

**SUBMISSION TO FOREIGN AFFAIRS, DEFENCE AND TRADE  
REFERENCES COMMITTEE INQUIRY  
INTO MATERIEL ACQUISITION AND MANAGEMENT  
IN THE DEPARTMENT OF DEFENCE**

The following comments are offered on the issues identified by the Committee's Terms of Reference. Where appropriate, recommendations are included. These are intended as suggestions to be considered further rather than as fully formed proposals.

**(a) whether the current materiel acquisition and through-life support system is meeting, and will continue to meet, the needs of Defence and Defence industries in a timely, cost-effective and qualitative manner;**

It would be fair to say that the current materiel acquisition and through-life support system is slowly improving in its ability to meet the needs of Defence and Defence Industries in a timely and cost-effective manner. On the assumption that "in a ... qualitative manner" means that the products being delivered are of acceptable quality then the same assessment would apply, noting that timeliness and cost-effectiveness have always been the more problematical areas of performance.

The establishment of the Defence Materiel Organisation, combining responsibility for acquisition and support for the first time since the 1960's, has significant potential to improve outcomes, as do some of the reform initiatives being pursued. Current performance, however, is still suffering as a result of decisions such as decentralisation of System Program Offices and the extensive loss of morale and departure of many experienced staff which occurred in 1998 and 1999.

There remains much room for improvement, particularly in the coordination and alignment of projects for better overall outcomes. Defence understands some of the problems caused by the "stove piping" of projects but has yet to come to grips with any solutions. The costs of the present project-by-project approach include:

- Source selection decisions taken without regard to their effect on the ability of industry to support existing systems;
- Loss of opportunity to achieve economies in logistics, training, maintenance and support through equipment commonality;
- "Built-in" incompatibilities between fielded systems.

*Recommendation:* Defence source selection decisions should consider factors outside the immediate scope of the Project, including the effect of such decisions on industry structure and on the costs of support of existing Defence capability.

*Recommendation:* Defence should introduce mechanisms to identify opportunities for commonality and requirements for compatibility between the systems it acquires and to ensure that these become part of the scope of affected projects.

Defence acquisition effectiveness relies on more than just the Defence Materiel Organisation. The "capability development process" involves other elements of the organisation and, while significantly improved over the last two or three years, still has some shortcomings in its ability to consider the whole range of potential solutions to a particular mission need and to present the Government with a choice of the most feasible. The process remains somewhat unstable and prone to "tinkering".

The outlook of the Defence Capability Systems Division, a key player in the acquisition process, has in the past been dominated by the “war-fighter” – people whose training and experience has emphasised short term decision making under stress over a longer term view. Recent postings of people with different backgrounds such as engineers and logisticians should help to provide a broader and more balanced view.

*Recommendation:* Defence should continue the policy of broadening the range of views brought to bear by the Defence Capability Systems and Knowledge Systems Divisions.

**(b) the impact of the Defence Materiel Organisation acquisition reform program on materiel acquisition and management;**

The Defence Materiel Organisation does not appear to be pursuing acquisition reform as a coherent program. There is no reference to “acquisition reform” on its web-site and the only reference to “reform” is the name of the Materiel Reform Branch. There is little evidence of DMO staff embracing reform at the working level.

In a speech in April 2002 to Defence Watch, entitled “DMO Report Card”, the Under Secretary discussed, the merging of acquisition and support, decentralisation, improvements in people management, streamlining of processes and systems, improvement of contracting and tendering processes and strengthening partnership with industry. The structural initiative, as noted above, has been positive and decentralisation is the subject of a specific Term of Reference. The remainder are covered briefly below.

While specific reform initiatives may be individually beneficial, the most productive approach to improvement of performance of the DMO would be to create an environment where delay and poor performance had real and evident outcomes. One way to achieve this would be to link the organisation’s own administrative and salaries budget to its acquisition budget so that delays in letting contracts and in achieving expenditure on contracts already in place would translate directly into a reduction in the DMO’s budget, engendering the same “time is money” attitude that motivates industry.

*Recommendation:* A regime under which the DMO administrative budget is dependent on its performance should be investigated.

People

While useful initiatives have been taken by the DMO in staff training and development, the major difficulty faced by the organisation is compliance with the constraints of public sector salaries and recruitment which make it uncompetitive in the market place.

*Recommendation:* A structure should be developed for the DMO which would allow it to compete in the market place for skilled and experienced personnel.

Defence has made some moves towards decentralising decision making by the establishment of Project Boards. However, this appears to have been frustrated, at least in part, by a requirement for many seemingly routine decisions to receive Ministerial approval. This causes delays in key project milestones and effectively disempowers the Boards. It is hard to see it having any beneficial effect on decision making.

*Recommendation:* Delegations of authority should be reviewed and placed at the lowest practicable level.

The loss of in-house expertise over the last five years has exacerbated the already significant problem of mismatch of experience and expertise between Defence and industry. This mismatch causes difficulty in contract formation and management and is at the core of many problems of project risk and cost.

Defence has attempted to overcome the loss by the wholesale use of consultants (now termed Professional Service Providers) who have taken over many project office functions. These people inevitably face a conflict of interest between meeting Defence's objectives and their own organisation's ambitions for revenue and tenure. The result is that the costs of Defence acquisition to both Defence and Industry have increased significantly.

*Recommendation:* A comprehensive review of the benefits and costs of the current extent of employment of professional service providers be conducted..

### Processes and Systems

Like all large organisations, Defence is attracted to simple solutions to complex problems. It regularly grasps the latest fad solution, only to abandon it for the next before the downstream benefits have had time to be realised. Examples in the last few years include TQM (Total Quality Management), Systems Engineering, PRINCE (Projects in a Controlled Environment) and CMMI (Capability Maturity Model Integrated).

While many of these have common sense at their base, and while some may produce residual improvements, the results touted by their salespeople and champions are unattainable. The distraction of effort into "recipe book" implementation has been mostly counter productive because staff are continually wrestling with the latest terminology and rework of processes they have just introduced.

These systems, together with the explosion of professional service provider involvement have accelerated the tendency towards large Defence project offices (Air-Force project offices in particular have been notorious for the numbers of people stationed at overseas contractors' premises). In a few cases, Defence project staff represent up to 30% of the total Defence and Industry effort involved in project delivery. This level of "bloat" leads to inefficient micro-management as project office staff strive to add value.

*Recommendation:* The larger Defence Project Offices should be reviewed to ensure that their size is commensurate with their role.

The services technical regulatory organisations and other diverse groups with responsibilities for safety, security, engineering and particular elements of end user needs fulfill an essential function but, under the present organisation arrangements, can result in such organisations having veto power without any responsibility for project outcome. The "advise and report" process, used in the past to overcome the resulting deadlock, appears to be no longer in favour with the result that lengthy delays can occur in project implementation.

*Recommendation:* Structural mechanisms capable of causing deadlock in project development and implementation should be identified and redesigned.

### Contracting

Some significant improvements were made in the standard forms of contract under the SMART 2000 Contract initiative which included extensive consultation with industry. (Industry was also consulted on the SMART 2000 Statement of Work but its advice that the

document was over-prescriptive and would increase costs was largely ignored). The Under Secretary noted in his April speech that “Some of the lawyers say we’ve gone too far – that we’ve rolled over for industry. Industry, on the other hand, says that there’s still some distance to go, so maybe we’ve got the balance about right.”.

Unfortunately the lawyers appear to have prevailed and the most recent document (ASDEFCON) has dropped a number of the more sensible initiatives. The result will be more protracted contract negotiations with hardened attitudes and the probability of inferior outcomes for both Defence and Industry.

Defence is experimenting with new contract forms such as Alliance Contracting. This initiative recognises the importance of a collaborative approach between Defence and Industry both prior to and during the contracting phase of a project. While it is not a panacea, it is an appropriate form for complex contracts, particularly where there is a natural sole source or where competition is unlikely to offer the best outcome. The initiative is commendable.

*Recommendation:* Defence should be encourage to continue to investigate innovative forms of contracting.

### Tendering

The Under Secretary also said: “While we have not succeeded in reducing the bulk of tender documentation to the extent I would like we have managed to speed up the process considerably”. Given examples such as Project Air 5333 (tenders closed April 1997, contract awarded mid 2002), this should not be difficult.

The amount of documentation sought remains the major cause of the excessive cost of tendering – a cost that is borne ultimately by the Australian taxpayer. Typical marketing and tendering costs borne by industry are 2% to 3% of project costs. Tendered prices must recover the cost of bidding the particular project but also the costs of previously unsuccessful bids. If the average tender short-list is three, then 6% to 9% of the defence acquisition dollar (i.e. as much as \$200 million per annum) is being spent on the tender process.

Defence has always demanded much more data than industry needs to generate to define prices and reduce risk to an acceptable level. The principal causes appear to be an attitude of “let’s ask for it, just in case” which arises from the fact that tenders are not funded and therefore the cost to Defence of demanding more than it needs is not immediately evident.

The attitude results from traditional risk aversion coupled with lack of understanding of industry by Defence personnel, particularly by junior staff. Staff loan and exchange programs have been proposed for the last several years in an attempt to overcome the problem but have not been implemented seriously.

*Recommendation:* Data requirements for tenders should be developed using a zero-base approach, requiring each data item request to be justified on its merits.

*Recommendation:* An exchange program between industry and the DMO should be implemented.

The recent proliferation of PSP support to project offices has exacerbated the problem through the introduction of new tender processes purporting to produce objective results. All of these are different and all must be fed by data in specific and often arcane formats. The

objectives seems to have as much to do with the PSP improving its security of tenure by becoming indispensable as with efficient acquisition.

The same mechanism appears to be driving project offices to introduce arbitrary modifications and extensions of the SMART 2000 template, adding to the cost of responding to tenders.

*Recommendation:* The review of the benefits and costs of professional service providers should include consideration of their contribution to tender costs.

### Industry Policy

Defence's policy for industry is commendable. Since the mid 1990's, however, Defence has progressively marginalised industry considerations in its acquisition decisions with the result that policy and implementation have diverged substantially. The result is a fragmented industry with more suppliers in any given sector than in comparable countries such as the UK, Canada and most European countries. R&D is minimal as is investment in people, process improvement and export development. Overall, the Australian defence industry's ability to contribute to the defence of Australia falls far short of what might reasonably be expected in a country with our GNP, education levels and defence expenditure.

In July 2001, Minister Reith recognised this divergence and the fact that the policy was largely process-oriented and was not producing outcomes. He pointed out that the Defence market was monopsonistic and that an attitude of leaving decisions to "market forces" failed to recognise Defence's role in applying these forces. The result was a new approach under which Defence would replace its approach of project-by-project competition with longer term relationships with industry covering strategic packages of projects. This approach was endorsed by Cabinet and reinforced by Minister Hill early in 2002.

Defence, in consultation with industry, is in the process of producing plans for the various industry sectors with the first of these, dealing with the rationalisation of shipbuilding, to be considered by Cabinet in September 2002. Work in the other sectors is proceeding more slowly and it is evident that it does not have the full backing of all members of the DMO Executive. There is also opposition from Government Departments with a tendency to dry economics and an inability to understand that the industry's contribution (both direct and indirect) to defence capability must be taken into account as well as general market theory.

While the new policy is a significant advance and has the potential to build an industry with real capability to influence the defence of Australia, it will fail unless the Government forces Defence to account for progress by measurement of outcomes.

*Recommendation:* Assessment of Defence Industry policy should be regular and based on achievement of identified outcomes.

The recent decision to participate in the JSF program, while criticised by some companies with a vested interest in aircraft other than the F-35, should be positive for Australian industry. For the first time in an aircraft acquisition project Australian companies will have a chance to become part of the "global supply chain" and supply components for the whole program rather than just the Australian aircraft. In comparison with the expensive and ultimately futile Australian Industry Involvement program for the FA-18, the JSF approach will be less expensive and is likely to have a better long term outcome.

There is a danger, however, that Defence will seize on participation in the global supply chain as the answer for all projects. It needs to understand that building a small part of a large number of products does not develop a capability to support the product as a whole. For tightly integrated “system products” like combat aircraft and missiles in-country support by local industry will inevitably be limited and the approach at least offers a way to build industry revenue and capability. For other systems an industry involvement program targeted at building and sustaining a support capability remains the soundest approach.

*Recommendation:* “Global Supply Chain” participation should not be pursued at the expense of current Australian Industry Involvement Programs except in cases where such programs are not able to deliver the required support outcomes.

**(c) the current status of major equipment projects in meeting the organisation’s requirements;**

The cost and schedule performance of Defence Projects is an issue in most countries. In general this is because Defence projects which avoid all technological risk will almost inevitably deliver a second rate outcome. Countries which have no “failed” defence projects are simply not setting the bar high enough and will have an inferior defence capability in comparison to those which are prepared tolerate some failures. The immature attitudes of the press, some parliamentarians and the Auditor General in this regard continue to do Australia a disservice.

Australia’s performance as a whole is better than uninformed press and parliamentary comment would suggest but there remain a number of failures which can not be explained by over-ambitious technology goals. The following are some of the causes:

- Project Schedules are compressed when, as usually happens, Defence takes longer than planned to reach contract award but the end date for fielding the new system remains fixed. The highly competitive environment, with an over-supplied industry and new entrants encouraged, forces companies downplay risk and bid compliant schedules, however unrealistic, in order to win contracts.
- The fragmented state of the Defence industry, which has resulted from Defence’s acquisition policies over the last eight to ten years, means that companies have little depth. Projects are more vulnerable to the loss of key staff or other unplanned occurrences than they would be in an industry serviced by a smaller number of larger players.
- A surprisingly high proportion of Defence’s “problem projects” have very large multinational companies as the prime. While these companies obviously have the capability to achieve better results, there is a persuasive argument that Australia’s projects are so miniscule in comparison to the usual scale of business that they are unable to attract the quality staff necessary for success.
- Failures still occur on too many real projects as opposed to prototypes and technology demonstrators, largely because Defence continues to allocate quite inadequate funding to the latter.

Defence has still to come to grips with the benefits of a controlled, incremental approach to development of capability that has been a feature of a number of successful “planned product improvement” and “technology insertion” programs in the US and other countries. The initial planning for the upgrading of the FFG-7 class ships envisaged such an approach but gave way to a one-shot major upgrade problem which is, predictably, now in difficulty.

The ANZAC Ship Project, with a large class, low initial capability, long overall life of type and significant investment in Australian industry offered a perfect chance to implement incremental upgrading. That chance was almost lost through delays and over-ambitious ideas such as the “Warfighting Improvement Program”. The ANZAC Alliance offers an opportunity to recover the approach through incremental development of the Anti-Ship Missile Defence and Underwater and Surface Warfare Upgrade Projects.

**(d) the impact of the creation of decentralised System Program Offices on materiel acquisition and management; and**

While the basic idea of location of Systems Program Offices close to their “customer” has some appeal, it has involved some very substantial short and medium term costs through loss of expertise as well as the direct costs of relocation (for which no additional funding was provided by Defence).

This initiative may have beneficial result over the long term. The approach of locating most Army SPOs in Melbourne adjacent to their support organisations is certainly sound. In a number of cases, however, the location of the System Program Offices does not appear to have been thought through and the more complex interfaces with other organisations have been made more difficult by relocation.

As an example, the ANZAC Ship SPO is located at Rockingham WA. While close to those WA-based ships that happen to be in their home port at the time, the office is six or more hours travelling time from the organisations in Melbourne, Adelaide and Canberra with which its most numerous, closest and most complex interfaces exist.

*Recommendation:* The location of Systems Program Offices should be selected to optimise its interfaces with other organisations in addition to the end-user of the system.

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