The Changing Roles of Defence and Industry in Material Support

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Introduction

There is a surprisingly large number of firms in Australia that contribute to the material support of the ADF and make up the Defence Industry sector. While a smaller number of firms provide new platforms and equipment, the Australian Defence Industry is central to the maintenance and repair of almost every platform and weapon in inventory, from the RAAF's F-111 strike aircraft to the infantryman's Steyr rifle

The Government's demonstrated preference to purchase equipment from, or at least through, Australian firms is exactly that; a preference. An understandable preference to see Defence spending generate jobs and industry capabilities in Australia rather than overseas. It's a preference encouraged by a belief – sometimes well founded but often more an act of faith – that Australian production represents better value-for-money once indirect economic benefits are taken into account. Notwithstanding these worthy arguments, I would argue there is ultimately no *strategic* imperative to maintain a domestic defence production base in this age of rapid response come-as-you-are warfare.

In contrast, the domestic capability to support, repair and maintain the ADF's capabilities is at the core of our national defence. The realities of our geography make it impractical to do otherwise in peacetime, and irresponsible to plan otherwise for wartime. An effective in-country support and logistics capability is as fundamental to the defence of Australia as any of the ADF's direct military capabilities. In fact, our ships, planes and tanks are all but useless without it.

Maintaining the ADF's vast inventory of platforms and weapons does not come cheaply. Defence currently spends around $2 billion, or around 12% of the annual Defence budget, on material support and logistics. That's more than four times the annual cost of the entire Australian Federal Police and twenty times ASIO's annual budget. Clearly, the opportunity costs of such spending are big. The public has a right to expect that the funds are spent efficiently, and the Government has a responsibility to ensure this is the case.

My focus today will be on how the relationship between Defence and Industry has changed, and is changing. It is a story of how this Government, and those before it, have grappled to balance the strategic imperative for effective in-country support with the prudent demand for better value-for-money. I hope that this will provide a useful context for the many detailed and expert presentations to follow.

Much of my talk will meld the ostensively distinct questions of how Defence acquires and then supports equipment. This is no mistake. It is increasingly difficult to separate these two interdependent activities, and it was probably never sensible to do so. This is especially true today as more frequent upgrades blur the line between acquisition and support.

How did we get here?

Up until the mid-1980's the Government owned its own shipyards, aircraft factories, and a variety of armaments and munitions plants. This entailed something like 16,000 people directly on the Government's payroll. These Government-owned facilities produced much of the ADF's equipment. In some instances they also repaired and maintained ADF equipment, especially the Navy's ships and submarines. Elsewhere, much of the repair and maintenance of equipment was done in-house by uniformed personnel from the three Services.

In the late1980's things began to change. The Government progressively corporatised the factories and shipyards and eventually sold them into private ownership. From the Office of Defence Production emerged the firm now known as ADI, while the Government Aircraft Factory became Aerospace Technologies Australia which is now a subsidiary of Boeing Australia. And in 1987 the precursor of Tenix first became a defence contractor through their purchase of the Williamstown shipyard.

The Government's motivation was two-fold: First, they were dismayed at the performance of the factories, especially the shipyards where big delays and cost overruns were the norm. Second, they believed that best value-for-money could in general be obtained by offering contracts to commercial firms through open competition. The result was a transfer of defence production from government to private hands, and with it went that component of material support and logistics previously undertaken by Government industries. But this was just the beginning.

In the 1990's the Government turned its attention to the ADF proper. Eager to free up money to enhance the ADF's capabilities they set about out-sourcing those support functions deemed 'non core' or more accurately non-combat. This began with the Commercial Support Program in 1991 and accelerated under the Defence Reform Program between 1997 and 2000. It continues today under the auspices of the Commercial Support Program with the 'fully-contracted integrated material support' of Navy's major ships but one of the several areas currently under consideration.

In terms of the sheer numbers of jobs, the initiatives have profoundly changed the Defence workforce. Since 1985 the transfer of work to the private sector has seen the ADF drop from 72,500 to 52,000 personnel and Defence's civilian workforce go from 40,300 to 18,000.

How has it gone?

The bold reforms of the last 20 years were difficult for the individuals involved and disruptive for Defence. So was it worth it? On the positive side there are two clear benefits – substantial savings and a more diverse and largely effective defence industry sector.

There is little doubt that substantial savings were harvested from both the Defence Reform and Commercial Support Programs. In 1998 the Australian National Audit Office estimated that the Commercial Support Program had delivered some $155 million per annum in recurrent savings. And in 2000 at the close of the Defence Reform Program the estimated annual savings stood at $644 million. These are substantial savings by any measure, together amounting to around 8% of the then Defence budget. Some observers have warned that these savings will be difficult to sustain once contracts are renegotiated in the absence of a ready-to-employ fully trained (ex-Defence) workforce. This will be a factor, but I'm optimistic that out-sourced support will prove be cheaper than an in-house capability – assuming that contracts are properly handled.

The other benefit of the reforms of the last twenty years has seen the development of a diverse and healthy domestic defence industry sector. In making this observation it's important to remember the many small and often innovative enterprises that form the second-tier below the big prime-contractors. The resilience of the defence industry sector varies. Some players have a very high, and arguably unhealthy, degree of dependence on Defence as a sole customer. Others have the advantage of a more diverse customer base which

allows them to weather the lulls in Defence demand. Only a few firms are substantial exporters of military technology but these exceptions are encouraging of future potential.

As is always the case these benefits have been accompanied by new challenges. Perhaps the biggest challenge has been for Defence and Industry to learn how to work together for the benefit of each other. Managing multi-million dollar projects for acquisition or maintenance is difficult and demanding, and there has been considerable frustration on both sides over the years. An outside observer could be forgiven for concluding that too much energy goes into each side blaming the other for problems. There is an element of truth to this, but I think that a closer examination reveals many examples of close and productive Defence-Industry relationships – especially in the area of material support and logistics. Unfortunately such stories fall well below the vision of the non-specialist media.

The other challenge brought about by the out-sourcing of production and support has been the loss of engineering and other specialist skills from Defence. One could argue that this is not a problem because the skills are still available in Industry. But this ignores the importance of engineering and specialist skills in making acquisition decisions. Very often the devil is in the detail when contracting the acquisition or support of military equipment; and the details require specialist expertise that Defence in some areas has lost. There are several ways to manage this problem that I will return to later.

So what's happening now?

In recent years change has been continuing and in some ways accelerating. The most visible changes are those wrought on the organisational structure within Defence but changes in the details of how Defence goes about contracting for material support and logistics are every bit as important.

A new organisation

The previously separate logistics support and acquisition organisations were brought together in 2000 to form the Defence Material Organisation (DMO). The thinking behind this move was to forge a closer link between the acquisition of new equipment and it's through-life support. This is a laudable goal. Over the life of an item of military equipment operating costs often exceed the acquisition cost by a substantial margin and decisions affecting the former are often made in the early stages of the design process. These require careful consideration as relatively small increases in the acquisition price can sometimes provide substantial savings over the life of the equipment. Unless through-life costs are a key consideration during acquisition it is unlikely that a cost-effective solution will result. While this has been recognised for years, successive attempts to take account of this by tweaking internal Defence processes have failed. In fact it is safe to say that until very recently acquisition decisions payed at best lip service to through-life costs.

The formation of DMO seeks to redress this by bringing together those who acquire and support equipment into Systems Program Offices that are responsible for cradle to grave delivery of equipment and support. No longer will acquisition decisions be made at arm's length from those responsible for maintaining equipment once it entered service. In addition, to ensure that the acquisition and support of equipment is responsive to needs of the Services, the System Project Offices are being collocated with the force elements they support. It's still early days yet but the recent Senate Committee inquiry into Defence Procurement was cautiously supportive of what was being done through DMO.

Of course, the formation of DMO is unlikely to be the last word on changes in Defence. There's currently a review of Defence procurement – the so-called Kinnaird Review – the results of which we are all awaiting. With an outcome promised soon, I'll refrain from speculating.

However, improvements are not only required in the acquisition process. Shortcomings in the pre-approval process contribute to the difficulties faced by the DMO. These include unrealistic schedules because of delayed decisions; poorly defined requirements; lack of clear

specifications; and overly ambitious requirements, including too many Australian-unique requirements that lead to additional risks.

The early engagement of industry in the pre-approval process could assist in mitigating some of these problems.

A stronger link between acquisition and support

A very concrete indication of the move to proper consideration of support issues has been the contracting of through-life support at the time of acquisition. Recent examples include the Hawk lead-in-fighter, hydrographic survey vessels, the LPA watercraft and the still under consideration Replacement Patrol Boat project. In each case, a long-term contract for the support and maintenance of the platforms has, or will be, awarded in tandem with the acquisition.

A similar, but slightly different, indication of better factoring of support issues is the trend to define equipment requirements in terms of the *availability*, rather than the mere physical number of platforms. This has been a factor in several projects including the Armed Reconnaissance Helicopter and Replacement Patrol Boat. This approach has the added advantage that Industry is free to come up with innovative solutions that deliver capability without the straightjacket of overly prescriptive equipment requirements. And when coupled with a long-term contract for through-life support it can (if properly managed) provide Industry with every incentive to deliver a platform that is cost-effective to support.

A new method of contracting

Two major Defence projects are currently employing Alliance contracting – the Light-Weight Torpedo and Anzac Ship Upgrade projects. These projects are currently focused on acquisition and upgrade work but they both provide a possible model for contracting material support and logistics. Without going into the details, Alliance contracting is roughly a partnership between customer and supplier built around a cost-plus contract with sharing of risks and rewards. This is usually backed up by a high degree of financial transparency and benchmarking to ensure value for money. The current two projects are a trial by Defence pending a review later this year.

A new approach to Industry

In mid 2001 the then Minister Peter Reith announced a new strategic approach to Defence Industry. This included a move away from open competition in all cases towards longer-term strategic partnerships where applicable. The new policy was motivated by the assessment that in many areas Australian Defence Industry was too dispersed among different firms and was suffering from the ill effects of so-called ‘destructive competition’. This new policy applies to both acquisition and through-life support.

Two years later we have two published sector plans (shipbuilding and aerospace), one draft plan (electronic systems) and one pending (land and weapons). The Government has agreed neither of the two published plans despite the fact that the shipbuilding plan is now almost twelve months old. It appears that bold intervention in the market place is easier said than done. The three plans on the table are very different beasts each reflecting the particulars of the industry sector they represent and the dynamics of the independent processes that spawned them.

This is not the place to examine in detail, or discuss the pros and cons, of these plans. For our purposes it is sufficient to identify one key point. The implementation of the plans will in general see the emergence of long-term partnerships and contracts for the delivery of through-life support. That does not necessarily signal the demise of competition. In some cases the plans envisage a high degree of competitive sub-contracting below the tier-one prime contract level. In other cases long-term contracts will be awarded to single firms but only after an open and competitive process. Nevertheless, there will be many instances where the time-honoured assurance of value for money previously provided by competition will be considerably reduced (although some would argue that this has been at times an illusionary comfort).

Even if the Industry Sector Plans fall by the wayside and Defence continues to contract acquisitions on a project-by-project basis the trend towards long-term contracts for through-life support looks likely to continue. It will continue as new acquisitions bring with them long-term contracts for support, and it will continue as the Commercial Support Program works through and market test support activities.

So what does this mean for the future?

At the risk of oversimplifying the diverse and complex world of Defence material support and logistics I think that there are three big trends that we can be reasonable sure of the for the future.

First, we will see a continuation of the program begun at the start of the last decade to out-source all those aspects of material support and logistics that are operationally feasible and cost-effective. It is tempting to conclude that most of the 'low hanging fruit' has been harvested and that significant operational impediments exist to out-sourcing beyond that currently envisaged. To an extent this is true. But I suspect that the pivot point will shift in terms of the level of contract support that is permissible to forward areas. It would be an interesting exercise to compare where Australia and other nations draw the line between their uniformed and industry workforce. In fact ASPI is actively considering just such a study.

Second, all signs are that we will continue to see the establishment of long-term contracts for the delivery of material support and logistics. Be it through the auspices of the industry sector plans, new projects that link acquisition and support, or just directly – this trend will continue.

Thirdly, and most interestingly, I think that we will continue to see a slow evolution in what we contract for. In the 1980's we saw Defence contract for the delivery of *goods* by shifting defence production from the Government to private sector. In the 1990's Defence began to contract for *services* by out-sourcing repair and maintenance that had previously been done in-house. But increasingly we will be contracting for *outcomes* like the number of available aircraft per day, or the number of mission capable vessel available per day.

What are the challenges?

Being an informed buyer

Some talk fondly of the good old days when there was enough in-house expertise in the public Defence sector to design a naval Destroyer or a Tactical Aircraft from scratch. While we can live without the folly that was the cancelled Australian Destroyer project or the ill-fated Nomad aircraft, some level of specialist expertise is necessary if Defence is to be an informed purchaser and operator of military equipment. Ultimately the risk of equipment performance resides with Defence and they need the expertise to manage that risk. There are several ways this can be achieved:

To some extent, Defence can use the expertise resident in Industry to support its decisions about acquisition and support. In a competitive regime, Defence can use funded studies to allow vendors to develop material support strategies that can be used to select the best approach and provider. In situations where competition has been foregone for one reason or another, Defence can work cooperatively with its industry partner to jointly develop a cost-effective solution using industry expertise. However, in either case, unless Defence has adequate in-house expertise it cannot judge the credibility and merit of proposals.

This problem can be mitigated by the use of so-called 'above the line' firms who specialise in specific areas of technical expertise but are not involved in the delivery of the physical solution. This separation of technical advice from project delivery removes the inherent conflict of interest when a vendor tells the customer what they need and how much they should be paying for it.

Of course Defence can also buy in specialist expertise directly through the well-established avenue of Professional Service Providers (PSP) who are contracted in for specific tasks requiring skills not available within Defence. But recent experience raises questions rather

than provides reassurance. In fact, over the last three years expenditure on PSP has skyrocket by over 300% to become a $280 million per annum budget item. This is equal to around half of the recurrent savings claimed for the various efficiency programs over the last decade or so.

Given the additional cost of PSP (who are usually from firms charging a generous overhead) it's hard to see how this can be cost effective compared with maintaining expertise within Defence, especially given the new freedoms the Public Service has to pay market salaries and secure private sector talent directly. The exception being when skills are only required temporarily. Thus, not only does it appear that Defence lacks the expertise it needs by a big margin, but it is responding to this problem in a far from cost-effective way.

Ultimately it is difficult to avoid the conclusion that Defence must retain, and where necessary develop, a credible level of in-house technical expertise. The acquisition and support of billions of dollars of high-tech military equipment cannot be undertaken by idiot savants coordinating data they do not understand – no matter how expert the advice they receive from outside might be.

In the past, Defence maintained a regime of internal contestability that tested proposals through a process of 'creative tension'. It would take a lot to re-establish such a capability. At very least, a credible level of specialist expertise (both technical and commercial) must be available to Defence decision-makers from within the organisation.

Knowing where to draw the line

At the risk of stating the obvious, care must be taken when drawing the line between in-house and contracted support to ensure that the ADF is not only efficient in peacetime but also effective in wartime. What works as a material support strategy today may not work in a crisis especially when the order is given to deploy to a far-off location. However, given the recent experience of several very demanding ADF deployments, Defence appears to have maintained what it needs to support a deployed force. That's not to say that the scale and capability of current logistic systems cannot be improved, but rather, that the current level of contractor support does not appear to be a problem.

The challenge of getting the balance right will remain no matter what support strategies are put in place. I've already argued that the boundary between the in-house and contractor workplace is likely to continue to change. As this occurs the litmus test has got to be what is workable and appropriate in operational conditions. I suspect that the boundary can and will move further towards the industry side thereby freeing up sparse (and expensive) uniformed personnel for combat roles.

Another area where the boundary is likely to shift is the ownership of assets. After an abortive attempt to arrange a Private Financing Initiative (PFI) for the Replacement Patrol Boat project, the option of private ownership of ADF platforms appears to have lost credibility. Although at the same time the progressive sale and lease back of components of the Defence estate continues at a great future impost to the taxpayer. While I'm highly sceptical that the sale and lease back of buildings represents value for money, I think there are situations where private ownership of other assets might be the best option. When I say this I'm thinking of assets with a significant residual value, large fleet economies of scale, or concurrent third-party use. This restricts the field somewhat but its important that we remain open to the possibilities that Industry might come up with.

One of the attractions of a PFI arrangement is that it readily allows for the contracting of an 'outcome' such as platform availability and rate-of-effort without specifying how that is to be achieved.

Balancing competition and long-term contracts

There is little doubt that the ongoing establishment of long-term contracts for the support of ADF platforms will mean less competition. Especially when, as suggested by at least two of the Industry Sector Plans, the duration of contracts could be in the vicinity of 20 years. And

with the loss of competition will go the assurance it provides of value-for-money. Of course, competition does not always guarantee efficiency (or sustainability) especially with a monopsony customer like Defence and a small industry sector. But as with Churchill's adage about the merits of democracy – it's better than the alternatives.

There are several ways the impact of forgone competition can be mitigated. First and foremost, the move to long-term arrangements can be made through competition. This guarantees that initially at least the value-for-money of the contract reflects the best the market can deliver. But 20 years is a long time and Defence's requirements will change and contracts will have to be amended, while in other circumstances the contracts are likely to be written (in part at least) in terms of a cost plus arrangement. All this works to reduce the assurance provided by the initial competitive tendering process. Another option is to require regular and open subcontracting of work to second tier firms. This avoids the ponderous inertia of vertically integrated companies and helps maintain the health of the many small and medium players in the sector. Where feasible this should be done. Finally it is possible to try and ensure value-for-money through benchmarking and open book accounting.

These strategies are all well and good. Yet they need to be underpinned by a simple approach to deciding when competition should, and should not, be abandoned in favour of a strategic partnership or very long-term contract. The answer would seem to be easy: Whenever the market can provide healthy competition for work, without imperilling the overall sustainability of the industry capability required by the ADF, competition should be used.

Delivering and demonstrating value for money

One way or another we are likely to see a smaller number of contractors supporting the ADF through long-term contracts. This has some undoubted benefits. It will allow firms to make long-term investments in infrastructure and the increasingly import areas of skills, intellectual property. It will also reduce the overheads that Defence and Industry pay for tendering and contracting. But it will bring with it two challenges. The first is to deliver value-for-money in an environment of reduced competition, the second is demonstrating that value-for-money has been delivered in a world of sceptics. Both will be hard.

Ensuring that the taxpayer gets appropriate value-for-money for the $2 billion per annum spent on material support and logistics will require a range of strategies for the many different situations to be faced. Where possible, competition can be used to test the market. In other cases, long-term alliance partnerships or cost-plus contracts will require open-book accounting and benchmarking in the absence of a market to set the price. And similar techniques will be needed to ensure that the price is right for the inevitable changes to long-term fixed price contracts (an area where folk law syas that Industry often more than makes up for small margins in an initial contract).

There may be a role for an independent third-party audit of the costs being paid and profits being reaped under a contract. This sort of approach is sometimes built into alliance arrangements. Paying for such a service can easily be justified when hundreds of millions of dollars are being paid to a single firm through a one- or two-decade long contract. But it is not a panacea, especially given the significant blows to the credibility of key parts of the global financial services sector in the last several years.

Ultimately, the final determinant of whether value for money has been delivered will be the business (and technical) acumen of those on the Defence side of the negotiating table. One of the key skills needed to be an informed buyer is real-world commercial savvy. This does not imply that Defence should adopt an adversarial approach to Industry, quite the contrary. Good business deals involve a win-win outcome where both sides benefit from a deal. Yet we should not forget that industry has a responsibility to deliver the best possible bottom line for its shareholders. I have yet to see a triple bottom line that allocates points for giving a sucker an even break – especially if the sucker is Defence who the Government has bailed out again and again with saintly patience.

Ultimately, this demand for commercial skills may require Defence to look more broadly at how it recruits trains and pays its acquisition and support professionals.

Getting a good deal is one thing, persuading other people of this can be quite another thing. I'm afraid that there is a good deal of scepticism about Defence's ability to deliver value for money – even using the traditional methods of competitive tendering. Once word gets out that Defence is letting very-long term contracts under alliance or cost-plus contracts then the alarm bells will sound. The automatic assumption (rightly or wrongly) will be that Defence, and by implication the taxpayer, is being screwed.

The onus will then be on Defence and Industry to demonstrate conclusively and transparently that value-for-money is being delivered. This will require openness, transparency and a deal of salesmanship not normally found in the public sector on the part of Defence.

If an adequate assurance is not forthcoming then one will be sought. It will certainly be sought by the Australian National Audit Office and through Parliamentary scrutiny, and if something goes astray it will be sought through the press. Even the Productivity Commission or ACCC might get interested given the scale of spending. And if you haven't guessed by now, ASPI will certainly remain seized of the question of how efficiently $2 billion per year is being spent on material support and logistics.