Submission to Senate Foreign Affairs, Defence and Trade Committee.

Inquiry Into the Procurement Procedures for Items Identified in the Defence White Paper.

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Overview

I have prepared this submission in an attempt to assist the Senate in understanding the issues and problems associated with the procurement of military equipment. The Australian Defence establishment is not alone in the receipt of criticism. The UK, USA, Canada and New Zealand Defence procurement systems have all been criticised at some point and yet the problems persist or are perceived to persist.

In this submission I suggest there are 4 areas where an acquisition can become a problem. These areas are not necessarily part of the "act of acquisition" but can be found in the definition of need, the method of delivery and contractor performance and in the measurement of success. Criticism without understanding is of no value and I suggest that those that do criticise are at times not in possession of the full story. I am not suggesting that things cannot be done better and a well structured approach and understanding or all risks would hopefully improve the outcome from a provision of capability perspective but unfortunately those that take measurements after the event my have a different view.

It is very difficult for the DMO to mount a defence against criticism of a procurement, a criticism that is made with the 20/20 vision of hindsight. There are decisions made during a procurement that are logical and considered to be in the best interest of Defence at the time but in hindsight can be seen as less than ideal. A review after the event may not necessarily pick up on the reasons a decision is made and sometimes measures of performance are from the wrong starting point. In simple terms it is those that audit or measure the performance of a Defence procurement that also need to be held to account with respect to the starting point and the way audits are conducted and reported.

The comments in this submission come from the experience I gained over 7 years as the Deputy Secretary of Defence (Acquisition) for New Zealand. Naturally the New Zealand military procurement programme was not as large as the Australian programme but was still $3.69B and covered the purchase and conversion of civil aircraft, upgrading of military aircraft and the purchase of two helicopter types, 7 ships for RNZN, weapons systems, communication equipment, light armoured vehicles and light operational vehicles.

The 4 Problem Areas for Procurement.

1 Capability Definition

The Capability Definition process requires an analysis of Government Defence policy and what is expected to be done by the Military to deliver that policy outcome. In New

Zealand it is not just Defence policy that is considered but the interaction between the Defence Forces and the Civil authorities and departments.

As an example the New Zealand Government policy was to have a maritime patrol capability. When we examined this need from a capability perspective we discovered a large portion of that capability was needed to meet civilian requirements. Search and rescue, fishery patrols, boarder protection, working in the Southern Ocean and the Pacific, servicing the Antarctic bases and even disaster relief were considered. This analysis defined the need for the 7 ships for the RNZN including the functional performance specification for the ships. It helped us determine that three types were needed, 4 Inshore Patrol Vessels, two Offshore Patrol Vessels capable of working down to 72 Degrees south and a Multi Role Vessel for disaster relief and for deploying and supporting the Army where appropriate. The needs for search and rescue particularly focussed on the upgrading of the P3 Orion Maritime Patrol Aircraft. Military requirements were an add-on to the significant civilian requirements.

To understand what we needed we looked at lessons from past deployments, concepts of operations, conditions at sea, the area over which operations had to take place and the types of disasters that a response from the Military may be necessary and the support likely to be required.

The Capability Definition process should also look into Rough Order of Magnitude (ROM) costs for a capability and also any special training and operational changes necessary to deliver the desired outcome. Unfortunately ROM costs are exactly that, rough estimates that unfortunately need to be published but end up being used as a measure of success. There are no cost estimating books for military equipment like those found in the construction industry. Each project is unique and the only time you get meaningful numbers is when you have engaged with suppliers or run a tender process.

The Capability Definition process needs to be robust. It needs to consider all aspects of a capability and the risks associated with delivering that capability. It should be used to not only define a particular project but inform the long term planning for Defence capability well into the future. It should be looking at new and emerging technologies and the risks associated with adopting those technologies. An examination of leading edge technologies should be undertaken to identify those mature enough to be considered. Going beyond the leading edge to the bleeding edge of technology is a recipe for disaster as these types of projects just bleed money.

The outcome of the Capability Definition phase is an understanding by Government of how Defence proposes to deliver the capability to meet policy objectives, the risks attached to the project, the expected budget and timing. Government should be given the opportunity to direct or not the commencement of a procurement process.

Also the DMO needs to be sure that they are not being given a hospital pass. They need to have been intimately involved in the discussion on technology, risk, timing, budgets, procurement methods and through life considerations. The DMO needs to be able to say to Government that it is confident it will be able to deliver the capability at the defined cost and within the time determined as part of the Capability Definition process and approved by Government.

The need for a capability is usually defined based on a known set of circumstances that may or may not be relevant at the time the capability is ready to be introduced into service. At key decisions points during the acquisition the capability should be reviewed to ensure that the requirement is still valid. It is unlikely that there would be a hold put on a major procurement but it does happen. Changes in the political environment and advances in technology may justify a rethink and anything significant that impacts on risk, cost and capability should be presented to Government.

The Capability Definition process should also be used to determine if an existing capability that is nearing the end of its life is necessary in the future. Replacing like with like is an option that should also be tested.

The Capability Definition stage is the first and probably the most critical phase of a procurement. Errors made here with respect to estimates of cost, maturity of technology and procurement method will have a significant impact on those charged with purchasing the capability. Audits of the outcome of this phase would be justified.

2 The Act of Procurement.

It is reasonable to expect the act of procurement to go smoothly if the Capability Definition phase has been done properly. The people running the procurement are at the most risk if things go wrong and therefore need to be intimately involved in the Capability Definition process especially relating to budgets, maturity of technology, risks, time and methods of procurement.

From the procurers viewpoint the best procurement is an “off the shelf” solution where the equipment is currently in service, costs are known and the capability meets the needs of the Military. Australia is now procuring “off the shelf” solutions an approach taken by New Zealand for many years.

An “off the shelf” solution will only succeed if it is truly “off the shelf” and not adapted to meet what people perceive is a unique capability required for Australia. The Capability Definition process is where these unique capabilities need to be identified and tested to see if they are absolutely necessary and if the “off the shelf” solution would not provide the level of capability needed.

There are a number of ways of purchasing equipment from open tender to a purchase on a Government to Government basis. The chosen method will have a major impact on the outcome especially if competition is a measure of value for money. The pure tendering approach where a number of suppliers compete is not unknown in Defence procurement and the Capability Definition process needs to make sure that the necessary capability will be provided no matter which supplier is chosen. Instead of a detailed specification a more functional performance type of specification suits this type of procurement. For arguments sake it is best not to describe the ship in full detail but describe what the ship has to do, the conditions where it has to operate and the required availability. From this functional performance type specification there is likely to be a number of ship builders with known and proven designs capable of performing as required.

If the start of a successful procurement is dependant on the quality of the Capability Definition process then the completion of a successful procurement depends on the management of the process, selection of a contractor or method of purchase. Not meeting cost and time parameters are most likely to be the cause of what some consider as a failed acquisition. It needs to be understood that the cost and time parameters as determined during the Capability Definition phase should no longer be the measure. Once the tendering and negation phase is complete the cost and time parameters need to be reset. The Government should be given the results of the tender and negotiation process and an explanation as to why there is a difference between the figures and times determined during the Capability Definition phase and those figures and times that come out of the tender and negotiation stage. There should also be a restatement of risk as some risks being eliminated through the tender and negotiation process but there may be new risks that the Government should be made aware of. Any evaluation of the performance of a procurement should be based on the Governments understanding of the figures, delivery times and capability at this point.

One other consideration that may impact on the views of those reviewing procurements is the need for a national industrial ability to build and maintain military equipment. A strong defence industry is important for Australia but there is not necessarily the continuous flow of work for industry to maintain and even work programme in the long term. The offshore supply may be a cheaper option but may not be in the best interest of maintaining a national defence building and maintenance capability. There is no doubt that the DMO works hard at supporting local defence industries and that should be recognised in any measure of a procurements success. What the DMO should bring to the Capability Definition table is an understanding of how Australian defence industries can support the building and maintenance of the equipment in the future and what other international relationships exist or are available that would enhance the Australian defence industries ability to survive and support Defence. This is another aspect of a procurement that the Government should be made aware of.

3 Contract Management and Contractors

Unfortunately this is where things can go wrong because of three things. Contractors can at times exaggerate their ability to deliver complex systems, forms of contract that do not accurately reflect the sharing of risk and a procurement entity that allows “good ideas” for capability enhancement to become part of the procurement without understanding the risks.

Contractors over promising is not uncommon and there is little that can be done except to be sceptical. Every opportunity should be taken to understand exactly what the contractor is capable of providing. Known systems should be seen operating and if the systems are new or unique then an alternative lower risk option may need to be considered. It may also be necessary to test the option against what was expected from the Capability Definition phase. It must also be clearly understood exactly where a contractors product is in the product lifecycle. Early on in the cycle there is a risk that the technology may not have matured sufficiently to be confident it is actually going to work. If it is late in the lifecycle it may become unsupportable very quickly. The middle ground is where to be but that can be hard to define.

Big expensive military capabilities are a mixture of complex systems that have to work together to deliver the desired outcome. They take years to develop and mature to a

point where there is confidence that on any given day it is going to function as required. In getting to that point a supplier or developer has to rely on support from those that want the capability and can afford it. The understanding has to be that the Contractor may not be able to deliver the desired outcome without some financial support beyond what is contracted.

The nature of the contract is important in that it is one way of ensuring that if the Contractor is having difficulty there is no comeback to the client. This is less of a problem if you are purchasing known equipment and capabilities "off the shelf" but not so easy if there is a mutual desire to enhance a capability. A clear understanding of and sharing of risk needs to be part of the contract where capability enhancement is a desired outcome.

The way payments are made against a contract is an important method of ensuring the Contractor only receives what is due for the work done. What any procurement group does not want is the end up paying for most of the capability before it is proven. In New Zealand our payments were based on the achievement of agreed milestones that could be easily determined and measured. Contract deposit payments were backed by Bank Guarantees and payments made only when an agreed point had been reached. For example, a payment would be made when the engines for the helicopters had been ordered and further payments when they were tested and delivered to the assembly plant. Payments were made when the bench testing of systems had shown that the various components worked together. These were measurable points where there was a clear acknowledgement of the completion of an activity.

The final risk to the contracting phase is "scope creep". This is where the Contractor or even the Military suggest some new and emerging technology that may be a useful enhancement to the capability. Sometimes "scope creep" is unavoidable but in this case it may simply be because a component of a system may be a new model with enhanced performance. In this situation there are risks especially if the new model has not been fully tested or integrated into like capabilities.

Any suggestion of a significant enhancement of capability should be tested by going back into the Capability Definition process where need is identified and risks understood. Even notifying the Government of this additional capability and seeking approval allows the cost and time parameters to be reset and any future measurement of the performance of a procurement based on these new figures.

4 Procurement Reporting.

Much of the criticism of Defence procurement suggests a lack of control of cost, time and technology. The criticism of cost is usually based on a view as to what was originally announced as being the cost and the cost at the end of the day. This criticism is only justified when comparing apples with apples but unfortunately it is the whole fruit salad that needs to be considered.

The initial figures that get published are best described as rough estimates and usually produced early in the life of a procurement. Things that are my not be considered in this first rough figure are the quantity of spares, changes in technology, level of capability required and even source of the equipment. These figures should not be used as a basis for the measurement of a procurement.

The Capability Definition phase provides the opportunity for a proper analysis of the likely cost of a procurement because all issues should have been considered. The figures that come out of this process are less rough but should not be considered as totally accurate. They should be of a quality to give Government confidence that the capability can be provided within the cost indicated. There is the opportunity here for audit and review if only to ensure that process of defining a capability has been all inclusive.

The real test of a procurement should be based on what comes out of the tender and/or negotiation stage. It is only after this stage is completed are all the answers available to the question of cost, capability and time. This again is a point for engagement with Government where approval to proceed can be sought. Review and audit at this point should be about probity and process.

Another opportunity for review and audit is in relation to the management of the contract. Here the issues that need to be examined are payments against milestone or work done, changes in risks and risk allocations, "scope creep" and/or reduction in capability and contractor performance against the contract. If risk is being properly recognised and managed, payments based on achieve milestones and there is no "scope creep" or unauthorised enhancements then a review or audit would find little to be concerned about.

It is wrong to audit a project at the end. It should be a process that is not continuous but used at various points to test the outcomes of activities immediately before the audit. Every Military procurement is different and recommendations from one audit do not necessarily flow onto the next. For the sake of those involved in the procurement process from definition of need to delivery the regular measurement of performance will protect them from undue criticism as errors in process and understanding of cost and capability issues will have been unearthed, understood and corrected.

Tips for Success.

Understand fully what is required and why.

Spend the time to define the capability needed from a policy perspective, understand what is available that may provide the capability, what is the expected costs and what are the risks. Spend the time in the Capability Definition phase to answer these questions. The DMO and the users need to be fully engaged in this process because they are the people responsible for the purchase, maintenance and use of the equipment.

Get as close as you can to an "off the shelf" solution.

There is less risk in a known "off the shelf" solution provided it is not a solution at the end of its life cycle. It may be more cost effective to change the way you use the equipment than to change the equipment to meet the way you operate. If the "off the shelf" solution is not available then understand the risks associated with new or immature technologies. Just because a contractor claims that something new and exciting will work it may not.

Avoid scope creep.

"No" is the only response to suggestions from within Defence or from a contractor that some additional capability should be included in the project. This "scope creep" and should be avoided. Any addition suggested capability enhancements should be tested by further analysis. If it is a good idea and has no risk or cost implications then it can be permitted. If it remains a good idea and there are risk and cost implications make sure they are understood. Capability Definition process is where the decision should be made.

Payments to Contractors should be based on the achievement of agreed milestones.

Work out with the contractor when there are points where components have been delivered or and outcome achieved. They can be small or large achievements but the activity needs to be completed before the payment is made. There should however be a significant payment left to the last to ensure completion of the project.

Undertake audits at key decision points.

This will avoid the end of project audit that uses early estimates as a basis of measuring success. Auditors should not be part of the decision process but engaged sufficiently to ensure that there is a clear understanding of what is happening within a project. Criticism without an understanding of all the issues is a waste of time. Criticism with knowledge of the issues and decisions can be constructive and result in improved processes.

Thank you for considering this submission.

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