capabilities to be impractical for a nation of Australia's size, and further, clearly states it "is not necessary in any event under defence policy requirements outlined in Chapter 6 of the White Paper." Nevertheless, a commitment has been distilled along the lines of "ensuring that certain strategic industry capabilities remain resident in Australia. Defence should not pay a premium for local industry work, unless the costs and risks of doing so are clearly defined and justifiable in terms of strategic benefits."

To guide the process of identifying which local industry capabilities should have priority, DWP'09 advises Government will move to draw up a list of desirable priority industry capabilities (PICs), and defined as: "those industry capabilities which would confer an essential strategic capability advantage by being resident within Australia, and which, if not available, would significantly undermine defence self-reliance and ADF operational capability." Behind the scenes, there is an expectation that the normal market interaction of buyer and seller may resolve the bulk of PIC choices, however, DWP'09 states the Government is also "prepared to intervene in the market to ensure that PICs remain healthy and available."

Reflective of the interventionist philosophy that has guided recent decisions in regard to the Automotive industry, DWP'09 also declares the Government "will determine the level and focus of assistance necessary to support PICs through a rigorous process based on clear criteria. The National Security Committee of Cabinet will make decisions about whether and how to support PICs. Support would only be provided in cases where market failures would be so detrimental to our strategic interest as to justify such intervention."

Factors to be taken into account in guiding Cabinet on the need to authorise any prospective intervention include: the criticality of the industry capability to our posture of defence self-reliance; the value-for-money represented by such intervention; the 'health' of the industry sector, in terms of workforce size and skill levels; capacity constraints; individual firm viability (in cases where this would be justified); and market structure.

Possible intervention strategies raised by DWP'09 might thus include: demand management by Defence; export promotion and support; skills development; investment facilitation; and

long-term contracting arrangements to assist firms in terms of access to finance and productivity investment decisions. Centres of Excellence are also proposed to be established to address any identified capability and capacity shortfalls in PIC categories.

## **Cone of Silence Surrounds PIC Nomination**

Fearful of the market implications of officials publicly confirming a decision to favour one particular industry (or firm) over another, the Government has decided not to publicly identify in detail the specific capabilities likely to attract PIC support.

DWP'09 argues that to do so would confer an advantage on any adversary seeking to exploit critical strategic vulnerabilities – irrespective of the reality that successive government interventions have seen a concentration in one place (ie: Adelaide), of Australia's lead construction assets for high-end surface combatants and submarines. The second reason cited for not publicly identifying PICs reflects the perceived potential of such information to compromise commercial leverage.

The high level of secrecy in regard to the nomination of PICs, however, conflicts with the need to maximize a level of transparency necessary to support efficient and effective decision making by private investors and individuals. To assist this process, the White Paper canvasses the following broad range of industry capabilities as areas in which subsequent PICs may be identified, as consideration is given to emergent strategic advice in latter Defence White Paper 5-year preparation cycles. Key areas noted include:

- 'high-end' system and 'systems of systems' integration capabilities, including for EW development, the protection of networks and computers, including in the field of cyber defence, communications security testing services and through-life support of cryptographic equipment, and system life cycle management capabilities to maintain and extend the service life of ADF systems;
- naval shipbuilding, including specialist design and engineering services; warship repair, maintenance and upgrade capabilities, and essential facilities; submarine design and construction, repair, maintenance, upgrade and overhaul capabilities; selected development, production, upgrade and through-life support of underwater acoustic technologies and systems;
- development, repair and precision machining of composite and exotic materials, signature management capabilities and coatings, and anti-tampering capabilities;
- the ability to produce selected ballistic munitions and explosives; repair, maintain, test and evaluate guided weapons; repair, maintain and upgrade capabilities in relation to infantry weapons, small arms and remote weapons stations on combat vehicles;
- through-life and real-time support of mission and safety critical software; system assurance capabilities for both ICT hardware and software; the repair and maintenance of specialist AEW&C systems; the development and through-life support of JORN and phased-array radars; secure test facilities and test ranges; the development and support of targeting and precision navigation capabilities;
- development of capabilities in the field of combat clothing and personal load carriage equipment;
- repair and maintenance of armoured vehicles; and
- the repair, maintenance and upgrade of rotary- and fixed-wing aircraft.

In addition to these initiatives, DWP'09 confirms developmental (and previously developed) measures to overcome capability and capacity shortfalls in both prime suppliers and small to medium enterprises. These measures include:

- encouraging international prime contractors to take up opportunities for local industry participation in international global supply chains;
- enhancing the Skilling Australia's Defence Industry (SADI) program to expand the pool of appropriately skilled workers, enhance work and career pathways in the defence industry sector and address specific defence industry capability and productivity gaps. In particular, the SADI program will continue to work with defence industry, secondary schools, universities and other institutions to encourage students to enter engineering courses and then to mentor and create career pathways for those that do so;
- developing a skilling program specifically targeted at improving Australia's system integration and engineering skills base; and
- if necessary, rebalancing offshore and local procurement activities.

## Research & Development and the DSTO

Interestingly, in proposing lists of PICs and an expanding role for industry in supporting the promulgation of new military capability, little was independently said in DWP'09 of the role of private research and development (R&D), recent government studies aimed at bolstering R&D taxation concessions, nor the major (Cutler report) initiative to devise a new National Innovation Strategy. It could be argued, that substantive reform of such incentives in the 12 May Budget would have more impact on the future structure of Australian defence industry than the progressive nomination of PICs.

DWP'09 acknowledges the future operating environment of the ADF will be shaped in very large measure by changes in military technology and its employment, especially in the Asia-Pacific region. It further notes "superiority in combat and other forms of military operations will hinge on continual advances in military technology, especially in areas such as EW, precision targeting, stealth and signature management, battlespace awareness, command and control and information networking."

It is also noted that the ready availability of COTS military systems, including those which rely on sophisticated electronics and computing, will increasingly enable less developed countries and non-state actors to acquire modern weapons as well as electronic, surveillance and communications systems. Hence, DWP'09 foresees "the ADF will be required to operate in an environment which is increasingly complex, as more potential adversaries will have access to a wider range of capabilities which are comparable to (Australia's), or will be able to exploit vulnerabilities in ours."

To relieve the investment load upon Australian taxpayers from this challenge, DWP'09 perceives that as the United States invests in modernising its military forces, allies will be similarly challenged in the task of maintaining interoperability. This is considered especially so in relation to the transfer of sensitive technologies likely to deliver the winning edge. DWP'09 also identifies that in future, such transfers will be restricted to a few very trusted partners, and controlled carefully. In turn, it is expected that the US will seek technology collaboration with trusted partners in the development of new systems.

To relieve this dilemma, DWP'09 concludes Australia is well placed to benefit by way of cooperation off the back of its self-reliant scientific and technological capabilities, which are viewed as becoming "a relatively more critical element of (Australian) strategic capability advantage, as will collaboration with our scientifically and technologically advanced allies and friends, particularly the US, and access to special technologies and capabilities."

Subsequent to the identification of local defence-industry PICs, DWP'09 notes (*refer Table A, right hand columns*) that as more technologically-advanced systems are introduced into the ADF, there will be an increasing need for independent, deeply-informed science and technology support to reduce capability risk, and in integrating capabilities into the force

structure. Beyond more holistic efforts already taken to support new air combat capability and the future submarine capability acquisitions, more focused approaches canvassed in DWP'09 envisage new weapon and sensor systems and their integration with ADF platforms will need to be more intensively supported through software and hardware modelling, simulation and live trials. In these respects, the Defence Science and Technology Organisation (DSTO) under the 'Force 2030' vision is anticipated to "maintain the ability to conduct both virtual and real testing of full-scale units, both weapon systems and platforms, to provide assurance of the capability advantage."

DWP'09 adds the DSTO will also be funded (including laboratory upgrades) moving forward to continue research into forward-looking enabling technologies, such as hypersonics, computer security, electro-optics and smart materials which will impact future Defence capability. Leaps in technology developed in the civilian sector considered as being potentially strategically disruptive, will also be closely monitored. Further, the DSTO will investigate emerging technologies - such as nanotechnology and biotechnology - generally developed for civilian purposes, to assess how they may be used for Defence purposes, and whether they may morph into potential threats.

Lead DSTO laboratory and technical facility upgrades are flagged in DWP'09 for the DSTO's missile simulation centre and phased array radar testbed. Further, investigations into (and the application of) key enabling technologies potentially capable of providing significant returns for 'Force 2030' development will also be pursued in: integrated ISR; cyber warfare (including computer security); electronic warfare; underwater warfare; and networked systems.

DSTO expertise is also viewed in DWP'09 as providing unique capabilities to support the Government's broader national security requirements, in areas such as chemical, biological and nuclear defence; explosives effects and IEDs; intelligence-related technologies; and cybersecurity. DSTO support to non-defence national security agencies also expands on key resident technology areas of relevance to Defence, and enables the leverage of technology developed for non-defence agencies back into Defence (ie: the synthesis and analysis of 'homemade' explosives for domestic security, and their applicability to DSTO support to the ADF in countering IEDs on the battlefield).

Prior to issuance of the new White Paper, the Government had announced its intention to establish an Advisory Board for the DSTO, consisting of internal and external members. The new Board is expected to provide guidance to the Organisation as it embarks on future programs. The DSTO is also to implement a change program to simplify science and technology requirement priority setting processes. Robust priority setting and reporting are also expected to be integrated into its governance arrangements to ensure greater accountability, and more transparent program management.

[END]

11 May 2009