NAUTRONIX LTD

MARINE TECHNOLOGY SOLUTIONS

www.nautronix.com

108 Marine Terrace, Fremantle, WA 6160, Australia
T +61 (0) 8 9431 0000 **F** +61 (0) 8 9430 5901 **E** info@nautronix.com.au

3 April 2006

The Secretary
Foreign Affairs, Defence and Trade References Committee
Suite SG.57
Parliament House
Canberra ACT 2600

Attention:
Dr Kathleen Dermody,
Committee Secretary

INQUIRY INTO THE SCOPE AND OPPORTUNITIES FOR NAVAL SHIPBUILDING IN AUSTRALIA

Nautronix Limited is pleased to have the opportunity to provide a submission to the Foreign Affairs, Defence and Trade References Committee's Inquiry into Naval Shipbuilding in Australia.

The attached paper provides a perspective from an established Australian SME and considers the impact to not only this group of companies but to the Defence Industry as a whole.

Should you require any additional information of clarification, please feel free to contact the undersigned.

Yours sincerely
for Nautronix Ltd

Mike Gallagher
Chief Executive Office

NAUTRONIX PLC
Nautronix House
Howe Moss Avenue
Kirkhill, Dyce
Aberdeen
AB21 0GP
Scotland

T +44 (0) 1224 775700
F +44 (0) 1224 775800
E info@nautronix.co.uk

NAUTRONIX MariPro INC
1522 Cook Place
Goleta, Santa Barbara
CA 93117
USA

T +1 (805) 683 3881
F +1 (805) 967 0367
E info@nautronixmaripro.com

NAUTRONIX INC
Bondesen Tech Center
6610 W. Sam Houston Parkway North
Suite 300
Houston
TX 77041
USA

T +1 (713) 880 2866
F +1 (713) 880 2734
E info@nautronix.com

NAUTRONIX INC
12131 Community Road
Poway, San Diego
CA 92064
USA

T +1 (858) 679 5500
F +1 (858) 679 5501
E info@nautronix.com

Registered Office
Nautronix Ltd
ABN 28 009 019 603
Australia

Nautronix Ltd – Submission to Senate Inquiry into Naval Shipbuilding in Australia

Introduction

Nautronix Limited (Nautronix) welcomes the Senate Inquiry into Naval Shipbuilding in Australia in the broadest context and is one that is consistent with the critical nature of the surveillance and control of Australia's vast maritime operational environment.

Nautronix' submission provides an overview of the Company and an appreciation of where Companies, such as this, may be affected or impacted by any adverse assessments resulting from the Committee's particular considerations and report concerning the opportunity for Naval shipbuilding in Australia and in particular:

- The capacity of the Australian Industrial base to construct large Naval vessels over the long term and on a sustainable basis;
- The comparative economic productivity of the Australian shipbuilding industrial base and associated activity with other shipbuilding nations;
- The comparative economic costs of maintaining, repairing and refitting large naval vessels throughout their useful lives when constructed in Australia vice overseas; and,
- The broader economic development and associated benefits accrued from undertaking the construction of large naval vessels.

In preparing this submission, Nautronix has considered a number of Government and Defence publications including, but not limited to:

- Defence Electronic Systems Sector Strategic Plan (February 2004)
- Commonwealth Procurement Guidelines – January 2005 (1 December 2004)
- Defence Capability Development Manual 2006 (February 2006)

Nautronix Ltd

Nautronix is a fast growing, dynamic, technology focussed, global company with significant experience and expertise in underwater acoustic positioning and communication systems, ranges, systems integration and vessel control systems.

With its origin in Fremantle in the mid 1980s, the Company developed and applied clever acoustic technologies into a vast array of underwater applications for the offshore oil and gas exploration sector prior to its entrée into the Defence sector in the mid 1990s in direct support of the COLLINS Class Submarine Project. This was indeed the first indication of the significance of the synergies that were evident across two very similar operational environments and the benefits that could be derived for both sectors as a consequence.

During the period from inception until 2002 Nautronix became publicly listed and strengthened its position as an Australian Company with a strong Global capability in key acoustic technologies. The Company's expansion was further strengthened through a number of small but strategic acquisitions that would see it consolidate its leading position in the undersea technology arena.

So well regarded was Nautronix' capability that it was the target of a number of acquisition attempts by international suitors throughout the period such that it was ultimately acquired by a leading Oil & Gas company in early 2002 and the headquarters transferred to Aberdeen, Scotland. The Nautronix name was retained as being synonymous with its leading role in undersea acoustics, a mantle that remains relevant across both theatres today, and the Company continues to operate from four strategic centres in Australia, the United Kingdom and the United States of America.

Nautronix in Australia is the largest of the four Companies and remains the central focus for the conduct of Research and Development as well as Defence related systems and solutions. Aside from the obligations to the Foreign Investment Review Board at the time of transfer, it was acknowledged by the new owners that the Australian entity held the wealth and depth of knowledge surrounding the specialist nature of undersea acoustics and remains relevant today. The responsibilities for the Nautronix Group of Companies is summarised as follows:

- Nautronix plc (Aberdeen, Scotland) – Headquarters and lead for the growth and execution of the Offshore technology business as well as the representation of Defence products and solutions into the UK;

- Nautronix Ltd (Fremantle, Australia) –Technology lead for Defence acoustic systems and solutions and Research & Development (R&D). The R&D effort extends across both Defence and Commercial sectors;

- Nautronix MariPro Inc (Santa Barbara, California USA) – Technology lead for the installation, maintenance and support of fixed maritime ranges and undersea cable technologies in both Offshore and Defence programs and representation of Defence products and solutions into the USA. A Technical Assistance Agreement (TAA) is also in place with Nautronix Ltd to facilitate the transfer of technology in support of Australian ranges; and,

- Nautronix Inc (San Diego, California, USA) - Technology lead for dynamic positioning systems and control systems primarily in the offshore sector. This company also maintains a small office in Houston for the provision of training services.

Today, the majority of the Nautronix business base is focussed on the provision of systems, solutions and products into the Navies of Australia, the UK and the USA and opportunities are being sought to increase this base. The analysis of FY 2004/5 financial results highlight that 68% of global $A70 million revenue was derived from participation in Defence programs. In fact, over 85% of Australian revenue is derived from local and international Defence business.

In Australia, Nautronix currently employs over 85 people with key specialisations centred on software and systems engineering with a key focus on acoustic technologies but with an increasing transition towards military systems integration. From various external assessments, the Company has been identified as a large SME being ranked in the top 5 Australian SME for the last 2 years. Nautronix is often recognised for "fighting above its weight" a fact that is evidenced by the investment of over $A20 million in Research &

Development over the last 10 years with the majority of those funds being spent in Australia.

Whilst Nautronix might not be, nor is it likely to be a Ship Builder, it has established itself as a key participant and contributor to Australia's Defence Industry base notably in the Naval sector. The Company particularly acknowledges the requirements of the Defence Electronic Systems Sector Strategic Plan and has made strategic decisions to address the acknowledged need for and the criticality of establishing and sustaining an indigenous capability in Underwater Acoustic

Technologies. It is suggested that this paradigm is equally applicable to other Defence Industry sectors that have a role to play in Australia's Naval and Maritime capability.

Ship Building

"Electronic systems account for a significant portion of the Defence forward procurement program…embedded in every platform and every system operated by Defence"[1]. The sector plan goes on to stress that it is the electronic systems that carry significant risk for Defence and notes that they are at the very core of functional effectiveness. Accordingly when considering the building of ships, whether large or small, and the need for a ship building industry there exists a recognised basis of requirement that provides the catalyst for the maintenance of a wider range of capabilities and technologies in Australia that are consistent with Australian Defence policies.

It is therefore fair to suggest that a far wider range of Australian Companies other than shipbuilders contribute to and rely upon the design and construction of Naval vessels in Australia. It is also noteworthy that the reliance by the RAN on overseas technologies has markedly decreased in the last 20 years or so with the principle turning point being the COLLINS Class Submarine program. Although the design was sourced from overseas, there was a conscious decision at the time that the vessels would be built in Australia. Despite the negative media interpretation of this program, the outcomes from this program can only be considered a huge success for Australian Industry as a whole and when it is realised over 1,000 Australian companies were directly engaged. This is particularly true for Nautronix that made its initial foray into the Defence sector as part of this program.

It is also appropriate to reference the SEA 4000 Australian Air Warfare Destroyer (AWD) program. It is apparent from the outset that this program is similar to and perhaps an extension of the submarine program model. Even in its earliest stages this program is seeking to leverage the capabilities and technologies available in the Australian industry base not to mention taking advantage of the significant investments by the Commonwealth of Australia (CoA) and industry alike through a range of initiatives such as the "Skilling Australia's Defence Industry" program. Under the terms of the CoA Procurement Guidelines the acquisition process must ensure fair and open competition however, the mandate to build these ships in Australia must surely increase the opportunities for Australian Industry participation and therefore benefit the Australian economy and industry base.

Small and Medium Enterprises (SME)

Australian SMEs have been supported and encouraged to be active participants within Australian Defence programs through a range of Government initiatives. However, without the foundation of large, key activities such as shipbuilding many

SMEs will be unable to compete or participate in major Defence programs given that it will be more challenging to establish and foster relationships with overseas prime contractors in their own market space. If the Australian shipbuilding industry withers and dies then the future for SMEs is bleak.

A vibrant and viable shipbuilding sector is important to the survival and growth of SMEs such as Nautronix. The Electronics sector cannot be considered in isolation of the total maritime industry. Whilst there are occasions where Nautronix bid as the Prime contractor for specific Defence projects, more often than not the Company is part of a consortia or sub-contractor to a Prime and therefore rely heavily on these companies for continued viability. For example

[1] Defence Electronic Systems Sector Strategic Plan dated Feb 2004, p.xi

Nautronix is the Prime for the provision of the Electronic Charting and Display System (ECDIS) for all RAN vessels (Defence Program SEA 1430) and is in separate contract with Austal Ships Ltd for the supply, installation and integration of ECDIS for the ARMIDALE Class patrol boats.

As a SME, this has presented a number of key benefits to both Nautronix and the Department of Defence:

- Increased capability for Nautronix as a Military Systems Integrator;
- Technology transfer to Australian Industry – Nautronix' sub-contractor is Offshore Systems International Ltd (OSIL) and through this program has and will continue to transfer technology that will shortly see Nautronix accredited by the International Maritime Organisation (IMO) as a "Place of Production" for ECDIS systems;
- Knowledge transfer to Australian Industry – as for technology transfer plus the ability to take a leading role in future systems development. Nautronix is also in the final stages of negotiation for the full representation of OSIL systems solutions (both Defence and Commercial) in Australia;
- "One Stop Shop" – there is no need for Defence to rely solely on an overseas provider for ongoing system support that would likely be more expensive and less responsive;

Nautronix has also submitted a response for parts of the Undersea Warfare Systems identified for the Australian AWD. Again, through strategic partnerships, the Company will address the needs of Defence through growing the Australian Industry capability using technology and knowledge transfer. This will be achieved through strategic partnerships with 3 leading, international sonar solutions providers.

By these two examples, it is suggested that without an Australian shipbuilding industry a company such as Nautronix would most likely not have had the opportunity to bid let alone be, or stand the chance of being, successful.

Long Term Sustainability and Risk Mitigation

The acquisition and delivery phases for the shipbuilding industry are but two pieces of a much larger requirement. "Defence must signal clear expectations to suppliers that…it is buying the capability to deliver a system and to support it over its life-of-type"[2]. As described in the Defence Capability Development Manual this in itself can be considered as:

- "Flexibility – …the capability development system also needs the agility to respond to short notice change in the operational and strategic environment…"[3]

Noting earlier comments regarding electronic systems and associated systems military integration skills and their importance in relation to Defence platforms, it is paramount that appropriate Australian Industry capabilities are not only retained but evolved. Without this, Defence will revert to an over reliance on international industry that substantially increases both risk and cost.

The overarching requirement can be best summarised by noting that … "Australia's policy of defence self-reliance requires the Australian Defence Force (ADF) to be able to defend Australia

[2] Defence Electronic Systems Sector Strategic Plan dated Feb 2004, p.xiii
[3] Defence Capability Development Manual 2006. Dated Feb 2006, p.8

… relies heavily on industry to achieve this policy objective with the provision and support of ADF equipment"[4]

Economic and Strategic Benefit

The CoA has made substantial investments in not only supporting the establishment of Australian capability across a wide number of industry sectors but also in the number of reviews, studies and reform programs for Defence and Defence Industry. It is notable that a large amount of this investment has been made in the shipbuilding sector from the submarine program onwards. It is particularly noteworthy that requirements for in service support have also formed part of the equation in the quest for sustainability through strategic self reliance. It has made excellent inroads into defining the policies and procedures through which it is able to exert direction and control in ensuring that the ADF is well equipped though the instruments of value-for-money capability programs and encouragement of competition.

If Australia is to continue to reap the rewards of these investments then it is essential to retain the cornerstones of the various sectors for which shipbuilding is a major contributor.

International Investment

Encouraged by Government policy and direction, a number of major international companies have recognised the need to establish a credible presence in Australia if they are to be successful in Australian Defence programs. This not only creates jobs in Australia but serves to strengthen the Australian knowledge and technological bases. It creates opportunities for other Australian industries, particularly SMEs, to participate in programs that might otherwise be out of reach as well as gain a greater insight into international developments.

Research and Development

Australian Defence Industry capability can only strengthen through investment in the future. This is relevant to both product and people. If there is no identifiable future then this high level investment is unlikely to continue. As such, the ramifications are far wider ranging than just the Defence Industry – the impact on Universities and Colleges and potentially the Defence Science and Technology Organisation will cause a reduction in Australia's technological capability that will also likely see an exodus of experience to overseas markets.

Furthermore, the benefits of cross-industry research, as is Nautronix' experience with the Offshore Oil & Gas sector, will be substantially diminished in both directions.

Export

The ability for Australian industry to fully participate in larger programs and particularly when large multi-nationals might be engaged offers Australian companies the opportunity to showcase their products and capabilities. Nautronix has yet to have the chance to take full advantage if this scenario but is aware of others that have been successful. However, the Company's participation in programs has been acknowledged such that other opportunities have arisen in international programs. For example, the Nautronix underwater communications technology (Hydro-Acoustic Information Link – HAIL) has gained excellent momentum in both the Royal and United States Navies. In the case of the latter, Nautronix is one of the few Australian Defence companies to have successfully 'passed' the US Foreign Comparative Test program which now provides significant export opportunities into the lucrative US export market.

[4] Defence Electronic Systems Sector Strategic Plan dated Feb 2004, p.1

Strategic Self Reliance

The Government's policy for Strategic Self Reliance can only be sustained if there is a sustainable industry base upon which to grow. It is not just the acquisition of equipment and systems that are impacted with any reduction in indigenous capability it very much extends to the supportability aspects including training.

Most importantly the development, ownership and accessibility of Intellectual Property (IP) is at stake. The reduction or loss of capability will result in the inability to control direction through the reliance of other nation's developments and upgrades that may not accord with Australia's own operational needs.

Regional Impact

Australia enjoys a leading role in the Region and areas of operational interest and is one that has gone from strength to strength over recent decades. Australia is regarded as having a solid Defence Industry base that underpins the acquisition and support requirements. Particularly with New Zealand, Australian Defence Industry is easily able to extend its reach (and vice versa) as was noted with the ANZAC Class program.

Conclusion

The Senate Foreign Affairs, Defence and Trade References Committee is encouraged to examine the ramifications on Australian Industry as a whole rather than just Defence when addressing the future of naval Shipbuilding in Australia.

The impact on companies and most notably SMEs, across all Defence Industry sectors, with any reduction or loss of shipbuilding will be as substantial as it would obviously be for the shipbuilders themselves. As noted in other shipbuilding nations, once this skill-base is reduced or even lost it is very difficult to rebuild. In turn, any significant change in direction will have a negative impact on Australia's export and growth potential that will ultimately affect the balance of trade that has been effectively managed to date.