DEPARTMENT OF DEFENCE
SUBMISSION TO THE TRADE SUB-COMMITTEE OF THE JOINT STANDING COMMITTEE ON FOREIGN AFFAIRS, DEFENCE AND TRADE
INQUIRY INTO ENTERPRISING AUSTRALIA – PLANNING, PREPARING AND PROFITING FROM TRADE AND INVESTMENT

This submission represents the Department of Defence's contribution to the Trade Sub-Committee of the Joint Standing Committee on Foreign Affairs, Defence and Trade inquiry into *Enterprising Australia – Planning, Preparing and Profiting from Trade and Investment.* Its purpose is to address the following Terms of Reference for the inquiry:

- **Incentives and impediments to foreign investment in Australia such as … research and development initiatives**

Introduction

This part of the submission considers the main incentives and impediments to foreign investment in defence research and development (R&D) in Australia. It begins with a general description of the structure of the Australian defence industry and identifies the principal impediments to R&D funding in the defence sector. A brief description of current government activities aimed at improving R&D levels is then given. It concludes with a brief description of on-going defence activities aimed at improving the defence industry base available in support of Australian Defence Force (ADF) capabilities. Although this last section does not specifically address R&D issues, the development of a vibrant industry base and a track record of successful services development is likely to attract higher levels of foreign investment.

Australian Defence Industry

There has been a large degree of consolidation in defence industry over recent years. In both Europe and the United States, the defence industry base has seen the emergence of a smaller number of very large defence companies. The Australian defence industry is increasingly dependent on the same European and American multinational companies. The Australian subsidiaries are generally required to offer products or services developed by the parent company. As such, they often have little interest in developing new products and services specifically tailored for the ADF. The same argument is in fact applicable across the entire high technology sector of Australian industry. The Information Technology and Telecommunications (IT&T) sector is dominated by foreign multinationals and there is a corresponding low level of private sector funding in IT&T R&D in Australia as a consequence. In contrast, many of these organisations commit large funding streams to R&D in their home market.

Although Australian defence industry is dominated by a few large multinationals, there is a considerable base of Small to Medium Enterprises (SMEs). These companies generally provide specialist services to the ADF or are used as sub-contractors by the larger corporations in support of ADF projects. The SMEs are not restricted by parent company strategies, but they often have insufficient financial resources to pursue the high levels of R&D required for new advanced products or services. Mentoring programs (particularly from SMEs with a track record of viable product development) and an expanded venture capital market are required to assist SMEs pursue higher levels of R&D than at present.

Impediments to R&D Spending

The low levels of R&D characterising Australian industry, therefore, are indicative of the predominance of multinationals in Australian high technology industries and the business imperatives of SMEs.

Australian industry has also identified that there has often been too much uncertainty in the direction of defence procurement priorities and future capability requirements. This has been particularly true in recent years. It is likely to change as a result of the new White Paper initiatives, as detailed below.

A discussion paper, released by the Chief Scientist in August 2000, indicated three specific areas that Australia needs to develop to leverage off new high technology industries. By implication, these areas require additional effort to improve R&D investment in Australia. The Chief Scientist was considering the high technology industry rather than the defence industry, but it is likely that the observations remain valid in the defence industry. The areas are:

- Culture – a Science, Engineering and Technology (SET) base reliant upon educated people who can communicate with the business world;
- Ideas – people who can generate new ideas and work within an environment where such ideas are quickly recognised as valuable; and
- Commercialisation – the successful implementation of new ideas to create new products and services and hence economic growth.

New Incentives to R&D Spending

Two major Government initiatives have recently been undertaken that will significantly influence the levels of R&D in Australian industry. One initiative is aimed directly at the defence industry, whilst the second impacts on high technology industries in both the public and the private sectors.

The recently released Defence White Paper, *Defence 2000 – Our Future Defence Force*, and the associated Defence Capability Plan provide considerably more information on Defence priorities than has been previously available and this should see an improvement in the level of R&D funding in the defence sector in Australia. This will allow defence companies to plan R&D initiatives in line with clearly defined defence requirements.

The Defence Capability Plan will also enable the Defence Science and Technology Organisation (DSTO) to identify what areas of research are of high importance to the ADF. Whilst DSTO sponsors play an important role in shaping DSTO research priorities, there are often external factors that dictate the research undertaken. DSTO R&D priorities are often aimed towards capabilities that meet unique Australian requirements and therefore are not likely to be developed elsewhere. There is also an emphasis on capabilities involving highly sensitive security issues, where Australia is unwilling to share information or ideas or is not privy to allied capabilities due to their own security concerns.

The second government initiative, the Innovation Action Plan, *Backing Australia's Ability*, also provides an environment more conducive to industry and government funding of R&D. The scope for increased Government R&D tax concessions and improved levels of public funding for R&D are likely to stimulate, albeit indirectly, R&D efforts in Australian defence industry. Cooperative Research Centres (CRCs) have, for instance, been given additional funding for R&D. Defence has an active interest in selected CRCs.

There will also be increased levels of "pre-seed" funding to progress inventive ideas to a more commercially exploitable stage. The details of how this "pre-seed" funding initiative will work are not yet clear. The innovation plan is being progressed and detailed by the Department of Industry, Science and Resources (DISR).

In July 1998, as an initiative identified in the Government's "*Defence and Industry Strategic Policy Statement"* (DISP), Defence instigated a Capability Technology Demonstrator (CTD) program that has had considerable success in introducing new capabilities into the ADF. The CTD program was specifically identified by the Government as a mechanism of including industry in defence R&D proposals. The CTD program differs from any "pre-seed" funding initiative in that only proven technologies are selected for development. However, it has been instrumental in increasing the amount of development of leading edge technology undertaken in Australian industry and hence complements the Innovation Action plan.

Defence-Industry Improvement Programs

Defence has expended considerable effort in simplifying and improving industry relations over recent years. Foreign investment into defence R&D is likely to be stimulated by a vibrant industry base with a successful track record.

Procurement processes have been streamlined to provide better opportunities for Australian firms to participate in defence contracts. Contract alliances are proposed to create a better risk management and teaming effort between defence and industry partners. Private financing initiatives (PFI) are also underway to allow the introduction of private funding in support of defence capabilities.

A key to the development of Defence-related products in Australia is the ability to market the product not only in Australia but to seek sales in larger markets, typically Europe and the United States. The Defence Materiel Organisation (DMO) has a mature Defence export policy aimed at improving the export of Defence relevant equipment and specifically identifies SMEs as important in this context.

All the above initiatives indicate an ongoing commitment by the Australian Government to improve the R&D base in both commercial and defence industries in Australia.

- **The adequacy of a skilled workforce in Australia particularly in new growth areas such as, though not limited to, financial services, information technology, E-business, education, pharmaceuticals and health care, and the competitiveness of that workforce**

Projected decreases in the number of people entering the Australian workforce in the next two decades, combined with increases in the requirements for skilled workers, pose challenges for Australian and defence industry. Broadly, the number of people entering the Australian workforce will decrease from approximately 120,000 people per year in 2000 to approximately 40,000 people per year in 2016[1]. In turn, projected employment growth in service areas that require Information Technology Professionals, Service Managers, Accountants, Finance Advisers, Management Consultants, and Project Administrators, will create a tight employment market for these services[2].

In regard to industry supporting Defence capability, the major focus will continue on defence industry's capacity to secure a sufficient information technology and engineering workforce. As emphasised in *Defence Needs of Australian Industry, 2000*[3], Defence requires a large effort dedicated towards combat systems design and development. While the general engineering base appears adequate in terms of quantity and quality of employees to meet this need, some specific skill sets have been highlighted with defence industry that will need fostering. Specifically, systems engineers and information technology professionals with a high level of understanding in software development and integration, will be needed in greater numbers to meet technical support and research and development requirements.

Defence has worked to inform industry of these target skill set requirements. However, there is also, firstly, recognition of the need to forge longer-term agreements with industry as a means of enhancing performance and building up these skill sets. Incentives might be offered to industry for the actual training and supply of qualified personnel. Ultimately, this would secure an ongoing dedication to education and training of these personnel and a greater incentive for continuing collaboration between Defence and Australian industry. Secondly, further efforts with the Team-Australia approach, including the advancement of Australian defence industry's access to export markets, may help to increase the supply of professionals in these new growth areas.

There is an absence of data to support a very specific assessment of current availability of information technology and engineering expertise to defence industry. However, against wider education and employment indicators[4], and future Defence capability requirements, there is strong recognition that Defence must be in close dialogue with industry and partner or foster long-term agreements and strategies to secure these skill sets.

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[1] ABS Labour Force Projections – 1999-2016, 1 September 1999.

[2] Department of Employment, Workplace Relations and Small Business, Job Prospect Matrix & Projected Jobs Growth – Prospects to 2005/06.

[3] Defence Needs of Australian Industry 2000, Industry and Procurement Infrastructure Division. Defence Publishing Service, June 2000.

[4] De Laine C., Laplagne P., Stone S., 'The Increasing Demand for Skilled Workers in Australia: The Role of Technical Change', Productivity Commission, September 2000, p.x.

- **Opportunities for encouraging inward investment and promoting export sales**

Background

The Government is committed to strengthening the defence industry base – without encouraging inefficiency or dependence. Following procurement reforms in 1994 and 1997, Defence undertook a number of initiatives to encourage buying Australian and the development of local industry. Defence industry policy is contained in the 1998 *Defence and Industry Strategic Policy Statement.* This policy direction was reinforced in the White Paper, *Defence 2000 - Our Future Defence Force.* To meet this challenge, Defence has implemented six strategies for change and improvement to, the Defence/industry relationship:

- Integrate industry into capability development
- Enhance industry's contribution to the nation's capability edge
- Reform procurement
- Establish new ways to involve Australian industry in Defence business
- Increase Australian exports and materiel cooperation
- Commit to cultural change and improved communication

Defence is moving away from *owning and controlling* its own resources to *utilising* assets owned by the private sector. Support for combat capabilities, such as maintenance and repair of aircraft, increasingly reside in industry. To meet the needs of Defence, the Government has adopted a strategic approach that seeks to capitalise on areas where Australia's industry base demonstrates particular strengths. In those areas, defence industry policy will recognise and foster Australian industry's innovative use of advanced technologies[5].

However, defence industry will not flourish within the Australian defence market alone, with its finite and uneven level of demand. Rather, sales to Defence should be the basis for capturing broader markets, here and overseas. In short, Australian defence industry needs to be competitive on an international basis. Defence will assist through export facilitation – consistent with Australia's international obligations and foreign policy and strategic interests – and will increasingly look at the potential for international collaboration when considering its own procurements[67].

Ultimately, the ability to develop a prosperous and effective Australian defence industry rests with industry itself. The Government will shape the environment in which industry makes its decisions, but will not intervene and shape the market through subsidies and preconceived solutions. The Government will not limit itself to purchases from Australian industry, nor pay an unduly high premium for them.[8]

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[5] *Defence 2000 - Our Future Defence Force,* Section 3, chapter 9 – 'Industry' p 100
[6] op cit p 101
[7] *See* Annex A for a summary of Defence policy and programs which encourage inward investment and export facilitation.

[8] *Defence 2000 - Our Future Defence Force,* Section 3, chapter 9 – 'Industry' p 101

Investment

Defence looks to industry to supply a broad range of equipment, goods and services. It needs to work in close partnership with efficient, innovative and sustainable companies. This approach requires a viable, internationally competitive industrial base in this country that can be relied upon to produce high quality and competitively priced goods and services.

For all Commonwealth Government acquisitions valued at $10 million or more, the Government requires opportunities to be identified for Australian and New Zealand industry development. Defence goes beyond this requirement and considers local industry development opportunities for all purchases valued at $5 million or more. The Australian Industry Involvement (AII) Program is the key tool for maximising the involvement of Australian industry in Defence acquisition projects and for ensuring that in-country capacity exists to provide through-life support to ADF capabilities.

Research and development and exports are two activities which promote long-term sustainability of industry capability. Noting that the AII Program is Defence's best tool for influencing the actions of prime contractors and major sub-contractors, its focus has moved recently to stimulating these actions through targeted levels of local content, research and development and export activity for each project. In addition, evidence of in country research and development activity is now a pre-requisite for Defence tendering for Major Capital Equipment projects. Defence requires tenderers to demonstrate the nature and level of in country R&D undertaken within the tendering team, and the extent to which either the ADF or an Australian industry has benefited.

Exports

To meet Australian defence objectives, the International Materiel Branch of the Defence Materiel Organisation, in conjunction with Austrade, manages a defence export and materiel cooperation facilitation program which aims to secure and strengthen Australian defence industry's long term place in international markets.

Reliable statistics on defence exports are needed to measure the effectiveness of export facilitation programs and to monitor performance of Australian companies in specific sectors. However, currently no single source of information can give a complete and comprehensive picture of defence exports from Australia. Measurable exports are approximately $100 million per annum. The Strategic Trade and Policy Operations (STPO) section of International Materiel Branch is currently developing a range of definitions for 'defence exports' and, in consultation with key stakeholders, is endeavouring to determine which best suit intended uses of data.

The following statistics only cover shipments of controlled and dual-use goods[9]. The values of exports of defence and related goods include only "genuine" exports. They do not include values for Returns to Manufacturers, Returns to Owners or Temporary Exports.

[9] Defence and Related Goods – those goods and technologies designed or adapted for use by armed forces or goods that are inherently lethal. These goods include – Military goods and Non Military lethal goods.

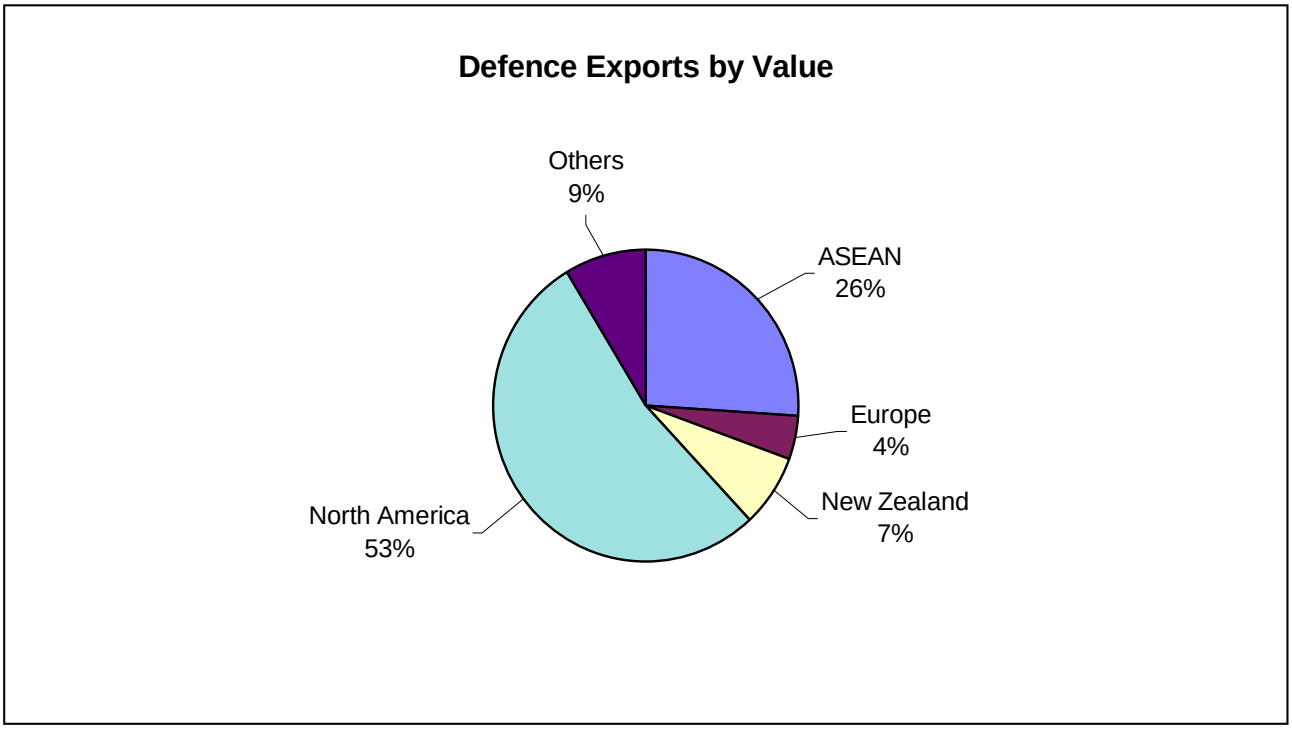
Defence-related exports – Australia ($m)

Source: Annual Report – Exports of Defence and Strategic Goods from Australia 1998/99

Department of Defence

TABLE 1 – Exports of Defence and Related Goods by Major Country Group

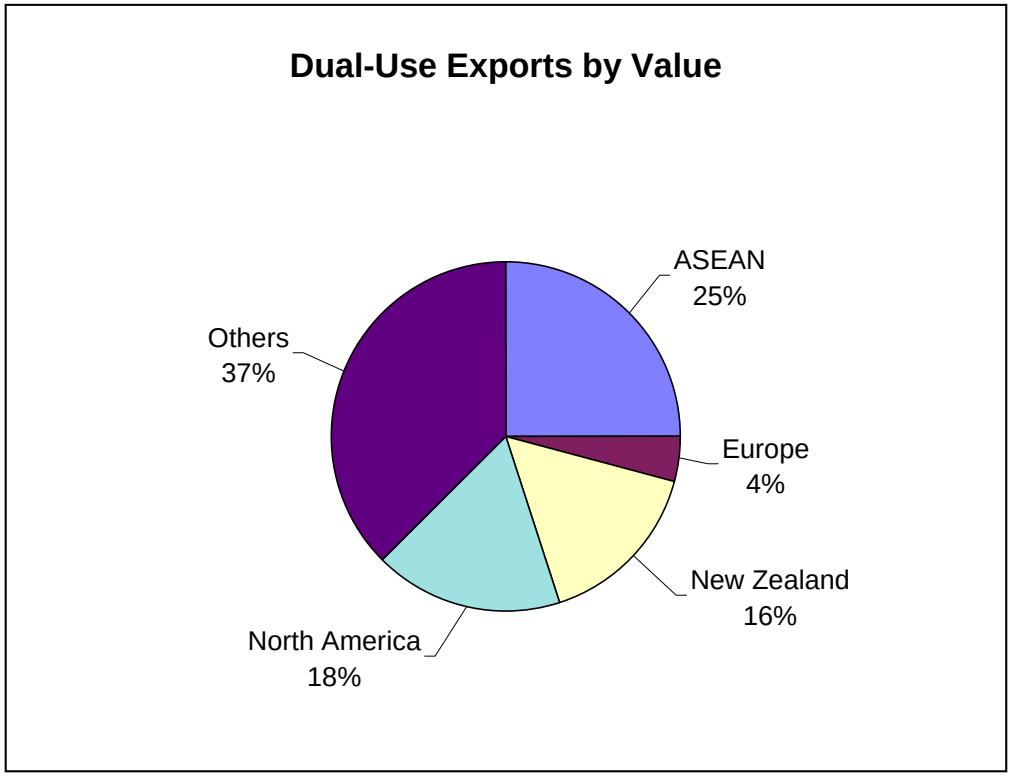
Country Group	Shipments	Value (AUD)
ASEAN	35	$ 4,774,851
Europe	29	$ 819,865
New Zealand	54	$ 1,364,346
North America	86	$ 9,747,067
Others	89	$ 2,207,950
Total	**293**	**$ 18,914,079**



Dual-Use Technology - comprises goods and technologies developed to meet commercial needs but which may be used either as military components or for the development or production of military systems or weapons of mass destruction.

TABLE 2 – Exports of Dual-Use Goods by Major Country Group

Country Group	Shipments	Value (AUD)
ASEAN	546	$ 20,318,659
Europe	90	$ 3,333,106
New Zealand	2062	$ 12,668,630
North America	253	$ 14,280,073
Others	1545	$ 30,290,328
Total	**4496**	**$ 80,890,796**



Case Studies:

The Australian Light Armoured Vehicle Project (ASLAV) and the ANZAC Ship Project are two good examples of what can be achieved when industry and defence work together to pursue mutually beneficial goals.

ASLAV

Phase 3 of the ASLAV project is a follow on procurement of up to 150 vehicles and support equipment. These vehicles will enhance the capability associated with the existing fleet of 111 ASLAVs purchased between 1995 and 1997.

In addition to providing the ADF with a capable, state-of-the-art fleet of light armoured vehicles, the project will provide a significant boost for the South Australian Defence industry and Australia's exports. General Motors Defence (GMD), through the Canadian Commercial Corporation, is the successful tenderer, and the contract will be managed by the recently established General Motors Defence Australia (GMDA) Asia Pacific Regional Headquarters in Adelaide.

In line with the Federal Government's commitment to Australian industry and self-reliance, GMD has established a global fabrication and regional assembly plant in Adelaide to build the ASLAV turrets. This is the sole turret fabrication facility for GMD's international program. Exports are expected to commence in May 2001, with a shipment of approximately 100 LAV-25 turrets to Canada. Other potential export opportunities may include up to 500 turrets within the next five years.

The estimated value of transferring the turret manufacture to South Australia is $37.9 million. An estimated 50 full-time positions will be created at GMDA in South Australia as a direct consequence of the turret production. The company has started an extensive program to hire and will employ 108 people in Adelaide within a year.

Australian industry involvement includes extensive Australian sourcing of vehicle components for ASLAV, a contract for the manufacture and fit of Mission Role Installation Kits, as well as the assembly and test of the finished vehicles. This work will be subcontracted to Tenix Defence Systems in Adelaide and is expected to be to the value of $40 million.

ANZAC Ship Project

In February 2000, Tasman Asia Pacific (Economic, Management & Policy Consultants) Canberra, released a report *Impact of Major Defence Projects: A Case Study of the ANZAC Ship Project,* which was prepared for the Australian Industry Group. The Report included the following key findings:

In addition to increasing the defence capability of our armed forces, the $5.6 billion (in 1999 dollars) ANZAC Ship Project with its high level of Australian industry involvement is making a substantial contribution to the Australian economy. By constructing the frigates in Australia instead of purchasing similar vessels from overseas, Australia is:

- Generating between $200 million and $500 million in additional, annual GDP. Over the fifteen-year construction phase, this means GDP will grow by at least $3 billion.
- Generating between $147 million and $300 million in additional, annual consumption. Over the fifteen-year construction phase, this means consumption in Australia will grow by at least $2.2 billion.
- Generating around 7,850 full time equivalent jobs.

The growth in economic activity resulting from the ANZAC Ship Project arises from a range of factors, which have increased the Project businesses' productivity and competitiveness. Through their participation in the project, companies have:

- Become more innovative through their own research and development, and access to foreign technology;
- Improved their business practices, leading to a culture of continuous improvement;
- Increased their export opportunities; and
- Acquired new defence capabilities enabling them to play a greater role in Australia's national security.

The high level of Australian industry involvement in the ANZAC Ship contract will lead to similarly high levels of local participation in the ships' through-life support. In net present value terms, Australia stands to save in the order of $520 million over the service life of the ships by being able to obtain support from local suppliers.

Annex A

The Government maintains a keen interest in defence-related exports and materiel cooperation and international collaboration in procurement. They can broaden and deepen Australia's defence relationships with strategic partners. By increasing the sales of goods and services by defence companies, they improve the sustainability and cost effectiveness of key industries. To assist in the achievement of these objectives Defence has developed the following policies and programs:

DEFENCE POLICY AND PROGRAMS TO ENCOURAGE EXPORTS AND INWARD INVESTMENT:

Australian Industry Involvement Program (AII)	The AII Program is the key tool through which Defence satisfies its requirements for in-country support of the equipment that it acquires.
Strategic Industry Development Activities (SIDA)	A SIDA is an activity that is proposed by the tenderer, so as to satisfy an Industry Requirement. SIDAs are a way of increasing the total involvement of Australian industry and enhancing the overall AII package.
Defence Industry Investment Recognition (DIIREC) Scheme	The DIIREC Scheme recognises the investments made by overseas companies in Australia's indigenous defence capability.
Procurement Rules for Foreign Firms operating in the Australian Defence Market	The Rules provide a solid foundation to guide the behaviour of foreign firms in the defence market from which mutual benefits will flow.

Australian Industry Involvement Program (AII)	AII stimulates research & development and exports through targeted levels of local content, research and development and export activity for each project.
Australia's Defence Export Business Principles	The Principles define the type of assistance that Defence offers to industry.
Defence Export Manual	The Manual is a guide for defence and industry stakeholders. It provides advice on the export of defence materiel and export issues.
International Traffic in Arms Regulations (ITAR)	Australia and the US are negotiating an exemption to the ITAR for unclassified defence articles and services. The removal of the delay caused by waiting for licence approval will allow Australian companies to provide more timely and pertinent responses to US tenders.
Defence Product and Company Recognition Scheme (DPCRS)	The DPCRS is a recognition scheme intended to offer sustainable support to Australian defence companies who have, or have had, a satisfactory supplier relationship with Defence.
Defence and Austrade roles	Defence and Austrade have complementary skills and capabilities in the defence export and materiel cooperation areas.
Team Australia	Defence promotes a "Team Australia" approach in its support of Australian companies. In doing so, it seeks to foster cooperation between Australian companies vying for exports.
Measuring Exports	Defence aims to gather broad data on what is being exported, by what sort of companies and to which countries, through such means as periodic surveys, Australian defence industry and Customs information.
Bilateral and Multilateral Arrangements	Defence seeks to maximise the use of bilateral and multilateral arrangements, which are relevant to defence industry matters and the enhancement of forward cooperation.

In-Country Support and Market Information	Trade Commissioners and Defence Staff in target markets can provide companies with specialist country knowledge, assistance and support
Marketing Agreements	When necessary to support a company's marketing activities, Defence will enter into agreements to enable companies to access ADF equipment and personnel.
Industry Missions, Trade exhibitions and other promotions	In consultation with the Defence Exporters Council and industry, Defence will help identify key overseas trade exhibitions and target markets for industry missions and other promotional activities, which may benefit Australian defence exporters.
Product Evaluation and endorsement by the ADF	The ADF may provide evaluation reports and trials information, or data and facilities to assist evaluation to Australian companies marketing products overseas, where these products are in the ADF inventory.
Cluster Booklets	Cluster Booklets boost the profile of Australian Defence products to foreign governments. Each booklet brings together products by theme or 'cluster' and features the work of a wide range of Australian companies.
Letters of Support	Letters of support provide Australian defence companies with either general or specific support when entering into a new market. It is envisaged that such letters will form an integral part of the company's export or marketing strategy.