


When Australian defence procurement goes wrong: Improving outcomes in a troubled contractual environment

The Economic and
Labour Relations Review
24(2) 238–254
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/1035304613482653
elrr.sagepub.com


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Abstract

Defence procurement is a notoriously difficult and often controversial field of public management. In Australia, problems with schedule and budget overruns have been addressed through business process reforms aimed at tightening control and improving professionalism. However, studies of complex contracting in other contexts show the importance of relational factors of trust, collaboration and risk-sharing. These factors are not encouraged by the predominantly transactionally based contractual environment of Defence. Based on a detailed examination of three case studies, we suggest that there is a disjunct between the types of controls that are applied by Defence and the requirements of delivering complex, long-term projects involving multiple stakeholders. The need for both improved flexibility as well as heightened accountability is evident. We argue that balancing these values involves processes that encourage, rather than discourage, communication, risk-sharing and trust.

JEL Codes: H570, H830

Keywords

Australia, contracts, contractualism, defence, flexibility, procurement, public–private partnerships, trust

Introduction

Defence procurement is a complex field, with strategic and industrial, as well as budgetary and management, dimensions (Wylie and Markowski, 2010). The sums expended are

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large: in 2010–2011, payments to suppliers by the Defence Materiel Organisation (DMO), covering the acquisition and maintenance of assets for the defence forces, totalled just over AUD\$10 billion (Department of Defence, 2012: 96). While most procurement (and associated sustainment) projects run smoothly, there have been some notable failures with the Super Sea Sprite helicopter project (cancelled in 2008 after over a billion dollars had been spent) and problems with the reliability and sustainability of the Collins class submarines being two high-profile examples (Australian National Audit Office (ANAO), 2009a, 2009c). Many other projects experience budget and schedule overruns (ANAO, 2012b; Australian Senate, 2011: 1–2; Thomson, 2011).

Clearly, improving these outcomes is a matter of some priority. From the official perspective, the problem has been framed largely as one of control – that is, eliminating or at least reducing cost overruns and delays by imposing greater commercial discipline on procurement and sustainment processes and making the purchasing organisation more businesslike (ANAO, 2009d: 52; Australian Senate, 2011; Mortimer, 2008).

This prescription is in keeping with standard contemporary thinking in public management and is supported by findings from the ANAO. A major ‘lessons-learned’ report from the ANAO identifies a number of purchasing-related factors in procurement projects that fail to meet their targets. The ANAO identifies inadequate skills levels in the purchasing organisation, a lack of independent risk assessment, failures to retain sufficient leverage over contractors and the constant pressure on purchasers to make payments to contractors to keep projects moving (ANAO, 2009c: Appendix 1).

While these reforms are clearly important, an important question is whether they will be sufficient to address underlying problems in the contractual environment, that is, the relationships between purchasers and providers that are created and sustained by the contracting processes and cultures of Defence. This question is prompted by recent work in public sector management that stresses the complexities of public–private partnering, and the importance of trust-based and collaborative processes in preventing difficulties, and resolving them when they occur. More generally, long-term projects involving specialised and highly technical processes and assets would be expected to generate relational behaviours between the parties – that is, investment in forms of communication that go beyond the terms of the contract itself.

It seems likely that if Defence’s main response were to mandate more controls, these might be counterproductive, if the role of relational factors were neglected. What evidence is there in defence procurement of these kinds of relational behaviours? Which mechanisms encourage them, and which discourage them? These questions were investigated through three case studies where there had been budget and schedule overruns. Following this investigation, we argue that further improvement in outcomes will depend on more explicit recognition of the importance of investment in relational factors, by both government and industry.

The contractual environment of defence procurement

Defence procurement shares a number of traits with the broader public sector. Indeed, it could be argued that Defence anticipated many of the trends associated with the market-oriented public sector reforms of the 1990s. The private sector has long been involved in

the manufacture of defence assets, and the strategic importance of defence-related industry has been acknowledged by successive Australia governments (Department of Defence, 2000, 2009).

Defence was also one of the first parts of the public sector to undergo significant privatisation. During the 1980s, the Government Aircraft Factory and the Williamstown Naval Dockyard were privatised, followed in the late 1990s by Australian Defence Industries (Aulich and O'Flynn, 2007; Fairbrother et al., 2002). It is important to note, however, that in many respects, Defence is indeed 'different'. There are significant structural, systemic and governance factors that are unique to Defence, and that impact the contractual environment.

First, there are a number of unique relationships involved, with overlapping and often ambiguous roles. The end-users of the assets are not civil servants or members of the public but members of the armed forces. While in the formal sense, governments are the purchasers, the military are also heavily involved in the identification of the requirements to be purchased, and play a continuing role in the implementation process. Thus, the military play many roles – they are at different times and in different parts of the system, purchasers, clients and regulators. At the same time, civilian control of the military is one of the key principles of governance in all democratic states.

Second, Defence procurement differs in important ways from public–private partnerships (PPPs) as these arrangements have been generally understood in the public sector management field. PPPs have been widely used by governments to generate assets, while avoiding debt (Chung, 2008). The allocation of risk forms a key component of the contractual environment. In contrast, Defence assets, at least traditionally, are always financed by the purchaser (i.e. government). In theory, this should mean that the supplier shoulders the risks associated with the project, by pricing these into the tendered price. However, in high-tech, long-term purchasing relationships, where there is both considerable uncertainty (i.e. risk cannot readily be quantified) and considerable competition for contracts, risk is shared *de facto* between the parties, without the Commonwealth having an explicit model to manage the situation.

Third, political factors (which are strong in conventional public-private partnerships) arguably manifest themselves even more powerfully and in more diverse ways in Defence. Political leaders may wish to buy from a particular country and pre-empt proper appraisal. Whatever their origins, shortcomings in defence procurement are useful fodder for oppositions and the media. Moreover, the political drive to locate manufacturing and/or maintenance facilities in particular locations remains strong.

Finally, defence industries internationally consist of large, multi-national firms with both civilian and military operations. All are to some degree dependent upon government contracts. The stance of governments towards 'their' technology is also critical. For example, buying from the United States necessitates dealing with the US government through the Foreign Military Sales system, which maintains stringent control over strategic and commercial aspects of contracts. At the same time, the scale and complexity of defence equipment requires a degree of inter-governmental collaboration from the purchasing side (e.g. with the Joint Strike Fighter, a programme involving eight countries partnering with the United States). The interdependence and interpenetration of government and industry

in the defence field renders the notion of 'classical' competition problematic for all but the most basic military assets.

Relational factors in public-private partnerships

Initial theoretical work by Williamson and others suggested that partnerships constitute an intermediate form between 'in-house' production of assets, and acquisition through competitive processes. Under certain conditions, relational rather than transactional processes would prevail, and partnership-like behaviours could be expected to emerge (Williamson, 1979).

These preconditions would appear to be met in public-private partnerships: using that term in its broadest sense, to cover long-term contracts between government and the private sector designed to provide a range of assets, products and services to the public sector (Bloomfield, 2006). These projects represent repeated exchange-based episodes (or the potential for these); many assets are specific to particular suppliers and longer time frames encourage investment in good relations. However, while some public-private projects in the infrastructure field show strongly developed relational behaviours, others have shown little evidence of collaboration or trust between the parties.

Smaller scale purchasing shows a range of behaviours. Reeves found that in five public-private partnerships governing school-building in Ireland, both client (Department of Education) and contractor expressed a preference for 'transactional' (i.e. contract-based) relations rather than the flexible exchange implied by relational contracting. Yet, both parties believed that trust was also present. Reeves speculated that the continuum of transactional to relational contracting was, at least where the public sector was involved, not a sufficient model. Both transactional and relational elements must clearly be present. It is noteworthy that Reeves found that the contractors believed that they were altruistically helping the client over difficult patches, even when the contract did not oblige them to do so. Interestingly, values of cooperation, flexibility and trust were of overwhelming importance in the success of the relationship between school principals (the end-users of the services) and contractors (Reeves, 2008).

Lian and Laing (2004), comparing public sector purchasing of health services with private sector purchasing, found that the public sector was indeed 'different'. The requirements of public sector accountability and probity propelled purchasing in the direction of transactional relationships, despite the fact that a relational approach could be expected to produce more effective outcomes (Lian and Laing, 2004). Partnering, while desirable, carried with it the risk that purchasers would draw too close to providers.

While the role of trust has generated a large literature in the business management field, it remains an under-researched factor in public sector management. Edelenbos and Klijn (2007) argue that actor networks characterised by high levels of trust should show more and better cooperation than those characterised by low levels of trust, that information exchange should be enhanced and finally, that better outcomes will be achieved where trust is high. From an empirical perspective, they see trust as a generated process, one that can be improved by deliberate action and by the evolution of enhanced structures and processes but, equally, can be eroded when things go wrong. They identify conflicts about risks and costs as contributing to reductions in trust. Trust appears to be

a necessary but fragile component of these complex interrelationships (Edelenbos and Klijn, 2007).

Similarly, McDuffie (2011) points to the dynamics of trust and the complexities of trust in inter-organisational relationships, warning against conceptualisations that dichotomise low- and high-trust states and view dynamics only as alternation in modes. In the broader management literature, work on process-based versus relationship-based trust suggests that both are important.

Also of relevance is the work on collaborative management styles and approaches in the public sector. Weber and Khademian (2008) found six different attributes to be associated with collaborative problem-solving: understanding and communication; balancing innovation and accountability; enlarging public, private and political landscapes as part of capacity building; crossing boundaries frequently and with ease; working to establish new trust-based relationships and employing substantive policy knowledge.

Despite the long history of private sector contracting to the defence forces, the public management literature has had little to say about defence procurement per se. One of the few empirical studies in the field – by Sanderson – examined the rhetoric–reality gap in relation to partnering in British defence procurement. Sanderson (2009) concluded that in the case he examined, the power relationships were so much in favour of the purchaser (i.e. the Ministry of Defence (MoD)) that the interdependence needed for the generation of partnering was missing. While the MoD used the phrase ‘partnering within competition’ in effect, the public sector purchaser retained its primacy at all times. Sanderson (2009) styled relations between the MoD and a typical prime contractor as ‘adversarial collaborative’.

McGuffog (2011) addresses the key question: how can we achieve better value for money and certainty of outcomes in defence procurement? He points to continuing incompatibility between the constraints of public sector accounting and financial management and the requirement for managing complex projects and value chains. In particular, he argues for stronger attention to the definition and management of uncertainty and risk.

From an efficiency perspective, Bittleston (1990) argues for governments to do more to harness the power of competition in defence procurement. The Royal United Services Institute (RUSI, 2009), in a recent article, stresses the willingness of British participants to undertake partnering, while also noting that, from the MoD viewpoint, ‘governance’ must necessarily be about MoD control.

To summarise across a disparate and very diverse literature, some flexibility in the interpretation of relational contracting would appear to be required in the public sector. Dichotomous ‘transactional versus relational’ factors do not adequately describe multi-valent defence procurement systems. Indeed, as both the defence and non-defence-related literatures show, the specific attributes and tensions of the public sector are part of the problematic to be examined. In the next section, we explore the particular attributes of defence procurement that impinge on this reality.

The research approach

The literature on partnering in both the public and private sectors suggests that relational factors (trust, collaboration, communication and risk-sharing) can be expected to play a

significant and (in general) positive role where complex assets and long-term relationships are involved. A priori, then, we would expect that unsuccessful procurement projects might exhibit failed or intermittent relational factors. However, the importance of context in the public sector, and the unique position of defence within the public sector, suggests that relational factors may operate differently or not at all.

Our research objective, therefore, was to understand more clearly how the particular circumstances of defence procurement shaped the emergence of relational factors. The circumstances of procurement – particularly the desire of the political executive to maintain control – might be expected to undermine relational factors of trust, communication and collaboration. At the same time, the presence of conflict, and the need to resolve it, can produce a positive environment for cooperation.

Moreover, there is unavoidable ambiguity in many aspects of the purchaser–provider relationship, with high levels of uncertainty and an array of interconnected risks. All these factors provide an environment in which communicative and relational strategies might be expected to emerge. Our research approach, therefore, was to investigate the behaviour of these factors over time, using key turning points in contracts as a way of detecting the ebbs and flows.

Method

Three cases where procurement projects failed to meet their targets were chosen for in-depth examination. They were Australian-based (i.e. the activity concerned was taking place in Australia), and they were of ‘medium’ scale and complexity – that is, the projects did not involve major new platforms but contained considerable degrees of technical challenge.

The three cases were chosen from 25 examples of problematic purchasing examined by the ANAO from 2000 to 2010. While selecting on the dependent variable (i.e. a problematic history) has its risks, these were counteracted by the rich source of data contained in ANAO reports. The Audit Office reports gave extensive chronologies and contained a rich source of ‘relational’ data. These were supplemented by interviews with key personnel from Defence, the DMO and in particular, from industry. In total, we undertook 15 interviews for the three case studies (further information is given in footnotes to the case studies): 7 for the M113 Armoured Personnel Carrier (as this proved to be the most complex chronology), 3 for the FFG upgrade and 5 for the Light Weight Torpedo project. Interviewees were selected on the advice of senior Defence managers and industry contacts and following recommendations by initial interviewees. Key criteria were the extent and level of the interviewee’s knowledge of the case concerned (i.e. time involved with the project and position in the relevant organisation). Where particular claims were made about the working of the contractual environment, these were substantiated by cross-reference to other interview and/or documentary sources. As interviews were conducted on the basis of strict confidentiality, only very general information about the situation of interviewees is included in this article.

Each of the cases represents a different contractual model, enabling us to test some features of the immediate contractual environment. All were notionally fixed-price (rather than cost-plus), but with some variations. The contract in case study 1 involved

incentive payments, while the second was an earned-value method. Case studies 1 and 2 involved a single (prime) contractor. The third case, although initially structured conventionally, was reconfigured into an alliance (partnership-based) contract with multiple parties involved.

Background to the case studies: The role of the DMO

The DMO was formed in 2000, replacing separate purchasing organisations for capital equipment and sustainment (i.e. one for each service) with a single organisation, headed by a Chief Executive Officer (ANAO, 2001). The formation of this organisation was intended to improve purchasing practice, and to concentrate purchasing power. The DMO's budget is substantial (AUD\$10 billion in 2010–2011), and it employs more than 7000 people, of whom roughly a quarter are serving military personnel, working at locations throughout Australia (DMO, 2012; Department of Defence, 2012: 96).

The Department of Defence has a formal, purchaser–provider relationship with the DMO. These performance-based arrangements include Materiel Acquisition Agreements (MAAs), and Materiel Sustainment Agreements. MAAs are employed for major capital acquisitions, and involve the Chief of the Capability Development Group and the Chief Executive of the DMO. Sustainment Agreements involve the Capability Managers (the Service Chiefs) and the CEO (Department of Defence, 2011: vol. 2, chap. 6).

Specific projects are drawn from the Defence Capability Plan, which is drawn up by the Defence Capability Group, part of the Department of Defence. Projects move from the planning to the acquisition phase following a multistage Cabinet-approval process. Within DMO itself, as part of implementation management, Gate Reviews are used as an assurance process, focusing on the identification and resolution of issues (Department of Defence, 2011: vol. 2, 126). In addition, projects that have failed to reach their performance targets are placed (by the Minister for Defence) on a public Projects of Concern list.

In keeping with political and bureaucratic sensitivities, the DMO is kept on a fairly short leash. While a recent inquiry (Mortimer, 2008) recommended that it become an executive agency, with a Secretary-Level Chief Executive, the decision was taken to retain the DMO as a prescribed agency. This means that while it has some financial autonomy, it remains under the control of the Department of Defence (Department of Defence, 2011: 10).

Purchasing framework, tendering and contracts

The principal 'purchaser–provider' interface is between the DMO and Defence. The DMO is therefore a purchasing agent for the Commonwealth, rather than a purchaser in its own right. The DMO uses a variety of contractual arrangements to deliver the required capabilities to defence. It is also important to note that the DMO is responsible for the management and maintenance of purchased systems.

The DMO has contractual understandings with its customers (that is the three services) and specific, project-specific contracts with industry. In agency-theory terms, this gives the DMO a somewhat unusual hybrid character, in that it is simultaneously a

provider (to Defence), a purchaser in relation to industry and a provider in relation to its customers (end-users).

DMO internal organisation

DMO has three major internal groups: commercial, systems and programmes (Department of Defence, 2011: 113). The systems group has primary carriage of acquisitions and sustainment projects, and contains subgroups corresponding to the main arena or character of the system being developed (e.g. aerospace and electronic systems).

Within each sub-group, project-based teams carry out the detailed work of managing tender processes, ensuring the contract is adhered to. Project management expertise is highlighted in these teams. Matrix management is also employed, so that supporting services may be shared across project teams, while still under the supervision of supporting services. The link between industry and the DMO is handled by System Project Offices, which are business units within the DMO that provide acquisition and sustainment services to the Australian Defence Force (ADF) (Department of Defence, 2011).

Cases

Case 1: Armoured personnel carrier upgrade

This project concerned an upgrade to lightly armoured, fully tracked personnel carriers used for transporting infantry troops and their equipment in a battlefield environment. The project commenced in 1992, when a major capability submission was endorsed. The first two phases of the contract (1993–1997) were intended to cover upgrading of 537 vehicles (including 355 full upgrades) at a cost of less than AUD\$100 million.

In 2002, after many contract changes, there was a significant increase in the scope of the contract, when Cabinet approved a further upgrade of 350 vehicles at a cost of AUD\$552 million. A global settlement with the original contractor occurred in 2007. By 2009, Army had received 42 of the 350 vehicles to be upgraded, with the balance yet to be delivered in accordance with the last round of specifications issued in 2008. By 2011, the project was substantially completed and was removed from the Projects of Concern list, with the removal backdated to 2008.¹

Major difficulties emerged early in the life of the project because the scope of the original contract changed dramatically. Originally, a low-key upgrade of Vietnam-era Armoured Personnel Carriers, it grew more complex as the military commitment and battle conditions changed. The changing requirements added to the vehicle's weight, interior space, visual window, ventilation and cooling systems.

In 2008, as the result of a major restructure, the original prime contractor sold its interest in the project to another firm. This resulted in a range of inherited problems that included the lack of production capability to do the work. There were also technical problems in fitting the required enhancements to the 'stretched' versions of the original vehicle bodies. Despite the opening of additional production facilities, increasing costs and schedule slippages continued. A difficult period was eventually surmounted only when the basis for a team-based approach was forged.²

A shared objective to ‘get it done’ drove the collaboration (from 2008) between the project office and industry.³ Some relational elements were evident on the industry side of the project, as the contractor and many of its suppliers had worked together over many years.⁴ However, relations between the contractor and government were not of this character. Individuals worked hard to secure the outcome – but the relationship was contract governed and purely project based.⁵ A final contract renegotiation in 2011 was required to address still-outstanding issues (ANAO, 2012a: 17–18).

In this case, we see the problems of balancing flexibility and control in a changing environment. Changing business and strategic conditions required flexibility (necessitating scope changes in the contract). However, throughout the long years of the project, payments had been authorised to keep the project moving, contributing to a reduction in overall control. Defence’s attempts to recover liquidated damages were frustrated by the complexities of the contract itself, which had evolved to deal with unforeseen practical difficulties as they emerged.

Case 2: New navy weapons systems

A number of guided missile frigates (known as FFGs) were to be fitted with a range of new weapons systems, including missile equipment for integration onto a replacement combat and control system that was itself to be developed through another project. From the outset, the project experienced extensive delays in meeting the contracted requirements, which were originally specified in the late 1990s. The original project schedule was rebased in 2004 and 2006, with a further major change in 2006 when the number of ships to be upgraded was reduced from six to four. Soon after this, the original prime contractor was privatised (ANAO, 2008b: 11–16).

According to industry assessments, the delays came from a number of sources, including a lack of clarity in the initial specifications and underestimation of project risks and complexity (ANAO, 2008b: 20). In addition, major conflict developed between the prime contractor and the client (Navy) regarding acceptance of work that had been done (ANAO, 2008b: 14). In turn, these delays were aggravated by uncertainty in the direction of the project and by changes to project staff (ANAO, 2008b: 41–42).

Test and evaluation procedures (and the relationship between these and the DMO’s control of payments) were held to be unsatisfactory by the Audit Office. Milestone (earned value) payments were difficult to administer when large sums had been expended in the initial phases of the contract (ANAO, 2008b: 15–16). However, from the industry side, it was clear that the engineering problems had been underestimated. The ‘conspiracy of optimism’ (by which costs are routinely underestimated by both governments and suppliers) was in evidence (RUSI, 2009).

Again the ‘Project of Concern’ process proved effective in giving concerned individuals a warrant to proceed. A key factor was that the prime contractor was able to get subcontractors to set aside their grievances in order to set up a platform from which the technical issues could be resolved. Knowing what was needed from the technical point of view was crucial. Addressing the impasse over acceptance issues by talking directly to the ‘customer’ was also important.⁶ At this date (early 2013), some aspects of the upgrade remain to be completed (ANAO, 2012b: 21–24).

As with case 1, there was significant change on the industry side, reflecting the privatisation of government-owned defence companies. The original prime contractor was taken-over by a European-based transnational. Getting the right people in the right place was critical to moving the project forward. Again, however, investment in relational processes came from industry rather than government.

Case 3: Torpedo replacement

Case 3 concerned a replacement light weight torpedo that was to be fitted to and integrated with existing and emerging complex electronic systems on two classes of naval vessels, as well as two naval helicopter platforms and one air force platform. While the project was perceived by Defence to be low risk, based on the notion that the capability was an 'off-the-shelf' solution and in service by two other navies, in reality, the development, integration and delivery of the torpedo on the intended platforms proved more complex than originally envisaged (ANAO, 2010: 122). Although a due diligence report prepared by DMO in 2004 identified the problem of uncosted integration work, an agreement with Defence to proceed with the next phase of the project was nevertheless signed in 2005 (ANAO, 2010: 98–103).

The complexity of the project was both reflected in and partly exacerbated by the contractual arrangements that were chosen. Initially, it was envisaged that the project would be managed through a standard Defence acquisition and procurement contract with a prime contractor (ANAO, 2010: 63). However, soon after the initial Request for Project (RFP) stage had been concluded, an alliance contract was introduced. This new model reflected the fact that the project represented a 'to be developed capability' and was one of DMOs first attempts at conducting a major capital equipment acquisition on the basis of a partnership between Defence and the contractors involved.⁷

The partnership was based on the understanding that that there would be a sharing of risks and rewards, a no-fault/no-blame arrangement to resolve most issues, a joint leadership arrangement and a payment arrangement where a contractor receives a reimbursement of direct project costs and a fee for overheads and profit combined with a pain/gain share arrangement based on project performance (ANAO, 2010: 92).

In theory, the partnership should have provided the kinds of relational factors – that is, problem-solving incentives and opportunities for communication – that the standard contracts did not encourage. However, despite the efforts made by all parties to share risk, progress on the project was severely hampered by a number of factors. These included inadequate initial technical and risk assessment.⁸ In the absence of an appropriately structured procurement process, the alliance arrangements were difficult to operationalise and once in operation, experienced 'significant organisational and cultural problems' (ANAO, 2010: 93).

A fundamental issue was that the Commonwealth was unable to fully commit to the risk-sharing arrangements of the alliance model because the autonomy of its representatives on the Alliance Board was inevitably constrained by the requirements of departmental management. In this environment of uncertainty, mutual consideration, trust and respect proved difficult to develop.⁹ As a consequence of these uncertainties, additional

unforeseen risks, costs and contract management overheads were imposed in the establishment, initial management phases and subsequent phases of the project.

Cross-case analysis: The role of relational factors

Across the three cases, we see interactions between a changing and often unstable contractual environment, the procedures and processes of the purchasing agency and the networks of actors and organisations involved in implementing the contracts. Agents in these situations were typically motivated (and constrained) by the effects of past decisions, by continuing uncertainty and by organisational imperatives and routines. In this section, we elicit the ways in which relational factors emerged from (or were constrained by) these institutional settings.

Contractual environment

The contractual environment was both rigid and flexible. It was rigid, in the sense that (in cases 1 and 2) the entire project was to be managed through standard contractual arrangements that defined requirements in precise and unambiguous ways. In reality, however, contracts were rebased and re-defined in response to changed perceptions of requirements, and/or to the realisation that the original plan and costings were unrealistic. When costs had been underestimated (often in order to secure political support), larger than anticipated expenditures occurred in the early stages. When budgets were reined in, schedules slipped as a result. Revising requirements by reducing the quantity, the model or effectiveness of the asset, was a way of relieving pressure.

Case 3 was an attempt to graft partnering processes onto this environment, with very mixed success. The project overlapped with others, and there was difficulty in establishing roles and responsibilities between the parties. Ultimately, the shared (partnering) environment was superseded when the contract reverted to a prime contractor.

In all three cases, the ANAO reports and our interviews show DMO officials trying to manage ‘up’ and manage ‘down’, struggling to develop and use leverage over contractors in order to change behaviour, while contractors complained that clear arrangements for getting the work done were lacking.

Trust

The purchasing structures employed by Defence are classically transactional – that is, the industry provider puts in a bid to get the work, and the successful tenderer is expected to abide by the terms of the contract, or face sanctions. At the same time, the multiple interfaces in the purchasing system – political executive–Defence–DMO–industry–armed services – are highly charged and highly bureaucratic, with frequent changes of personnel. These are hardly conditions conducive to the generation of trust that is necessary for effective collaboration in conditions of uncertainty.

When things go wrong, trust is further compromised, as actors tend to play ‘the blame game’. In our case studies, the potential for distrust to develop was exacerbated by protocols that discouraged informal communication. The DMO, as the purchasing agent of

government, was wary of allowing clients (i.e. end-users) to get ‘too close’ to contractors, fearing that the end-users might be overly influenced by the contractors’ commercial interests and technical nous. Yet, in some instances, direct communication was the only way of sorting out misunderstandings.

Ironically, case 3, which was intended to facilitate the development of partnering through an alliance contract, failed to establish the necessary clarity around accountability, roles and responsibilities to enable the contract to work. Case 3 supports practitioner advice that formal partnering arrangements require close attention to this kind of detail (Queensland Government Department of Infrastructure and Planning, 2010).

Risk and uncertainty

In all three cases, there was an underestimation of risk. While the weapons themselves did not involve cutting-edge research, acquiring and/or developing and fitting them to older equipment and/or multiple platforms was far from being a straightforward task. Re-equipping or modifying older equipment was thought to save money, but fitting modern digital weapons systems to analogue platforms posed considerable technical problems, particularly when required outcomes were unclear.

In cases 2 and 3, but also in the second phase of case 1, risk was exacerbated by the concern to make the one project achieve multiple objectives. These arguably overloaded contracts’ magnified risk because of the coordination problems they set in train. In case 3, there was a concern to manage risk through negotiation and information-sharing, but the relational factors of trust and collaboration were difficult to develop.

In large part, this was because risk-sharing by the Commonwealth, even though required by the alliance contract adopted in this case, was not formally an option. Solution-finding was often managed by joint damage control strategies and jammed by a need to apportion blame. At times, in cases 1 and 2, contractors shouldered additional risk while dealing with ambiguous or stalled validation procedures.

Knowledge

Bushell (2011) has argued that detailed engineering and project management knowledge is needed in both the purchaser (Defence) and the purchasing agent (DMO) to vet proposals and to ensure realism. While we did not investigate this aspect in our research, our cases showed the importance – once implementation was underway – of professional knowledge and expertise in addressing technical and behavioural problems. Contractor-based engineering knowledge was critical to progress in case 2. Detailed purchaser knowledge was also important (as in case 1). Our cases also showed that a concern to maintain control by senior management could undermine necessary feedback (between contractors and project offices). This lack of communication led, for example, to significant disagreement over testing and acceptance procedures.

Collaboration

When the chips were down, there was a willingness to set difficulties aside and to work together towards a common outcome. Often, purchasing officers and suppliers felt that

this was the only way to proceed. However, in the broader sense, there were few incentives for collaborative behaviours to emerge.

From the DMO perspective, these projects were not, initially, perceived as being critical. From the contractor perspective, defence projects of this kind do not provide major workflows. Interdependence was not sufficiently obvious to promote major commitment from either side at the outset. Applying controls belatedly was doomed to failure. In case 3, efforts to retrieve a faltering collaborative situation were hampered by the need to report constantly to supervising quality assurance committees outside the alliance itself.

Conclusion

From the initial conception to the denouement, each of these cases took over a decade. The clients' needs changed, governments changed, companies changed and personnel changed. The contractual environment responded in a number of ways to these developments, largely through changes to timing and scope of the requirements. However, while these responses relieved pressure and offered a breathing space, they were almost always found (by the Audit Office) to be unsatisfactory, largely because they papered-over, rather than resolved, faulty business processes within Defence.

Defence's ongoing focus on improved business processes and controls will address many of the problems identified by the ANAO. Our analysis suggests, however, that these reforms may not be sufficient. When viewed more holistically, the problems of defence procurement reflect the difficulties of managing multi-stakeholder, networked systems over long periods of time using a purchasing agent (the DMO) operating in a top-down fashion within a difficult and contested political and bureaucratic environment. Projects that encountered difficulties worked through to solutions through collaborative processes that emerged in response to concern 'from the top' but were driven by those close to the action. Partnering, in the sense of shared responsibility and relational approaches to difficulties, was not encouraged by senior management or by the contractual environment.

In these circumstances, tightening and sharpening processes and controls might have had its advantages. However, given the realities of defence procurement, it is hard to see that the problems of the system, many of which lie in the multiple purposes it tries to serve, can be fully resolved in this way. The need for both more flexibility and more accountability is evident. To bring these values into better balance requires processes that encourage, rather than discourage, communication, collaboration, trust and a more realistic sharing of risk.

Creating (or in many cases recreating) and sustaining a firmer technical knowledge base on the part of Defence is likely to be critical to this undertaking. The need to reverse the decline in engineering and project management capability is beginning to be acknowledged (Rizzo, 2011). The Senate Committee on Foreign Affairs, Defence and Trade, arguing that existing arrangements dilute accountability, has recommended that the link between client and industry should be strengthened by giving capability (service-based) managers sole responsibility for implementing contracts (Australian Senate, 2012: xxiii).

Mutual understanding will be enhanced by a deepening of industry knowledge and experience on the part of both military and civilian purchasers. It is common for industry

to employ ex-military personnel as consultants. As one such consultant observed to the researchers, recalling his time in Defence, 'If only I had understood then more about how industry actually works, we would have achieved much better outcomes'. While, arguably, defence procurement takes place within a more complex institutional setting than many other spheres of public contracting, it would seem that, even with the best-designed contracts, the risks of not investing in closer relations between clients and suppliers are appreciable. In recent years, the UK MoD has embraced 'partnering' as part of its Defence Industrial Strategy. A cultural shift towards information-sharing within specific contracts is regarded as central to the strategy (Hardy, 2012). While the Australian situation vis-a-vis government and industry is, if anything, more complex than in the United Kingdom, closer attention to long-term relationship management, with contract-based and other incentives to support this, can only be beneficial to both sides.

Acknowledgements

The authors wish to thank the University of New South Wales, Canberra, the Department of Defence and Defence Industry firms for their support in carrying out this project.

Declaration of conflicting interests

The authors declare that there is no conflict of interest.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Notes

1. Chronology prepared in 2011 from Australian National Audit Office (ANAO) (2006, 2008a, 2009d) and Senate Standing Committee on Foreign Affairs, Defence and Trade (2007).
2. Defence, Defence Materiel Organisation (DMO) and industry interviews held in 2011.
3. Defence and DMO interviews.
4. Industry interviews.
5. Government and industry interviews.
6. Industry interviews.
7. Defence, DMO and industry interviews, 2011.
8. DMO and industry interviews.
9. DMO and industry interviews.

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