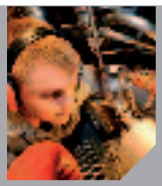
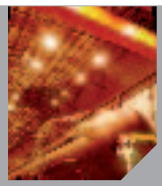
Australian Government

DEFENCE INDUSTRY POLICY REVIEW 2006 DISCUSSION PAPER





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DEFENCE INDUSTRY POLICY REVIEW

PART A: DEFENCE INDUSTRY DISCUSSION PAPER

FOREWORD

Since assuming responsibility as the Minister for Defence, I have taken the initiative to review our defence industrial policy. As part of the process of consulting with relevant stakeholders, I am pleased to release a *Defence and Industry Discussion Paper* in order to further develop a public discourse on this important matter.

Next year, over $8 billion will be appropriated by the Government to the Defence Materiel Organisation for acquisition and sustainment activities. This figure will continue to grow in the coming years under the Government's commitment to increase Defence spending by 3 per cent per annum in real terms out to 2015. The Government is committed to ensuring this money is spent in a way which maximises the return for our Nation's security.

The Australian people, their interests and security remain at the forefront of the Government's planning. The objective of this policy review is to ultimately deliver a transparent, innovative and economically prudent framework that explains how the Government makes Defence procurement decisions. The community at large is entitled to an explanation of where the flags lie in terms of procurement policies.

The recommendations of the Kinnaird Review are now government policy. Its recommendations serve as the template for how the Capability Development Group and the DMO approach the business of Defence procurement and it should be treated as the bedrock for further reform.

Where we can do better is in shaping public policy that assumes industry is a vital component of delivering Defence capabilities, so while it is a globally driven market subject to economic forces, it is also a strategic asset for the people of Australia. The Government requires a commercially and strategically sophisticated policy approach to this area, one that accounts for the complex commercial structure and activity of the sector and also works with market forces to build an internationally competitive Australian defence industry.

There have been many reviews into defence industry, dating back to 1970. It is recognised that developing effective policy is an extremely difficult and complex task. Precedent must not diminish our confidence or take away from the need for leadership in this area. An honest assessment of why the past policies of different governments have met with limited success in either their conception or implementation should be considered if we are to succeed today.

Many issues need to be addressed in this complex arena. This discussion paper sets out to stimulate debate in good faith, rather than stifle it. Consideration needs to be given to what constitutes a strategically important industrial capability, how the market can deliver it and how Defence should evaluate the relative merits of local industry participation where strategic grounds for local procurement may not exist.

Competition and regulation will be part of doing business with Defence and proving value for money remains an important element of Commonwealth legislation. The importance of performing once in contract also needs recognition and reward.

The Australian economy has grown in the longest continuous stretch ever experienced and the ongoing supply of skilled labour to defence industry has become a priority. The Government has moved early to intervene in the market to ensure this future supply, and continuous monitoring in this area is needed.

The Government is determined to see that any opportunity for Australian industrial interests to access export markets is fully exploited. It is in our interests to build wealth for our society and generate economies of scale in defence industry through participating in procurement and sustainment programs that are complementary to our own. While the market is clearly dominated by European and North American interests, we should recognise the efficiencies to be gained in accessing just a small portion of a very large global market. Our consideration should also account for the emerging trends of multi-nation projects and global business practices.

The Minister Assisting the Minister for Defence, Mr Bruce Billson MP, will oversee the upcoming consultation process and Mr Kerry Clarke, Mr Lucio Di Bartolomeo, Mr Henry Ergas and Dr Mark Thompson will develop recommendations for my consideration. They will seek out your views over the next three months and I expect to conclude this review by the end of 2006.

The end product will be a government endorsed policy that is a realistic, achievable and transparent basis for planning and decision making that sets out priorities, objectives and values for our defence industry. I welcome your involvement and trust you will discuss solutions to problems, as well as their causes.

BRENDAN NELSON

JUNE 2006


CAUTION
REVERSE
FLAP
AILERON TRIM

01: INTRODUCTION

1.1 A capable local defence industry is essential to Australia's national security. Without supply and support from industry, the military capabilities of the Australian Defence Force (ADF) are incomplete and unsustainable.

1.2 Over the past fifteen years, the range of goods and services provided by the private sector to Defence has grown substantially to include activities as diverse as medical services, logistics management and garrison security. Nonetheless, the focus of this paper is on the industry sector that supplies and supports ADF equipment because that is the area where defence-specific policy is most relevant.

1.3 Australia is fortunate to have a relatively well-developed defence industry base. Even the most advanced of the ADF's platforms are maintained and repaired locally, albeit with dependence on foreign parts and specialist munitions. In recent years, moreover, local industry has manufactured submarines, frigates and armoured vehicles, as well as completing ambitious upgrades of a wide range of vessels and aircraft.

1.4 We must remain alert, however. The defence-industry structure that has served us well for the past ten years may not be the right one for the future. On several fronts, the environment for defence industry is changing.

1.5 Investment in new equipment for the ADF is set to increase over the next several years and remain high at least into the middle of the next decade. Not all of this work will go to local industry; in fact, some sectors might see a decline in sales as rising costs and falling economies of scale make overseas purchases more attractive. But even should that occur, local industry will still have to meet the challenge of maintaining an arsenal that is growing in size, diversity and complexity – a task that won't be made any easier, in the medium term at least, by skills shortages in the broader economy.

A vibrant local defence industry is a key element of Australian national security.

1.6 Another trend directly affecting local defence industry is the demand to support the ADF's high operational tempo, through the rapid acquisition of equipment and offshore support. In current strategic circumstances, it is likely that this will continue to be important, and perhaps increasingly so. Short turnaround times – for equipment, services and operational upgrades – will be essential for meeting changing and unpredictable needs.

1.7 Internationally, both military technology and the economics of arms production are also changing. The most visible change has been to the commercial structure of defence industry internationally. Following the end of the Cold War, defence industry in the US underwent a wholesale consolidation that saw the number of suppliers fall dramatically. To a lesser extent, the same has occurred in Europe. For Australia, this means that there are fewer potential sources of military equipment and technology to draw upon.

1.8 In addition, some major weapons systems – like the Joint Strike Fighter – are now being developed as international programs with global supply and support arrangements. Participation in these programs can offer Australia economies of scale and scope previously available to only much larger economies, and create the promise of greater interoperability with our allies overseas. At the same time, participation in global supply chains can open up opportunities for local industry to sell into large international production runs. However, participation also creates challenges in terms of optimising and adapting such systems for our local requirements. In many cases, it may prove increasingly difficult, if not impossible, for Australia to demand unique solutions in the future.

The technological demands and scale of the new investment and sustainment program will be maintained over the next decade and will place high demand on the local defence industry.

1.9 Military technology is also changing quickly and moving in multiple directions. Innovative new systems like unmanned aerial vehicles and advanced satellite communications are rapidly becoming commonplace and there is a push to closely integrate platforms and command systems into a seamless network. Coupled with the growing imperative for Australian forces to be interoperable with those of our allies, this move to so-called network-centric warfare will place major demands on industry and may become a critical factor in selecting, sustaining and upgrading equipment.

1.10 Last but not least, equipment lifetimes seem set to continue to lengthen as high acquisition costs make it more attractive to extend system lives where militarily practical. As systems are retained in service for longer, the ability to efficiently upgrade systems in response to changing technologies and evolving threats will become ever more important.

1.11 In the face of these changes, there is little doubt that Australian defence industry will have to evolve to meet the demands of the future. It is the role of defence industry policy to provide a framework for this to occur – a framework that sets practical goals in the face of emerging constraints and challenges. The purpose of this discussion paper is to review Australia's defence industry policy with a view to ensuring that it provides such a framework.

1.12 The paper has been structured around answering nine questions:

- ***What are the Government's objectives and priorities for Australian defence industry?***
- ***What are the priority areas for Australian defence industry?***
- ***How should Australian industry participation in Defence projects be managed?***
- ***How can Defence and industry best work together?***
- ***What is the role of competition and regulation in Defence procurement?***
- ***How should the contribution of small-to-medium enterprises be managed?***
- ***How can skills shortages best be overcome within defence industry?***
- ***How can exports support defence industry policy goals?***
- ***What is the role of research and development and science and technology in Australian defence industry?***

The settings for defence industry are changing and we need to look at the way the local defence industry is sustained.

02: WHAT ARE THE GOVERNMENT'S OBJECTIVES FOR THE DEFENCE INDUSTRIAL BASE?

2.1 Government defence industry policy aims to promote a sustainable, cost-effective industrial base that retains in Australia those capabilities that are needed to ensure ready and reliable support to the Australian Defence Force (ADF). To achieve this goal, the policy needs to be sufficiently clear and stable to provide industry with adequate certainty to plan the investment for the future.

2.2 While defence industry is a subset of Australian industry, this paper focuses on the impact that industrial capabilities have on defence acquisition, maintenance, support and upgrade activities. An analysis of the industry capabilities deemed critical to the support of ADF capability and self-reliance, appropriately tested for technical feasibility and affordability, can show what parts of defence industry require specific government policy.

2.3 Two categories of defence industry capability can be defined for the purposes of this discussion: priority and non-priority. Within priority industry capabilities there will be a core level of domestic industry capability essential to ensure appropriate sovereignty and national security. These 'core' capabilities will be in direct support of ADF operational capability and military self-reliance and are those to which the ADF must have access in Australia if it is to successfully pursue our military objectives. Ensuring that the ADF can have appropriate and cost-effective access is therefore a primary objective of defence industry policy.

2.4 Placing a value on the benefits to ADF capability of access to particular domestic industry capabilities poses obvious conceptual challenges. Choosing to rely on local supply will often be dictated by the requirements of our geography and by the need to have a substantial and continuing degree of control over production and servicing capabilities. Those facts will create a strong advantage in having supply capabilities within Australia, as such supply not only ensures the serviceability of key defence materiel but also extends the range of options required to meet the Government's strategic guidance. Nevertheless, all options and alternatives must be subjected to rigorous investigation and assessment.

Government policy aims to ensure the ADF has appropriate and cost effective access to defence industry capacities.

2.5 Present policy guidance reflects the need to ensure that the ADF has access in Australia to capabilities that will be highly responsive to its needs. As a result, for the purposes of this document, 'Australian industry' means industry located in Australia.

2.6 While there are some activities that can be described as 'priority' in the sense in which the term is defined above, the bulk of the tasks undertaken by industry in support of the ADF will not be so. With respect to those activities, and the capabilities on which they are based, the Government's primary objective is to ensure value for money. This in turn requires that Australian industry has the opportunity to compete to provide these activities on a level playing field; given such a level playing field, Australian Defence suppliers will be able to secure outcomes consistent with their relative efficiency.

2.7 More specifically, there may be circumstances where the Government as buyer will view a commitment to local design, manufacture and support as desirable, above and beyond the need to ensure operational effectiveness. Local suppliers whose viability is very largely dependent on Defence purchases may well be more committed to establishing and retaining a strong reputation for effective and efficient program delivery than suppliers with little direct investment in Australia. The requirement to make substantial investment to service the ADF can, in other words, increase the prospects of efficient and responsive product delivery, as a supplier then has more at stake in maintaining a reputation for good performance.

2.8 Obviously, such requirements are not without costs, and those costs need to be taken into account. Nonetheless, where local supply can provide greater responsiveness and induce greater investments in building capacity, it might be appropriate for this to be taken into account in defence industry policy.

2.9 Moreover, local supply schemes can create entry or expansion opportunities for small-to-medium enterprises (SMEs) which increases the diversity of the defence industrial base and creates scope for greater competition and innovation in the supply of defence goods and services. There can also be wider spin-offs – skills gained, for example – that may also be taken into account if they are substantive and demonstrable.

2.10 Underpinning all defence industry capabilities is a series of enabling activities that include workforce development, the presence of a capable network of SMEs, wider access to scientific and technological resources and the ability to spread costs and acquire valuable experience through exports. Even where these are not directly undertaken in the priority areas of defence industry, they may contribute to ensuring that the core industry capabilities required within Australia are available, commercially viable and cost-effective.

Defence industry capability falls into two categories.

2.11 Questions:

- *Is the distinction between 'priority' and 'non-priority' capabilities a useful one?*
- *Is it appropriate to define 'Australian industry' in terms of industrial capabilities located in Australia?*
- *Is it reasonable to view the primary objectives of defence industry policy as being (1) to ensure that priority capabilities are available within Australia and are cost-effective, and (2) to source non-priority capabilities from whichever source provides greatest value for money, taking account of the need for Australian industry to be able to compete for the contracts on a level playing field?*
- *To what extent should defence industry policy seek to contribute to wider industry policy goals and, if so, why and how?*

Within each of the nominated priority areas there will be a core level of capability essential to the ADF. The government might choose to intervene to sustain the core level of capability.

03: WHAT ARE THE PRIORITY AREAS FOR AUSTRALIAN DEFENCE INDUSTRY?

3.1 Defence industry policy should promote a sustainable, cost-effective industrial base that retains in Australia those capabilities that are needed to ensure essential support to the Australian Defence Force (ADF).

3.2 This does not mean that we can or should aspire to anything approaching self-sufficiency: it is inevitable that we will rely on overseas suppliers for spare parts and specialised munitions. Neither does it mean that we must manufacture all military equipment in Australia. We can afford to wait for acquisitions from overseas and maintain adequate stocks of critical parts; the era of industrial mobilisation to fight wars of mass attrition is long past. In any case, the cost and technological complexity of modern weapons puts the manufacture of many items well beyond our capacity.

3.3 Which defence industry capabilities should be retained in Australia? In practice, it is a matter of weighing the costs and benefits in individual cases. To guide this process, Defence 2000, the Government's Defence White Paper, set out the priority areas for local industry as: combat and systems software and support; data management; command control and communications systems; repair and upgrade of major weapons and surveillance platforms; systems integration; and the provision of peacetime and operational support to the ADF.

3.4 Several imperatives underlie the Government's list of priorities. The in-country ability to repair and maintain military equipment, and to re-supply the ADF, are practical matters. In most cases, it would be impossible to rely on foreign suppliers to repair and maintain our equipment offshore, and having the ability to replenish our defence forces from home is similarly essential. These industry capabilities are intrinsic to our strategy of defence self-reliance.

> We cannot aspire to anything approaching self sufficiency.

3.5 The demand for sovereign control over certain capabilities has also been a factor in setting defence industry priorities. Sensitive technologies such as cryptography, and the security of our command control and communications systems, are important matters to retain in Australian hands. While the number of industry capabilities driven purely by sovereign concerns is small, but they tend to be important.

3.6 Aside from practical and sovereign concerns, the largest driver of our defence industry priorities has been securing responsive industry support to maintain the ADF's capability edge. Indeed, a high priority has long been put on the ability to understand and, where feasible and cost-effective, to improve the performance of the weapons systems we acquire. The Defence Science and Technology Organisation, the Defence Materiel Organisation and defence industry all have important roles in ensuring that Australia gets the most it can from its sizeable investment in military equipment. By using local industry to support critical military technologies, Defence gains both ready access and enhanced responsiveness over what larger offshore firms might deliver.

The White Paper 2000 set out the priority areas for local industry as: combat and systems software support, data management; command control and communications systems, repair and upgrade of major weapons and surveillance platforms, system integration and the provision of peacetime and operational support to the Defence force.

3.7 Thus, even though the primary focus of procurement must be on the ADF's direct needs for equipment and support, it is also important to ensure long-term access to critical industry capabilities that make Australia a smart buyer and effective user of modern military equipment. These critical industry capabilities can include technological, industrial and managerial components. In recent years, Defence has indirectly pursued such goals by awarding long-term support contracts to firms. In other cases, the development and maintenance of in-country industry capabilities has been used to justify domestic production over foreign purchase.

3.8 Irrespective of how it is achieved, developing and maintaining industry capabilities comes at a cost. In most cases, we have no practical choice other than to maintain the ability to repair and maintain equipment in-country. On matters of modifying and upgrading equipment, however, the balance of costs and benefits is more open. We cannot maintain the ability to optimise all of the many hundreds of weapons systems and subsystems that the ADF operates. We have to decide which industry capabilities take priority.

3.9 Ideally, such decisions would be made by identifying critical industry capabilities that support defence self-reliance, quantifying what core level of each is required to meet military capability support and defence self-reliance objectives, setting priorities cognisant of the costs and benefits involved, then finding the most cost-effective way of delivering the core level of capability for each of the nominated strategic capabilities. This is easier to say than do.

3.10 The *Defence Industry Sector Strategic Plans* that Defence developed in consultation with industry between 2002 and 2004 sought to identify priority industry capabilities and the most cost-effective ways of delivering them. The *Sector Plans* described, in varying levels of detail, how Defence would manage procurement and support in three sectors: naval, aerospace and electronics. Development of a fourth plan dealing with land systems is in abeyance pending completion of the current review.

3.11 Aside from the now defunct naval sector plan, the plans released to date have not been overly prescriptive in charting the future. A more concrete approach to industry planning is possible. The 2005 United Kingdom Defence Industrial Strategy, for example, left local industry in no doubt about what are the UK Government's detailed priorities, and what future work would be protected from foreign competition. The question is open as to whether so detailed an approach is feasible and warranted for Australia, or if existing mechanisms are adequate given our different circumstances. The level of detail provided in the UK strategy may itself undermine the credibility of the certainty it seems to provide, as detailed needs are sure to change – potentially substantially – over time.

To determine which core levels of capability will be sustained, each nominated area of priority will be tested for affordability and technical feasibility.

3.12 Questions:

- ***How should strategic industry capabilities be defined and measured?***
- ***Do the industry capability priorities set out in Defence 2000 or the Defence Industry Sector Strategic Plans remain extant? How should they be determined, now and in the future?***
- ***Do we need to specify 'core' industry capabilities that represent the minimum levels consistent with maintaining defence self-reliance?***
- ***How can we best balance investing in priority industry capabilities and alternative ways of using scarce resources?***
- ***Are the strategies set out in the Sector Plans to sustain industry capabilities adequate?***
- ***Do current processes pay sufficient, relevant attention to identifying industry capabilities that are critical to longer-term defence capacity? If not, what will be the most effective way of ensuring those capabilities are incorporated into defence planning and decisions?***

04: HOW SHOULD AUSTRALIAN INDUSTRY PARTICIPATION IN DEFENCE PROJECTS BE MANAGED?

4.1 The role of Australian industry participation in Defence projects is to acquire and support our military capabilities. With this in mind, Australian industry participation should:

- generate and sustain domestic industry capabilities deemed critical to support Australian Defence Force (ADF) operational capability and military self-reliance
- promote a cost-effective and competitive Australian defence industry base
- promote the wider development of skills in defence industry
- where possible, gain economies of scale and scope by developing broader export and civil markets.

4.2 The primary means of promoting Australian industry participation in Defence procurement projects is through the Australian Industry Involvement (AII) program. This program aims to specify and secure Australian industrial capabilities required in support of ADF capability. The AII program is applied in three steps. First, Defence identifies the strategically important industry capabilities associated with a project. Second, these capabilities are described in tender documentation and addressed in subsequent bids from industry. Third, Defence assesses each bid and ranks potential suppliers in terms of their AII response and other tender requirements.

4.3 While the AII program has promoted investment in local industry capabilities, it has a number of shortcomings. AII program objectives were initially specified in terms of percentage targets for Australian industry content. There is no doubt that such prescriptions were ineffective in achieving particular industry capability objectives. On the other hand, they were transparent, and allowed industry to seek the most cost-effective solution to the requirement.

Should the Government take previous performance into account when determining Australian industry participation levels and if so how?

4.4 While mandatory targets for local content no longer exist, AII tender requirements still encourage a quantitative approach to Australian industry input. Thus, notwithstanding an avowed focus on strategically important industry capabilities, the result is that Defence typically assesses the monetary value (i.e. quantity) of local industry activities as opposed to the strategic value (i.e. quality) of the activities. Also, the assessment occurs on a project-by-project basis late in the acquisition process, with little consideration given to broader strategic industry capability goals.

4.5 An audit of the AII program undertaken by the Australian National Audit Office in 2003 highlighted the absence of mechanisms in the program to measure its effectiveness and resulting industry capability outcomes. Specifically, there were no performance indicators to determine whether the AII program was succeeding in its aim to generate and sustain the local industry capabilities required.

4.6 To overcome the current shortcomings of the AII program will require greater clarity on what industry capability outcomes Defence is seeking at both the project and inter-project level, and how these outcomes are to be measured. Companies could then detail the project-specific and broader strategic industry capability outcomes that would be achieved through their local industry activities.

4.11 Managing Australian industry participation in Defence projects remains the primary means of creating and maintaining the industry capabilities required by Defence. Good policy in this area is therefore essential.

Should prior level of investment in Australian based capability be taken into account when assessing tenders?

4.12 Questions:

- ***To what extent and in what instances should Defence continue to specify Australian industry capability outcomes for Defence projects? Is a broader inter-project approach needed?***
- ***How should Australian industry participation that is unrelated to defence industry capability outcomes be weighted in procurement decisions?***
- ***How should government ensure the economic and military benefits of local industrial participation are evaluated in Defence procurement?***

05: HOW CAN DEFENCE AND INDUSTRY BEST WORK TOGETHER?

5.1 There is no doubt that Defence is a demanding customer – and with good reason. To meet the challenges of today's security environment, the Australian Defence Force (ADF) needs world-class equipment backed by responsive repair, maintenance and upgrade services. All of this must be achieved as efficiently as possible; to ensure that each dollar spent on defence delivers as much military capability as it can.

5.2 Experience has shown that the most effective and efficient way to deliver equipment and support to the ADF is by Defence and industry working closely together. An adversarial relationship is in neither side's interest. Within the broader framework set by the Government's procurement policy, Defence effectively sets the requirements for procurement through its procedures and practices. In turn, these procedures and practices define the relationship it has with industry. Several areas are prominent in shaping Defence's relationship with industry: transparency of plans, contracting procedures, performance reporting and procurement reform.

TRANSPARENCY

5.3 Central to a healthy partnership between Defence and defence industry is early notice of Defence's future acquisition plans. It is reasonable for industry to expect timely advice of Defence's plans, and it is in Defence's interest to make its plans known. The more time there is for industry to prepare, the greater the likelihood there is that Defence will get what it wants. For this reason, the Government took the unprecedented step in 2000 of releasing a public version of its ten-year Defence Capability Plan.

5.4 Inevitably, changing strategic priorities, emerging military technologies and budget constraints mean that the Defence Capability Plan is an evolving document. The challenge is to provide industry with adequate lead time for technical and business planning, and government with appropriate flexibility to respond to changes in strategic circumstance, while recognising that Defence's plans can no sooner be frozen than the Defence Force kept in stasis.

SUSTAINING PRIORITY INDUSTRY CAPABILITIES

5.5 Sustaining priority local industry capabilities requires Defence and defence industry to work together. Without a clear understanding of Defence's priorities, industry cannot be expected to deliver what is needed. And without a detailed understanding of the capabilities, capacities and commercial realities of Australian defence industry, Defence cannot specify its priorities in practical terms. Quantifying the core level of industry capability required within each of the identified priority industry capabilities is also central to the development of any policies to generate and sustain this core level.

CONTRACTING

5.7 One area of long-standing frustration for industry is the amount of paperwork involved in bidding for Defence work. This not only adds to the cost of tendering for Defence projects, but also constitutes a barrier to new entrants to the defence industry sector. While there are good reasons for thoroughness in documenting multi-million dollar projects, the cost of unnecessary paperwork is ultimately borne by the taxpayer. Over the past three years, Defence has been working with industry to revise its contracting policies.

5.8 Recent experience with successful, rapid acquisitions for operational deployments proves that Defence and industry can achieve quick results when necessary. While the approaches adopted on these occasions will not be applicable to all Defence procurements, the lessons that might be learnt from them should not be overlooked.

PERFORMANCE REPORTING

5.9 Effective communication is critical to a healthy relationship between Defence and industry. Two formal processes are in place to achieve this. First, Defence monitors the performance of significant prime and sub-contractors through the Company ScoreCard program with a particular focus on cost, schedule and technical performance. The information gained is fed back to the firms and used, in addition, to inform future selection decisions. Second, Defence solicits feedback through the 360o View ScoreCard on project office performance, with an emphasis on requirements and contract management.

PROCUREMENT REFORM

5.10 Following the Kinnaird review of Defence procurement in 2003, the Government implemented wide-ranging changes to the way Defence goes about planning for, acquiring and supporting its equipment. Major changes included the establishment of the Defence Materiel Organisation (DMO) as a quasi-independent prescribed agency, a new, two-pass Cabinet approval process for major projects and several initiatives to ensure that the Defence workforce has the skills to do its job. The review also foreshadowed a greater role for industry in the pre-approval process, noting that from 10 per cent to 15 per cent of total project value might need to be spent before proceeding to tender on complex projects.

5.11 Progress has been made on implementing the changes. An independent high-level advisory board is operating, DMO has been formally re-established as a prescribed agency and the new Cabinet approval process is now in place. Within DMO itself, a major program of change is underway, including initiatives to professionalise its workforce, standardise its business processes and improve its relationship with industry.

5.12 Questions:

- *What more can be done to make the Defence Capability Plan more useful?*
- *How can the unavoidable uncertainties in the plan best be handled?*
- *How should Defence engage defence industry on the issue of sustaining priority industry capabilities?*
- *How can Defence ensure that industry engagement focuses on the strategic whole-of-defence industry capability outcomes rather than on individual project solutions?*
- *What more can be done to improve the way Defence solicits and contracts work from industry?*
- *How effective are the existing channels of feedback between Defence and industry and how might they be improved?*
- *Is Defence an informed customer? Does Defence have enough adequately skilled personnel to plan for and manage its acquisition and support contracts?*
- *Are industry capabilities being given sufficient consideration in the pre-approval process?*

Relationships work better when there is trust developed from frequent open interaction;
Transparency
Giving – without the need for reward
Willingness to change for the mutual benefit.

06: WHAT IS THE ROLE OF COMPETITION AND REGULATION IN DEFENCE PROCUREMENT?

6.1 The market for defence equipment and support is characterised by a single buyer and a small number of sellers interacting in the supply of goods and services that are relatively unique and whose prices are determined to a large extent by the acquisition process itself.

6.2 While that fact alone imposes constraints on the degree to which competitive forces can work, that does not mean that competition, and rivalry between suppliers more generally, cannot bring significant benefits.

6.3 Rather, experience shows that in technologically dynamic industries, competition has both a rivalry effect and a portfolio effect.

- The rivalry effect refers to the impact that the threat of being displaced, or the prospect of displacing rivals, has on suppliers' incentives to perform. Simply put, the presumption is that suppliers are keener in terms of cost and quality when their market position is not assured.
- The portfolio effect refers to the impact of concurrent independent development efforts on the probability of identifying, in a timely and cost-effective way, the optimal approach: i.e. with many horses in the race, there is increased likelihood that one will be a champion.

Both of these effects are important to ensuring that the Australian Defence Force (ADF) has the equipment and support it requires.

6.4 In addition to these benefits, competition, while it is rarely a perfect solution, enables Defence to avoid the complexity, cost and distortions often associated with regulatory strategies such as cost-plus contracting.

6.5 In practice, both competition and regulation are required if Defence is to secure the outcomes it desires. Neither instrument by itself will achieve value for money in Defence procurement. Recognising the advantages and disadvantages of each thus becomes important in deciding on an optimal mix.

6.6 Given the relatively small scale of Defence procurement in Australia, competition is most readily effective in the supply of goods and services that can be bought off the shelf, or where any customisation can be separately identified and paid for. For those goods and services, competitive procurement should be the primary means of acquisition.

6.7 Where the goods and services sought are relatively unique, or in any event entail significant adaptation to ADF requirements, competition can nonetheless be important as a way of soliciting alternative approaches and allowing an informed choice to be made between the options. In those cases, it is important that attention is paid to ensuring that 'design competitions' are genuinely competitive. This may entail funding some of the participants' costs.

6.8 Even in those cases, the sheer duration and complexity of Defence acquisition programs, and the economies of scale involved in the production of defence systems, mean that initial competition more often than not gives way to the circumstance of a single supplier, with primary responsibility for the program, serving Defence as the single purchaser. In addition to those circumstances where at least there is competition at first, there are many situations in which materiel is effectively sole-sourced. Such sole sourcing can account for as much as 50 per cent of Defence contract outlays.

6.9 Structural changes in world markets may affect the scope for competition. The number of prime contractors has tended to shrink, especially in areas where major integration of systems and platforms is needed. Moreover, with equipment lifetimes increasing, upgrading system capabilities becomes ever more important; in practice, it is the original equipment manufacturer that is often best placed to undertake these upgrades. Finally, an environment of network-centric warfare, with its focus on interoperability, may constrain the range of choices available. While too much stress should not be laid on any of these forces, and there are opposing factors too, they are suggestive of practical limitations on the extent to which competition alone can sustain efficiency in procurement in the future.

Neither competition nor regulation alone are suitable strategies to obtain best value for money – a balance of the two is necessary.

6.10 As a result of all these factors, competition will inevitably be paralleled by a degree of regulation, by which we mean the active structuring and management of acquisition and sustainment programs with the goal of achieving the best outcomes for Defence. The required regulatory instruments must manage the Government's financial exposure to programs in a manner that is predictable and accountable; ensure that technical challenges are addressed in a timely and cost-effective basis; permit and secure efficient and effective access to whole-of-life support; and provide incentives for, and monitor outcomes in, efficiency in production and sustainment.

6.11 Some emphasis has been placed on protecting the Government's financial exposure through fixed-price contracts and clearly these have an important role to play. Nonetheless, it is also important to recognise that, in some cases, the inherent uncertainties associated with a program make fixed-price arrangements unrealistic, with the result that initial commitments become vulnerable to costly and, at times, contentious renegotiation.

6.12 However, where fixed-price contracts are not feasible or desirable, arrangements must be in place that allow the Government to provide an effective assurance to taxpayers that value for money is being achieved, and ensuring that suppliers do not inflate costs or otherwise harm the buyer's interest. Currently, Defence uses a mix of strategies to this end, across a continuum that includes alliance contracting on complex projects. In future, contract arrangements may need to be more intrusive than simply requiring open-book accounting. There are trade-offs here that need to be explored. It might be advantageous, for example, for Defence to monitor rates of return on projects, with the aim of ensuring that they are reasonable in light of project risks, and to ensure that overall costs are efficient.

6.13 While the trade-offs are not confined to programs that have not been sourced competitively, the weaker the competitive tensions at work in an individual program, the greater the reliance on regulatory instruments will need to be. Those regulatory instruments may well also involve greater use of benchmarking between projects and suppliers, with the aim of identifying and rewarding best practice, helping firms that are not at best practice to improve and ensuring that the Government is not exposed to charges that exceed efficient costs. Making such benchmarking a systematic element in program management may require changes in Defence itself, in terms of the management of its information resources, as well as in the information it collects from and provides to industry. At the same time, while still providing the community with the confidence it requires that its resources will be well spent, there is a clear need to avoid regulatory arrangements that are unnecessarily intrusive and may simply add to delays and cost.

6.14 Questions:

- ***Have we got the balance right between competitive sourcing and sole-source (or otherwise non-competitive) decisions? Are there cost-effective options for making greater use of competition or additional regulation?***
- ***How are structural changes in defence materiel markets likely to shape those options going forward? Are there differences here between original acquisition and sustainment, and if so, what are their implications?***
- ***Should Defence alter its approach to competition to ensure the generation and sustainment of the core level of priority local defence industry capabilities? If so, why and how?***
- ***What instruments can be used, above and beyond competitive disciplines, to ensure that the Government gets, and is seen by the community to get, value for money? Is there a need for more prescriptive arrangements, so as to allow informed assessments of processes and outcomes by all stakeholders and how would they be achieved while sustaining the Government's need for flexibility?***

07: HOW SHOULD THE CONTRIBUTION OF SMALL-TO-MEDIUM ENTERPRISES BE MANAGED?

7.1 SMEs, defined as firms with no more than 200 full-time employees, form an important part of our defence industrial base. They provide a significant source of technologies, unique skills and capabilities, many of which are critical to the design, development and sustainment of Australian Defence Force (ADF) platforms and systems. Furthermore, SMEs act as centres of innovation, and contribute to the overall robustness and competitiveness of Australian defence industry.

7.2 Many SMEs are Australian–owned and operated and have a natural commitment to the Australian market that makes them especially responsive to the needs of Defence. Most of these SMEs are sufficiently diversified into civil or other defence-related work to weather the uneven demand inherent in dealing with Defence and prime contractors. That said, Defence recognises that its SMEs cannot be taken for granted.

7.3 Many of the challenges facing SMEs reflect those facing defence industry as a whole. They include identifying and sustaining priority capabilities and technologies (a number of which exist within niche SMEs), dealing with skills shortages and securing exports. Many of these challenges are exacerbated for SMEs because they have few employees, limited access to capital, and often deal with Defence only through larger firms as a subcontractor.

7.4 Currently, around 50 per cent of Defence procurement expenditure retained within Australia is estimated to find its way to SMEs. With Defence moving more towards prime contracting and longer-term contracts, a major challenge is to ensure that SMEs are not excluded from obtaining Defence work, either directly or as subcontractors.

Around 50% of Defence procurement retained in Australia goes to SMEs.

7.5 To this end, there is a need to better understand the barriers within Defence that may limit or prevent SMEs competing on their merits for Defence work. This is not about allocating work to SMEs, but rather about allowing them to compete on a level playing field.

7.6 There is also a need to understand what might prevent SMEs acting effectively as subcontractors. Defence has a strong interest in ensuring that prime contractors do not engage in anti-competitive behaviour that is likely to increase costs in the long run. As one element in that, Defence needs to understand whether prime contractors pass on the benefits they are receiving from Defence contracts to their subcontractors, such as long-term agreements and payment on time. Defence could also have an interest in ensuring that prime contractors

help Australian SMEs develop their capabilities (quality, competitiveness, business processes), including access to global supply chain opportunities, as that can strengthen and diversify our defence industrial base.

7.7 Finally, there may be a need to ensure that key niche skills and capabilities of SMEs are maintained and developed, particularly where those SMEs are largely dependent on Defence work. This relates to the broader issue of the identification and sustainment of priority industry capabilities, but may have specific connotations for SMEs due to their size or specialisations.

7.8 Questions:

- ***What should be the objectives of defence industry policy with respect to SMEs?***
- ***Are SMEs able to appropriately access, directly or indirectly, business opportunities with Defence? If not, what approach should Defence take to facilitate that outcome?***
- ***Are there limitations in the way that SMEs and prime contractors interact? Should defence industry policy seek to overcome them, and if so how?***
- ***Should defence industry policy specifically target SMEs with niche capabilities and if so how?***

While SMEs are an important incubator of key niche skills and ideas are they deserving of special nurturing or should they be engaged only on merit?

08: WHAT IS THE BEST WAY TO OVERCOME SKILLS SHORTAGES IN THE DEFENCE INDUSTRY?

8.1 As with other sectors of the Australian economy, defence industry has experienced severe difficulties in attracting and retaining the skilled people needed to expand our output of defence equipment and properly maintain the defence capabilities we have in place.

8.2 These difficulties are partly cyclical. The Australian economy has experienced a prolonged period of growth. One of the benefits of that growth has been to materially reduce unemployment, with the result that the excess labour that characterised the period from the early 1980s through to the late 1990s has been resorbed. Particularly for more skilled workers, the current situation is one where demand exceeds supply throughout the economy, with mining and resource industries especially attracting skills away from other sectors.

8.3 However, the factors at work also have structural and longer-term dimensions. Traditionally, defence industry could rely on the public sector – be it the Australian Defence Force (ADF) or the Australian Public Service (APS), or government-owned defence firms – to recruit and train cohorts of entrants into the job market. The tendency for some degree of over-staffing in these areas meant that there was a reservoir of skills that could, when demand was strong, be transferred into defence industry occupations. Once in those occupations, people were typically retained there, both as a result of some labour hoarding by firms (in the sense that firms did not adjust the size of their work force fully to fluctuations in demand) and as a result of a labour market which was not effective in moving skills to areas of higher demand.

8.4 Microeconomic reform means that defence industry can no longer rely on these mechanisms to provide it with the labour force it will need. In effect, cost pressures on the public sector, and the shift in any event to much greater reliance on outside contractors, have reduced the extent to which that sector can or will bear the burden of labour force training for the industry as a whole. At the same time, defence industry itself is now more generally in private ownership, or subject to commercial pressures which limit the willingness and ability of individual firms to carry training costs that will have flow-on benefits to others. The fact that the Australian labour market is now so much more flexible, and that employees are better informed about outside opportunities and more willing to take them, further undermines the extent to which any one firm or industry player is in a position to underwrite training investments for which it will not be the sole beneficiary.

8.5 Demographic change makes these issues all the more acute. The Australian population is ageing, and the size of entry-level cohorts into the job market seems likely to decline substantially. All else equal, the pool of potential trainees will decline in line with this broader trend, and defence industry will need to compete more vigorously and effectively with other occupations if it is to attract a long-term labour force.

8.6 The solution to these issues cannot lie in defence industry stripping the ADF and APS of the skills those agencies also increasingly require and find difficult to attract and retain. Current differences in skill classifications between civilian and Defence personnel somewhat reduce the ease with which Defence personnel can directly transfer into defence industry with full recognition of their skills. Greater uniformity would likely be beneficial in the long term: among other things it would make it easier to attract and retain skills in the ADF and APS, since it would reduce the pressure skilled personnel may now feel to move into the civilian labour market sufficiently early, to overcome any disadvantage associated with differences in qualifications. However, greater uniformity would not yield net benefits if it merely accentuated a skills shortage in Defence and allowed industry to free-ride on training funded by the ADF to meet its own needs.

8.7 Looking to what can be done, it has been suggested that the problem of skills shortages would be more tractable if defence investment were smoothed over time. While this may be true in theory, there are practical limits to what can be done. Achieving smoothing would require earlier than anticipated replacement of equipment, unnecessary duplication, or acceptance of capability gaps (as high-priority programs were postponed so as to avoid increasing the demands on defence industry).

8.8 Therefore, rather than focus on reducing demand for skills, the objective of policy in this area should arguably be on better managing existing supply and expanding it in the future.

8.9 Some gains in dealing with skills shortages can be achieved by initiatives that allow Defence and industry to pool their personnel through, for example, initiatives that allow Defence staff to work on external teams, or that allow external staff to work for Defence.

8.10 When considering more-formal training programs, and support for training as such, what is needed is a holistic approach that develops and implements options that meet three key requirements:

- the Defence budget is not loaded with costs that are better managed through other government programs at Commonwealth or State level
- any programs that are Defence-specific, in the sense of being implemented in the Defence sector, are directed to the long-term needs of the sector
- capacity for separate costing and subjection to careful effectiveness and benefit–cost evaluation.

8.11 The most directly relevant current activity is the Skilling Australian Defence Industries (SADI) program. This program could provide a base for assisting in funding longer-term skill development in a manner consistent with the criteria set out above.

8.12 Questions:

- ***Is it only the factors identified here that are creating skills shortages, or are there others relevant to identifying a solution?***
- ***Is there more that could be done through Defence/industry cooperation to secure better use of existing skills?***
- ***How effective and efficient is SADI?***

09: HOW CAN EXPORTS SUPPORT DEFENCE INDUSTRY POLICY GOALS?

9.1 Australia has long supported local industry to export. Defence exports pose specific challenges, however, as the markets in which they are sold involve government buyers and do not operate on a conventional commercial basis. Additionally, exports of defence materiel raise security issues which entail additional layers of control.

9.2 Australian defence exports have not been significant, even relative to the size of the Australian defence sector, but rather incidental or opportunistic at best. This is very much a reflection of the nature of defence industry in Australia: its commercialisation and privatisation did not begin in earnest until the 1990s, its scale is limited, and its capabilities focus primarily on delivery of projects rather than products. Furthermore, the extensive foreign ownership of Australia's defence industry has meant (with some notable exceptions) that much of the parent companies' research and development (R&D) is done overseas, limiting the acquisition of autonomous technological capabilities by Australian producers and hence also their export capacity.

9.3 The scale of the Australian Defence Force (ADF) and the subsequent defence market will always be inhibitory to defence exports. What success Australian defence exports have had has been linked almost exclusively to Australian programs aimed at meeting specific Australian requirements and supported by government-funded R&D. The resultant product or capability sometimes then finds a niche export market. However, this outcome has come about more in response to immediate opportunities than through a strategically planned and supported export program.

9.4 Where exports involve sensitive technologies, the strategic implications of exporting must be considered carefully. Fortunately, Australia has well-developed laws and procedures in place for this purpose. Where exports do not involve sensitive technologies, or are otherwise prudent, they can help bring economies of scale, defray original development and overhead costs, and potentially sustain continuing in-country product and system development along with the associated skills, resources and industrial capacity.

Can exports assist the sustainment of priority industry capabilities or is it just a demand too great for the size of the workforce?

9.5 The question is whether government support for Australian defence materiel exports can improve the continuity of work to industry and thereby help sustain priority industry capabilities. Obviously, it is also important to assess whether that support can be cost-effective, in the sense that the benefits obtained from any exports outweigh the costs incurred.

9.6 The ever-growing world marketplace has seen the development of global supply chains. Participation as a partner in a global supply chain can involve difficulties over and above those encountered in a direct export opportunity. However, it may also open the door to a much larger global market and provide opportunities for companies with a narrow capability profile – such as SMEs – to become involved in exporting. The Joint Strike Fighter is an example of a program in which a number of SMEs are exporting through such a global program. As the Australian buyer in such programs, Defence has the scope to secure such opportunities; to the extent to which there is a cost involved in doing so, that again raises the need to ensure that there are net benefits.

9.7 Success in exporting requires a comparative advantage in product quality, price or both. However, these qualities alone are not sufficient if the market is closed to foreign competitors. While global markets opened up significantly in the latter part of last century, defence markets – for the same strategic reasons considered in this review – lag well behind other sectors in terms of the degree to which they are open to international competition. These barriers to trade are a major obstacle to defence export growth and an area for potential government support.

Can broader industry access to global supply chains be matched in the defence sector?

9.8 If defence exports are of value in achieving the critical mass required to sustain core skills and priority industry capabilities, then we must consider the form and level of support that can be provided and justified by government. There could be a range of support options for defence exports, from maintaining present arrangements, through to the creation of a dedicated exporting agency.

Ultimately the task would be to evaluate what the costs and benefits of any support would be, being realistic as to the absolute level of Australia's defence industry export potential.

9.9 Questions:

- ***Which priority industry capabilities provide export potential? Equally, to what extent are there unrealised export opportunities from other areas of Australian defence industry?***
- ***What are the main costs and benefits associated with supporting exports in each of those areas and, in the light of that assessment, what level of support, if any, is warranted?***
- ***What is the best form of that support, and what lessons, if any, can we draw from the experience of other countries in this area?***

10: WHAT ARE THE ROLES OF RESEARCH AND DEVELOPMENT AND SCIENCE AND TECHNOLOGY IN AUSTRALIAN DEFENCE INDUSTRY?

10.1 As a small country, Australia has always relied heavily on foreign sources for military technology. As a result, our relative investment in defence R&D and underpinning science and technology (S&T) has been low.

10.2 Aside from some niche areas, the majority of defence R&D undertaken in Australia is funded by the Government, either within or through the Defence Science and Technology Organisation (DSTO), or directly through acquisition contracts with industry. In both cases, the R&D is almost always directed at meeting Australia's unique requirements.

10.3 DSTO is Defence's in-house provider of S&T advice and services. As such, DSTO helps the ADF to be a smart buyer, user and adaptor of S&T. In the process, DSTO spends around 10 per cent of its annual budget, or $30 million, on collaborative work with industry. In addition, it administers the $25 million per annum Capability Technology Demonstrator program that funds local industry activities.

10.4 The bulk of acquisition-related R&D is undertaken as part of major Defence projects, both before, but more usually after, project approval. Lesser amounts are also spent through Defence's Project Development Fund and Prototyping, Development and Evaluation program.

10.5 It is not surprising that most R&D is directly or indirectly funded by the Government. In most cases, industry cannot be expected to take the risk of developing bespoke products for a single customer in the hope that they might be taken up. Where Australian firms do undertake self-funded defence R&D, it is usually with a wider range of customers in mind.

10.6 Given the rising cost of military equipment and the resulting internationalisation of defence production, the scope for Australian defence R&D may fall as the cost of pursuing Australian-unique equipment solutions rises. Nonetheless, for the moment at least, the ability to adapt and modify military equipment remains central to maintaining the Australian Defence Force's capability edge.

The ability to adapt and modify our defence equipment is central to maintaining the capability edge of the ADF.

10.7 Questions:

- ***Does Australia undertake enough defence S&T activity and R&D? If not, what more needs to be done?***
- ***Are the current Defence initiatives in these areas the best way of spending the money allocated?***

11: GOING FORWARD

11.1 This discussion paper forms the basis of the terms of reference for a review of Australian defence industry policy.

11.2 The next stage of the review will be an extensive consultation program to determine what changes are required to existing policy, this including matters of policy implementation and of assessing and monitoring policy effectiveness.

11.3 As far as practicable, the review team or one of its members will, between 26 June and 30 September 2006, meet with any person wishing to make a submission.

11.4 A template for submissions is available at: http://www.defenceindustrypolicyreview.com.au

Submissions can be forwarded to:
Defence Industry Policy Review
Head of Industry Division
Defence Materiel Organisation
Russell Offices R2-5
CANBERRA ACT 2600

Email address: submissions@defenceindustrypolicyreview.com.au

The review team can be contacted on 1800 100 377 between 9.00am and 4.00pm AEST Monday to Friday.

11.5 It would be of additional assistance if submissions suggesting changes to defence industry policy also provided views as to how such changes might best be implemented.

The review team is:

Mr Kerry Clarke AO
Mr Henry Ergas
Dr Mark Thomson
Mr Lucio Di Bartolomeo

DEFENCE INDUSTRY POLICY REVIEW

PART B:
DEFENCE INDUSTRY INFORMATION PAPER

INTRODUCTION

01 This paper provides a brief profile of Australian defence industry and the policy environment in which it functions. The profile:

:: outlines the expenditure, employment, ownership and other economic features of the industry in its current form

:: describes the evolution of government policies influencing the industry from the 1970s to the present day.

02 The profile is presented using data covering the most recent period for which complete sets of information are available, namely 2004–05. Although limited to a single year, the figures used are broadly representative of longer term industry trends. Due to the difficulty in quantifying all of the industry's key characteristics, the data should be considered indicative.

CURRENT STRUCTURE OF THE AUSTRALIAN DEFENCE INDUSTRY

(I) INDUSTRY SECTORS

03 Australia's defence industry spans four major sectors:

- **maritime –** covering the construction, modification, repair, refit and maintenance of naval surface and sub-surface vessels
- **aerospace –** covering assembly and through-life support for a range of fixed and rotary wing aircraft used by the Army, Navy and Air Force
- **land, weapons and munitions –** covering manufacture, assembly and through-life support for a range of light armaments, ammunition and military vehicles
- **electronics –** centring on systems integration and software development to support a range of weapons systems but extending to the manufacture of niche equipment in areas which include mobile communications, underwater acoustics and radar.

04 Adjusting for flows across sectors, the electronics sector currently has the largest turnover of the four sectors, followed by aerospace, land, weapons and munitions and maritime. Measured in employment terms, the sectors together are estimated to make up 1.8 per cent of Australian manufacturing and 0.2 per cent of the overall Australian economy.

05 The sectors exclude work done by Australian industry to support Defence's Corporate Services and Infrastrucure Group (CSIG). The group generates considerable demand for Australian industry in the areas of garrison support, construction, facilities operation, housing and utilities connected with Defence bases and other infrastructure.

(II) INDUSTRY PLAYERS AND PERFORMANCE

06 The industry consists of a core of between 250 and 300 companies, the majority being small to medium enterprises (SMEs) with fewer than 200 employees. These companies are distributed between states and territories in rough proportion to Australia's population and business activity.

07 At the industry's core are a number of larger military equipment suppliers – ADI, Tenix Defence, BAE Systems, Australian Aerospace, Raytheon Australia, Boeing Australia, ASC, Saab Systems, QANTAS Defence Services and Thales Underwater Systems – which all fulfil prime-contractor roles. Together, these companies account for at least 60 per cent of total industry sales in a market characterised by a high overall 'concentration' of sellers.

08 All but three of the industry's largest companies are at least 50 per cent foreign-owned by parent companies located in Europe or the United States. The three exceptions are ASC, which is owned by the Australian Government but scheduled for sale; Tenix, which is privately owned by Australian residents and Qantas Defence Services, which is a wholly-owned subsidiary of an Australian public company. None of the industry's largest players are listed as separate entities on the Australian Stock Exchange. Attachment A profiles the companies concerned.

09 In recent years, the individual identity of leading companies has changed markedly. By 2004–05, five of the firms registered among Australia's top ten Australian defence contractors a decade earlier no longer operated in their original forms, although the majority of their employees remained within the industry. These included AWA Defence Industries, Rockwell Australia, Siemens Plessey Electronic Systems, Celsius Tech Australia and GEC-Marconi Systems. Rationalisation among leading companies was driven by a combination of Australia's high levels of industry foreign-ownership and a spate of connected mergers, acquisitions, joint ventures and natural attrition in international defence markets.

10 The gap between the size and capabilities of larger Australian defence companies and the industry's remaining players is substantial. In 2004–05, the largest ten companies employed an average of 1,100 people each and many delivered a broad range of defence products. Employee numbers were as high as 2,800 for a single company. Outside the top ten, the size of companies rarely exceeded 200 employees and most companies tended to focus on niche products and services.

(III) INDUSTRY EMPLOYMENT

11 In 2004–05, Australian defence industry directly supported approximately 19,000 jobs: 16,400 within leading prime contractors and their immediate subcontractors, and a further 2,600 among so-called third tier suppliers with direct links to defence projects. The SME component of these figures is not easily identified.

12 Around 5,250 direct jobs – or 28 per cent of the total across Australian defence industry – were located in regional Australia. Regional employment was distributed across more than 19 distinct geographic areas, with the largest regional sites being Amberley in Queensland, Edinburgh in South Australia, Wodonga and Benalla in Victoria, and Mulwala and Williamtown in New South Wales.

13 During 2004–05, defence industry is estimated to have contributed on average 2 per cent to total employment in the geographic areas immediately surrounding regionally-based defence projects – with areas set by postcode. However, considerably higher figures applied in some areas. The national average was 1.8 per cent.

(IV) INDUSTRY EXPORTS

14 The average value of defence goods and services exported by Australian industry is difficult to estimate due to the fluctuating nature of the market, the difficulty in clearly delineating between defence and civil products and a tendency for the effects of a small number of projects to overshadow broader industry trends. Nonetheless, based on data covering controlled goods requiring a defence export permit, recent export levels have been in the order of $600 million a year and have grown substantially since 2000. Australia's most recent export figures are not dissimilar to those of Canada, when Canadian trade with the US is excluded.

15 Since 2000, Australia's defence exports have been dominated by the generic categories of aircraft parts and components, bombs, torpedoes and rockets, ground vehicles, including parts and components, war vessels and armoured and protective equipment.

16 The countries and regions to which Australia has recently exported include New Zealand, Canada, the United States, South-East Asia, Europe (United Kingdom, France) and to a lesser extent the Middle East, which is viewed as an important developing market. Attachment B provides a short summary of Australia's export facilitation measures.

DEFENCE SPENDING ON ACQUISITION AND SUSTAINMENT

(I) OVERVIEW

17 In 2004–05, Defence spent approximately $6.3 billion on military equipment. This was small by international standards – equating to half that of countries like South Korea and Italy, one-fifth that of the United Kingdom and one-fortieth that of the United States. An additional $2 billion was spent by Defence on corporate support and infrastructure.

18 Features of Australia's expenditure on military equipment in 2004–05 were as follows:

:: outlays were divided reasonably evenly between acquisition ($3.1 billion) and sustainment ($3.2 billion)

:: around 65 per cent of total expenditure ($4.1 billion) remained within Australia – made up of 85 per cent of expenditure directed to sustainment ($2.7 billion) and 46 per cent of expenditure directed to acquisition ($1.4 billion)

:: an estimated 50 per cent of total expenditure retained within Australia ($2.1 billion) found its way directly or indirectly to SMEs[1]

:: approximately 22 per cent of retained expenditure ($900 million) was allocated to projects centred in regional Australia.

(II) RETENTION RATES

19 During 2004–05, a combination of factors led to a relatively high proportion of Defence equipment sustainment expenditure being retained within Australia and distributed to domestically-based companies:

:: Australian industry was often more competitive than overseas industry in the maintenance aspects – – of defence manufacture

:: Australia needed to have the domestic industrial capability to at least repair, maintain and modify key military platforms and systems

:: local supply was a more attractive economic option because of the often high cost of transporting military equipment overseas for servicing.

20 During 2004–05, a relatively low proportion of Defence equipment acquisition expenditure was retained within Australia and distributed to domestically-based companies for the following reasons:

:: Australia needed military equipment of considerable technical complexity.

:: Few companies – within and outside Australia – had the technical expertise and scale of operation to deliver major military platforms and their weapons systems at competitive prices.

1 This 50 per cent figure consists of 30 per cent directly through outlays by Defence to these firms and a further 20 per cent indirectly through SMEs working for other defence contractors.

(IV) FUTURE EXPENDITURE PATTERNS

21 Over the coming decade, Defence expenditure is expected to rise by approximately 30 per cent in real terms, in response to major new capital acquisitions detailed in the Defence Capability Plan (DCP). The DCP for 2006–16 contains projects worth approximately $51 billion[2]. A public version of the 2006–16 has been released.

22 Major projects expected to add to recent expenditure levels on and off shore include new combat aircraft, air warfare destroyers, C-17 transport aircraft, amphibious ships, maritime response and patrol aircraft, helicopters, artillery and tanks.

(V) SUPPORT PATTERNS

23 A significant increase in Defence demand will coincide with increasing skills shortages across the Australian manufacturing and service sectors, including defence industry. Over the next decade, between 3,000 and 5,000 additional workers will be needed to support impending defence projects. The increase in Defence demand is also expected to coincide with a long-term pattern of substantial real price increases for advanced military equipment targeted for procurement by Australia. Extensive historical analysis undertaken by Defence points to average annual compound rates of growth in real unit prices from 3 per cent to 5 per cent for major weapons systems, as new technologies and enhanced equipment capabilities emerge.

24 Taken together, mounting domestic industry inflation and the impact of technological change on equipment prices have the potential to erode the purchasing power of existing Defence budgets.

2 In 2006–07 prices.

THE EVOLUTION OF DEFENCE INDUSTRY POLICY

(I) POLICY REVIEWS

25 Directly or indirectly, the issues of where, when and how Australia's defence industrial infrastructure should be developed have been explored many times since the 1970s – sometimes as a separate exercise but often as part of a broader report on defence-wide issues.

26 Milestones in this process include the 1984 government statement on *Defence Policy for Australian Industry*, the1986 *Review of Australia's Defence Capabilities* conducted independently by Paul Dibb, the Government's 1992 *Report on Defence Policy and Industry*, the Industry Commission's 1994 report on *Defence Procurement*, the 1998 *Defence and Industry Strategic Policy Statement*, the *2000 Defence White Paper*, a 2001 announcement by the then minister for defence and defence industry sector plans released between 2002 and 2004. The 2001 announcement – http://www.minister.defence.gov.au/ReithSpeechtpl.cfm?CurrentId=769 – can be accessed directly.

(II) LONGER TERM SHIFTS

27 While the cornerstones of industry policy have remained relatively stable in the long term, a number of factors have influenced its development, including:

:: general reductions, from the 1970s onwards, in the levels of tariff and other forms of protection given to Australian manufacturing companies, including defence-oriented companies

:: the commercialisation and privatisation in the 1980s and early 1990s of a defence industrial base that was largely government-owned and widely regarded as economically inefficient

:: the abolition in 1989 of a 20 per cent purchasing price preference for Australian and New Zealand suppliers vis-a-vis overseas defence companies.

28 The policy has been implemented through the offsets, Australian Industry Participation (AIP) and Australian Industry Involvement (AII) programs. Attachment C describes the evolution of relevant programs and details of AII's current structure.

29 In addition to the factors noted in paragraph 27, Australia's defence industry policy environment has been affected by:

:: the introduction by Defence of life-cycle costing as the most appropriate means for evaluating the efficacy of projects

- greater transparency at all levels of the Defence procurement process in identifying and evaluating differences between the price of competing Australian and overseas bids
- outsourcing by Defence of equipment maintenance previously done internally by the Australian Defence Force (ADF)
- a general acceptance of increasing levels of foreign ownership and control among Australia's leading defence companies
- Defence's use of its purchasing leverage with equipment suppliers to facilitate entry by Australian contractors into global supply chains for the overseas manufacture of advanced military equipment
- a growing recognition that strategies for promoting Australian defence exports should be geared in the first instance to supporting military capabilities considered most important to Defence
- Kinnaird procurement reforms, which included provision for an earlier consideration of defence industry issues in the equipment acquisition cycle
- Australia's participation in a free trade agreement with the United States, which intensified interest in the definition of industry capabilities critical to Australia's national interest.

(III) SUPPORT FOR DEFENCE CONTRACTORS

30 Over the years, Defence has tried to help Australian companies enter domestic and international markets through a range of measures designed to:

- improve flows of information between Defence and industry, including information on Defence's longer-term procurement plans
- lower the cost to companies of doing business with government
- promote the dissemination of information on industry capabilities, particularly those of small-medium enterprises
- support the sale of Australian defence goods and services internationally.

31 Attachment D describes the assistance measures currently in place, many of which are derivatives of longstanding Defence programs. These measures include the Skilling Australia's Defence Industry (SADI) initiative, Defence Materiel Organisation (DMO) Small Business Access Portal, Defence Unsolicited Proposals Gateway, Defence Recognised Supplier Scheme, DMO Regional Office Network, DMO Procurement Improvement program, Defence and Industry Study Course, Capability and Technology Demonstrator program, Rapid Prototyping, Development and Evaluation program, *Team Australia* defence marketing scheme and work of the Defence Materiel Advocate. Taken together, the current measures are as comprehensive as past measures.

THE CURRENT STRUCTURE OF DEFENCE INDUSTRY POLICY

(I) 2001 POLICY ANNOUNCEMENT

32 Within the overall parameters of value for money in government purchasing and a carefully measured approach to industrial self-reliance, Australia's current policy framework follows a more 'strategic' approach to industry development. Enunciated in a 2001 announcement by the then minister for defence, the approach highlights the importance of:

:: recognising that Defence expenditure largely shapes Australian defence industry

:: defining the critical defence industry capabilities Australia needs

:: encouraging international companies to nurture SMEs and Australian company participation in global supply chains

:: structuring individual Defence projects to create a more sustainable defence industry base

:: accepting the need for greater specialisation among defence manufacturers

:: acknowledging that competition for the sake of competition can be expensive

:: ensuring that, where market competition is limited, Defence can achieve value for money in its procurement through appropriate regulatory measures.

(II) SECTOR PLANS

33 To help give effect to the Minister's 2001 announcement, sector plans were prepared between 2002 and 2004. Developed by Defence in close cooperation with industry, the plans covered the maritime, aerospace and electronics areas of industry and focused on:

:: identifying in greater detail the generic capabilities considered essential for Defence and the domestic industry

:: outlining ways in which strategic planning for the procurement of projects might assist industry development

:: suggesting methods by which Defence might regulate industry costs and profits.

34 Sector plans covering aerospace and electronics were endorsed by Government in June 2004. Key recommendations in a plan for the maritime sector were superseded by the Carnegie Wylie review into naval shipbuilding and the sale of the Australian Submarine Corporation, which rejected earlier calls for a single Australian shipbuilder as part of a process of industry consolidation. A Land and Weapons Sector Plan has been drafted and will be influenced by the current policy review.

35 The intention of sector plans was to focus attention on issues of policy implementation and in particular on the mechanics of:

:: narrowing key Defence and defence industry capabilities

:: quantifying and comparing the capabilities Defence requires and the capacities of Australian defence industry

:: developing and applying a framework for ranking the suitability of Defence projects for a more strategic approach to procurement

:: developing a framework for regulating industry costs and profits that is equitable and efficient for government and industry.

CONCLUSIONS

36 From the above review of defence industry and policy, the following points emerge:

:: Australian defence industry's four key sectors – electronics, aerospace, maritime and land, weapons and munitions – together account for around two per cent of overall employment in Australia's manufacturing sector.

:: At the core of the industry are 250 to 300 companies, the majority of which are SMEs. However, larger Defence contractors account for most industry activity.

:: Defence directs to Australian industry more than $4 billion a year in expenditure on military equipment. A further $2 billion in expenditure is allocated to Australian companies through support for Defence's corporate functions and infrastructure.

:: Defence industry policy has been reviewed extensively over the past 20 years. Enduring policy principles are the need to maintain reasonable degrees of industrial self-reliance in supporting the operation of major military platforms and weapons systems, achieving value for money in government purchasing and encouraging market competition where practical.

:: Since 2001, policy has emphasised the advantages of a more 'strategic' approach to procurement which recognises the advantages of greater continuity of workload for certain industry contractors.

:: The current focus of policy is on the implementation aspects of industry sector plans, including the delineation of critical Defence and defence industry capabilities, methods for selecting Defence projects suitable for strategic procurement and a framework for ensuring that industry costs and profits remain within reasonable parameters.

Industry Division,
Defence Materiel Organisation
Department of Defence
10 May 2006

DEFENCE INDUSTRY POLICY REVIEW

ATTACHMENTS

ATTACHMENT A
SUMMARY OF LEADING DEFENCE COMPANIES

LARGER COMPANIES

ADI Limited
2005 annual turnover: $656 million
Workforce: 2,513 employees
Capabilities: design, fabrication, machining, assembly, test and installation of equipment for defence and commercial applications.

Tenix Defence Pty Ltd
2005 annual turnover: $650 million.
Workforce: 2,800 employees
Capabilities: defence and shipbuilding businesses, infrastructure maintenance and engineering services, property interests and other major undertakings.

BAE Systems Australia

2005 annual turnover: $525 million.
Workforce: 2,600 employees
Capabilities: command, control and communications; electronic warfare; intelligence, surveillance and reconnaissance; missiles and decoys; ground support and avionic systems; manufacturing; facilities management; flight training; maintenance, repair and overhaul, engineering, design, development, and manufacture.

Australian Aerospace Ltd
2005 annual turnover: $390 million
Workforce: 342 employees
Capabilities: assembly, testing, supply, logistics support, repair and overhaul, maintenance, modification and enhancement of civil and military aircraft for the Australian and export markets.

Raytheon Australia Pty Ltd
2005 annual turnover: $390 million
Workforce: 1,090 employees
Capabilities: aerospace; naval systems; network-centric systems; intelligence and information systems and support services.

Boeing Australia Holdings
2005 annual turnover: $375 million
Workforce: 3,400 employees
Capabilities: systems integration and major project and subcontractor management; software engineering, design, test and development; aircraft weapons, avionics and electronic warfare systems; aircraft assembly, modification, maintenance and support; command, control and communications systems; information and surveillance systems; communications and information management systems; through-life support for major defence equipment and systems; integrated logistics support; operation and maintenance of defence communications and support facilities; and the manufacture of aero-structure components and electronics systems.

ASC Pty Ltd
2005 annual turnover: $229 million
Workforce: 1,020 employees
Capabilities: submarine and ship builder and maintainer.

Saab Systems
2005 annual turnover: $177 million.
Workforce: 300 employees
Capabilities: command and control systems, electronic warfare and signature management, avionics, and training and simulation products; military and commercial aircraft; and customised systems and technical support.

Qantas Defence Services Pty Limited
2005 annual turnover: $88 million
Workforce: 400 employees
Capabilities: electrical, hydraulic and fuel systems component and accessory repair and overhaul; full range of aerospace standard electroplating heat treatment, plasma spray and machining on site.

Thales Underwater Systems Pty Ltd
2005 annual turnover: $79.7 million
Workforce: 222 employees
Capabilities: manufacture of underwater acoustics, hydrophones and transducers.

SMALL-MEDIUM COMPANIES

CAE Australia Pty Ltd
2005 annual turnover: $28 million
Workforce: 85 employees
Capabilities: military simulation and training for aerospace, land and naval applications; simulator maintenance; engineering and training support services in support of in-service simulator systems; and modelling and simulation in acquisition, analysis, and design phases of projects.

Rohde & Schwarz (Australia)
2005 annual turnover: $20 million
Workforce: 21 employees
Capabilities: development and marketing of professional radio communication products.

Pacific Marine Batteries Pty Ltd
2005 annual turnover: $18 million
Workforce: 45 employees
Capabilities: designs, manufactures, tests and supports special purpose batteries; recognised and respected supplier of a broad selection of acoustic and maritime equipment for offshore and underwater applications.

Nautronix Ltd
2005 annual turnover: $17 million
Workforce: 95 employees
Capabilities: undersea acoustic ranging, tracking targeting and communications systems; manufactures acoustic surveillance systems, hydrographic survey systems, integrated navigation and 3D visualisation.

Rosebank Engineering Pty Ltd
2005 annual turnover: $17 million
Workforce: 154 employees
Capabilities: hydraulic and fluid flow component manufacture, repair, maintenance and overhaul; micro-grinding of precision parts for hydraulic flight control components and other fine mechanisms; design, manufacture and support of aircraft system and component test equipment; aerospace, mechanical and instrument design and analysis; design, install and support infrastructure for manufacture and repair services; and supply and support of high-quality machine tools and metrology equipment to the domestic market.

Birdon Group Pty Ltd
2005 annual turnover: $15 million
Workforce: 65 employees
Capabilities: logistics support services, in service support hyperbaric equipment.

Xtek Pty Ltd
2005 annual turnover: $12 million
Workforce: 50 employees
Capabilities: sale, maintenance and repair of specialist equipment; training for the equipment the company sells.

Codarra Advanced Systems Pty Ltd
2005 annual turnover: $12 million
Workforce: 70 employees
Capabilities: deliver a range of information, communications, Defence and technology-based solutions, which includes project and program management, logistics, communications security and information technology. The company has specialised expertise in military systems, including systems engineering, communications, command, control, surveillance, reconnaissance and vehicles.

Asia Pacific Aerospace Pty Ltd
2005 annual turnover: $11 million
Workforce: 21 employees
Capabilities: maintenance of turbo-shaft aircraft engines, having an extensive in-house repair, overhaul, upgrade, modification and machine shop support capabilities.

G H Varley Pty Ltd
2005 annual turnover: $10 million
Workforce: 65 employees
Capabilities: design, development and manufacture of high performance structures involving human engineering, road, air and sea transportability, 2D/3D drafting and modelling, structural analysis, ILS stations, ship brows, road trailers, pressure vessels, ASLAV components, air cargo containers and equipment racks.

Data Source: ADM, December January 2005/6.

ATTACHMENT B
AUSTRALIA'S EXPORT FACILITATION MEASURES

Defence support for industry exports seeks to sustain industry during peaks and troughs in demand, facilitate the exploitation by companies of economies of scale in production, encourage industry innovation and support engagement and cooperation with friends and allies.

Defence support for exporters is provided through Team Australia promotion at international tradeshows and missions, the work of the Defence Materiel Advocate, the leverage provided by the Australian Industry Involvement program for entry by Australian companies into global supply chains and product references by Defence and ministers.

Defence exports are permitted where they do not adversely impact on Australia's strategic and foreign policy interests and fulfil Australia's international obligations. Export controls are kept at levels comparable with those of Australia's partners in the various non-proliferation regimes to which Australia belongs. Australia's participation in these regimes and its export controls provide greater access to technology because Australia is seen as a trusted recipient of foreign technology.

Many countries have legislation that protects or favours their defence industries, making it difficult for Australian companies to export. The US, for example, operates a complex regulatory system designed to restrict offshore production and control third-party transfer of US technology.

During the early and mid 1990s, Defence financed the work of Austrade trade commissioners dedicated to defence and based in Jakarta, Bangkok and Kuala Lumpur. However, this arrangement was not cost-effective. The workload was insufficient to warrant the considerable expense of maintaining these positions. Support to Australian defence exporters is now provided by Austrade and Defence attaches, as appropriate.

ATTACHMENT C
THE EVOLUTION OF AIP AND AII PROGRAMS

The Australian Government introduced an offsets policy in 1970 which provided the basis for the Australian Industry Participation (AIP) program. Based initially on a 'best endeavours' principle, AIP encouraged overseas suppliers of defence equipment to place work in Australia which would help to support defence-related industry. It aimed to maximise Australian industrial activity. Work could therefore occur in the civil sector of the economy or in areas of industry not directly connected with Defence projects.

The AIP program was replaced by the Australian Industry Involvement (AII) program in 1986 with the release of guidelines for the Australian Government Offsets Program. AII specifies that work undertaken in Australia must contribute to Defence self-reliance through the establishment, enhancement or maintenance of Australian industry defence capabilities. It is targeted at areas of defence industry of high strategic importance. In its early form, the program mandated that 30 per cent of the value of contracts let to overseas suppliers be directed to Australian industry but was later changed to incorporate more flexible targets specific to Defence's strategic needs.

The effect of historical factors on AII are reflected in the program's existing structure. It continues to follow the principles set out in *Commonwealth Procurement Guidelines* and states that Defence must seek to obtain value for money in its approach to procurement and encourage competition as a vehicle for doing so.

The AII program is currently applied in a series of steps. First, Defence identifies the industry capabilities associated with a project which it considers important for strategic, logistical or other reasons. This typically involves the capability to domestically repair, refit and modify equipment. Second, these capabilities are described in tender documentation and addressed in subsequent bids from industry. Third, Defence assesses each bid and ranks potential suppliers on the basis of the quality of their response to Australian industry and other tender requirements.

Important features of this approach are as follows:

:: There is no uniform level of Australian industry involvement specified for each project. That is, fixed percentages specifying targeted values of Australian industry participation are not part of the tender process. Desirable levels of Australian industry involvement can differ across projects in response to strategic and other factors.

:: The importance given to Australian industry involvement relative to other issues in the evaluation of tenders – like product or service price and quality – is determined on a case-by-case basis. In some projects, industry issues may attract a higher 'weighting' in the overall process of tender evaluation.

- Local industry involvement centres on work which will assist directly to support Defence projects. It does not normally extend to work with limited long-term connection to an industry capability with specific relevance to Defence needs. In this respect, Australian industry involvement is not a form of offset or counter-trade.
- Proposals for local industry involvement are evaluated on the basis of value for money. This does not always mean that goods and services sourced from local industry must be cheaper than those sourced from overseas. Paying more for supplies from local sources may yield offsetting strategic or other benefits, meaning that value for money has been achieved.
- A bidder's failure to satisfy all of the Australian industry involvement outcomes set out in a request for tender (RFT) may disadvantage that bidder relative to its competitors and potentially disqualify the bidder from contention. However, Defence retains the right to select a bidder whose approach may not satisfy all Australian industry involvement outcomes, if other aspects of its tender provide offsetting benefits. Thus, while Australian industry involvement outcomes specified in an RFT are considered important by Defence, there may be instances where a preferred bidder is selected without these being satisfied in full.

ATTACHMENT D
SUMMARY OF DEFENCE PROGRAMS DESIGNED TO ASSIST SMES AND OTHER DEFENCE COMPANIES

SKILLING AUSTRALIA'S DEFENCE INDUSTRY

Skilling Australia's Defence Industry (SADI) is a policy initiative announced by the Government in 2004 to address a significant shortfall in the quantity and quality of skills – professional, technical and trades – available to defence industry to ensure the ADF has the capabilities it needs. The initiative provides direct financial support to assist companies cover the training costs of upgrading the skills of their workforce. SADI's budget is $215 million over ten years. The initiative is focusing initially on larger companies who hold major Defence contracts but is open to SME participation.

DEFENCE SMALL BUSINESS ACCESS

Companies, particularly SMEs, can find it daunting to locate the appropriate point of contact in an organisation as large and complex as Defence. To facilitate easier access to Defence and to act as a first point of contact, the Defence Materiel Organisation (DMO) operates the Defence Small Business Access (DSBA) portal. The portal allows companies to contact Defence through a website, email or a national (1 800) phone number. Inquiries from industry channelled through DSBA are handled by providing the information requested and/or referring the inquirer to the appropriate area in Defence.

SMEs can add details of their products and capabilities to a DSBA database that prime contractors use to locate local suppliers.

DSBA also handles the Defence Unsolicited Proposals Gateway that provides a formal assessment process for the large number of unsolicited proposals that Defence receives from industry. Unsolicited proposals can range from company brochures, which are forwarded to appropriate areas of Defence, to innovative proposals warranting further investigation, including the Defence Science and Technology Organisation's (DSTO) Capability Technology Demonstrator (CTD) and other Defence programs.

CAPABILITY AND TECHNOLOGY DEMONSTRATOR

The Capability and Technology Demonstrator (CTD) program aims to show ADF users how leading edge technology can be integrated quickly into existing, new, enhanced or replacement high priority capabilities. The program is managed by the Director-General Science Policy Development in DSTO. Funding was originally set at $20 million annually but increased to approximately $26 million in 2004 for the following three years.

The CTD program is not a grants program, but a collaborative activity conducted under contract arrangements between Defence and industry to deliver a demonstration of the capability potential of new technology. The program's emphasis is on technology in Australian industry that will provide capability advantages to the ADF and allow Australian industry to position itself to provide in-service capabilities and through-life support to the ADF. Proposals are sought annually.

In order to initiate a successful CTD proposal, a company must have an appreciation of Defence's capability priorities, gained through prior discussions with CTD and Capability Development Group staff and through publications such as the public version of the Defence Capability Plan. Industry briefings are provided around Australia by the CTD Program Office. Examples of areas of current capability interest include, but are not limited to:

:: battlespace energy generation and storage
:: sensors and non-lethal weapons applicable to urban operations
:: simulation systems support to ADF operations
:: military platform hybrid drive systems
:: countermine technologies and unmanned countermine vehicles for sea and land
:: ship/aircraft/vehicle signature management technology.

In 2004, the Government announced enhancements to the program, mainly to improve SME participation and access. The enhancements included:

:: seed funding for detailed proposals – normally in the range of $10,000 to $20,000 – to help companies further develop, modify or enhance proposals to better meet Defence's needs
:: project viability funding – normally in the range of $50,000 to $100,000 – to help companies maintain staff and infrastructure for their CTD proposals while awaiting approval. Viability funding is not dependent upon the ultimate decision regarding the proposal.
:: concept definition funding – normally in the range from $10,000 to $100,000 for seed funding for systems definition proposals with a view to developing the proposals for the CTD program. These proposals, which can have varying levels of maturity from systems definition through to demonstration, can be accepted at any time (not only during the annual call for proposals).

The CTD program was established in 1997. As at May 2005, the program had invested about $116 million in 38 projects.

DEFENCE + INDUSTRY CONFERENCE

Defence organises an annual Defence + Industry Conference (D+I Conference), usually held over two/three days in Canberra in June. It is the major forum where the Government (i.e. ministers), Defence and industry discuss the range of issues affecting the Defence and industry relationship, including the Defence Capability Plan, other procurement plans, industry capabilities, technology and industry policy. The D+I Conference is often the venue for major procurement announcements and policy initiatives. About 1,200 delegates from industry and Defence register to attend the Conference. The primary messages from the conference are disseminated to regional industry through the D+I Regional Briefing program organised by DMOROs.

DEFENCE AND INDUSTRY STUDY COURSE

The Defence and Industry Study Course (DISC) is an annual national program managed by Defence's Industry Division that provides about 70 future leaders (senior managers) from industry, Defence, the ADF and other Commonwealth and State governments and agencies, with an insight into the roles and interdependencies of government, the ADF and industry in the defence of Australia and its interests. The DISC consists of three week-long study modules spread over a year, covering national policy and strategy, the ADF, and industrial support for Defence. The modules provide access to appropriate ministers, senior officials and industry leaders, and include visits to Defence bases and industry facilities around Australia. Participants, sponsored by their respective organisations (who pay a fee), are selected to provide an optimum mix of industry/agency and defence experience. Graduates from the DISC take back to their home organisations a first-hand appreciation of how Defence and industry operate, the government processes involved in capability development and acquisition, and the capabilities of the ADF and industry.

PUBLICATIONS FOR THE DEFENCE INDUSTRY

In close consultation with the Capability Development Group, Defence's Industry Division prepares and publishes the public version of the Defence Capability Plan (DCP). This is aimed at providing industry with information on Defence's future procurement plans over the next ten years and beyond (including project/equipment/capability details, decision timing and phase information, an indication of the likely funding, and the strategic industry capabilities that will be required) to help industry plan future investments in plant, technology, facilities and resources. The Division also produces other publications to assist industry such as the Doing Business with Defence booklet.

RAPID PROTOTYPING, DEVELOPMENT AND EVALUATION

Rapid Prototyping, Development and Evaluation (RPDE) is administered through the Capability Development Group. The Head of Capability Systems Division (HCS) chairs a Defence and industry RPDE Board that looks at overall governance issues, and the Director-General Integrated Capability Development (DGICD) chairs a Defence RPDE Steering Group that originates the RPDE tasks and oversees the transition into ADF capability.

The aim of the program is to enhance ADF warfighting capacity through accelerated capability change in the network-centric warfare environment. Where critical shortfalls in the existing force are identified, the RPDE program allows rapid evaluation of the potential benefits and the risks associated with new technologies and changes in procedures through a collaborative program with industry, recognising that neither Defence nor individual companies necessarily have all the answers. Following RPDE evaluation by the Defence and industry team (membership depending on their niche capabilities), new technologies and/or processes can be rapidly adopted and integrated into ADF capability.

RPDE has a budget of up to $20 million per year, with actual expenditure depending upon the number of approved tasks. Ten tasks are currently underway (March 2006), ranging from initial analysis (to understand and scope the problem) to others that are near completion, with technology being prototyped for trial and implementation by ADF warfighters.

Eighty-three companies are presently engaged in the RPDE program, ranging from global multinationals such as IBM and Boeing, to very small Australian SMEs like Cirrus Real Time Processing Systems, Acacia and RLM Pty Ltd. Regular briefings on the RPDE program provide opportunities for companies to join the program.

An example of the outcomes generated by the RPDE program is the first task undertaken – the Rapid Environmental Assessment (REA) Task. It focused on the problem of collecting and integrating environmental information (e.g. topography, bathometry, meteorology) for littoral operations. Following broad stakeholder engagement, the RPDE Task Team quickly discovered that a key barrier to improving ADF operations was in the command and information management associated with geospatial operations. After seven months of work, RPDE recommended and is now assisting Headquarters Joint Operations Command implement a new Geospatial Command Cell and Geospatial Data Fusion Team. As well, RPDE is prototyping a new information technology tool called ‘WebREP’ (to be complete by September 2006) which will enable operational planners to seamlessly manipulate and interpret disparately sourced geospatial information through a web browser interface – a step forward from the often stovepiped IT systems that have traditionally provided geospatial services to Navy, Army and Air Force.