

**Discussion paper
response
Submission
No 26a**

INQUIRY INTO DEFENCE INDUSTRY IN NEW SOUTH WALES

Organisation: Charles Sturt University

Date received: 15 February 2018

15 February 2018

Hon Taylor Martin MLC
Chair
Standing Committee on State Development
Parliament House
6 Macquarie Street
SYDNEY NSW 2000

Dear Mr Martin

STAKEHOLDER VIEWS ON OPPORTUNITIES TO INCENTIVISE AND GROW THE DEFENCE INDUSTRY IN NEW SOUTH WALES

I write regarding the New South Wales Parliament's Legislative Council Standing Committee on State Development's inquiry into the defence industry in the State and the Committee's call for stakeholder views on opportunities to incentivise and grow the defence industry in the State, based on the Committee's *Defence Industry in New South Wales Discussion Paper* of November 2017¹.

Charles Sturt University is Australia's largest regional university, with more than 43,000 students, with a reach that spreads from the mid-north coast in Port Macquarie, down into Victoria, with a concentration in the central and central western regions of New South Wales where a significant military services and defence industry presence exists.

Our University offers a comprehensive suite of teaching, learning and research that focuses on addressing rural and regional labour market needs, including those of the Australian defence forces and New South Wales' defence industries, growing regional economies, and preparing students for the jobs of the new economy in regional and rural, as well as metropolitan Australia.

As one of Australia's largest online and distance education providers, Charles Sturt University has been able to leverage its course profile and specialist expertise in education provision for the delivery of study programs that support labour market skills development, including those of the defence forces and industries, regardless of student location.

Charles Sturt University is honoured to have been involved in the Committee's inquiry into and report on opportunities to incentivise and growth the defence industry in New South Wales to generate economic development. Our involvement to date includes:

- *Charles Sturt University Submission - Standing Committee on State Development – Defence Industry in New South Wales Inquiry* at <https://www.parliament.nsw.gov.au/committees/DBAssets/InquirySubmission/Body/5828/0026%20Charles%20Sturt%20University.pdf> of 18 June 2017, I have included a copy of the recommendations contained in our Submission for your reference (Attachment 1).

¹ Refer

<https://www.parliament.nsw.gov.au/committees/DBAssets/InquiryReport/ReportAcrobat/6122/Discussion%20paper%20-%20Defence%20industry%20in%20New%20South%20Wales.pdf>.

- Appearance at the Committee's Orange hearing on 14 August 2017.
- A detailed response to the Committee's request for further information at the Orange hearing regarding examples of existing government funded industry and university innovation programs, of 11 September 2017 (Attachment 2).

While our Submission to the Committee of 18 June 2017, provides a range of recommendations relating to the policy outcomes and program objectives contained in the *New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017*² statement, that details the Government's defence industry strategy for the State, I would like to take this opportunity to provide input on the matters raised in the Committee's November 2017 Discussion Paper and confirm the recommendations contained in our Submission of 18 June 2017 for inclusion in the Committee's report to the Government, which fall into three key industry support themes.

1. Technology development and commercialisation.

The defence industry innovation, research, education and future workforce elements of the Government's Statement be strengthened by direct investment, including:

- a defence industries technical skills development fund of up to \$25 million per annum;
- a professional development fund of up to \$10 million per annum; and most excitingly of all,
- implementation of a "development-intensive" research fund of at least \$25 million per annum modelled on the highly successful Small Business Innovation Research Program (SBIRP) in the United States. The SBIRP provides public funding to develop R&D partnerships between defence and SMEs, leading to highly innovative solutions to often intractable defence challenges. The SBIRP is largely credited with the technological, industry, investment and export success of the US industrial-military complex, not only underwriting the technological superiority of US defence capability but giving rise to the firms of the future. Implementation of an SBIR in New South Wales would catalyse:
 - defence industry innovation, research and education including developing the future workforce;
 - the ability of Defence to procure goods and services from home-grown businesses; and,
 - opportunities for New South Wales-based defence-focused companies to grow exports and attract investment.

2. Community capacity and workforce capability.

We recommend that the defence industry innovation, research, education and future workforce elements of the *New South Wales: Strong, Smart and Connected Defence*

² Refer <https://static.nsw.gov.au/nsw-gov-au/1487649980/PUB17-60-NSW-Strong-smart-and-connected-NSW-Defence-and-industry-st....pdf>.

and Industry Strategy 2017 be strengthened by direct Government investment, including:

- a defence industries technical skills development fund of up to \$25 million per annum;
- a professional development fund of up to \$10 million per annum; and,
- establishing a \$5 million per annum community development fund to support establishing and sustaining defensive supportive communities.

3. Ensuring success, effective governance and management.

We do believe that the policy outcomes and program objectives sought by the State, we be maximised through effective governance arrangements that are not only representative, but skills based. To this end, we recommend:

- establishment of a Ministerial Council for Defence Industry Development; and,
- strengthening the regional development element of the Government's policy by establishing a committee of the Ministerial Council for Defence Industry Development that would focus on defence force and defence industry development in the regions, this committee would work towards maximising the regional economic benefit attained from co-location of Defence bases and defence industries in the State's regional centres, its membership would be drawn from regionally-based Defence, industry, scientific, educational and training and community sectors.

With regards the Committee's November 2017 Discussion Paper and further to our contributions to the Committee's Inquiry to date, we provide the following additional commentary on New South Wales' defence industries.

The defence industry in New South Wales

We support the research, contributions, analysis and findings that the Committee has presented on the defence industry in New South Wales in the Discussion Paper, particularly the:

- commentary regarding the value and importance of Defence and defence industry to the State, especially regional areas;
- opportunities for the State Government and Commonwealth to boost Defence and defence industry economic and social outcomes in New South Wales;
- importance of SMEs in the Defence innovation and procurement mix;
- crucial role of the State Government must play as a facilitator and enabler of the industry and, in particular; and,
- establishment of a Ministerial Council to champion, govern and oversight the whole-of-government approach to management of the defence industries in New South Wales.

We believe, that adoption of our recommendations would strengthen the defence industry in New South Wales.

Supporting defence industry growth

NSW Government commitment to supporting Defence

We believe that that primary role of the New South Wales Government to supporting Defence should be in the areas of industry advocacy, awareness and facilitation, as well as skills development, professional development, SME innovation and community support for the sector.

The commitment of the Government to Defence is best achieved and demonstrated through investment in technology development and commercialisation, community capacity and workforce capability and success through effective governance and management. Investment in the recommendations put forward in our Submission of 18 June 2017 by the State Government would address these key areas for intervention.

Prioritising projects which focus on New South Wales' strengths

Consistent with the commentary provided in our Submission of 18 June 2017, including our recommendations, we believe that the following priority projects should be focused on to build on New South Wales' strengths in the defence industry:

- Technology development and commercialisation:
 - research and development;
 - bridging the gap between R&D and the marketplace;
 - beta testing and commercial scaling;
 - capital provision for growth; and,
 - market access; introduction, facilitation and procurement.

Recommendations 1.1(b), 1.2(b)iii in our Submission of 18 June 2017 would underwrite actions to achieve these outcomes (refer Attachment 1).

- Community capacity and workforce capability:
 - skills development, through vocational training and professional education;
 - on-going professional development of Defence and defence industry workforces, particularly private sector suppliers;
 - support to encourage SME innovation in Defence procurement;
 - utility infrastructure, such as world-class broadband access; and,
 - human capital, including the crucial role the regional communities play in the support of their Defence and defence industry workforces.

Recommendations 1.1(b), 1.2(b)i, 1.2(b)ii and 1.5(b) in our Submission of 18 June 2017 would underwrite actions to achieve these outcomes (refer Attachment 1).

- Success through effective governance and management:
 - a Ministerial Council to champion industry and coordinate a whole-of-government approach in New South Wales, as well as ensure that the State Government draws

on the expertise and connections of Austrade globally (noting the value of brand Australia in international markets); and,

- a regional committee of Council to ensure regional cities, rural towns and remote communities have a voice and presence in the development of the defence industry.

Recommendations 1.1(b), 1.3(b) and 1.4(b) in our Submission of 18 June 2017 would underwrite actions to achieve these outcomes (refer Attachment 1).

Enhancing export opportunities.

We wholeheartedly support the Department of Defence's position that:

“successful Australian defence industry cannot be sustained by domestic demand alone – exports are crucial” and “enhanced export outcomes will help make Australia’s defence industry more sustainable and internationally competitive, thereby improving its capability to contribute to Defence capability requirements”³

As discussed above, the implementation of the recommendations detailed in our Submission of 18 June 2017 would strengthen the New South Wales defence industry by enhancing technology development and commercialisation, building community capacity and boosting workforce capability and driving success through effective governance and management. Taken together, strengthening these three enablers would significantly and substantially enhance export opportunities for the State's defence industry sector.

Supporting a future workforce

Overall, we support the research, contributions, analysis and findings presented in the Committee's Discussion Paper regarding supporting the defence industry's future workforce, particularly the commentary regarding STEM and tertiary education pathways for development of the defence industry workforce. We take this opportunity to stand by and further advocate for our position regarding the crucial need to invest heavily in future workforce development, as summarised on Page 32 of the Discussion Paper.

“Evidence presented to the inquiry demonstrated general support from tertiary education stakeholders of the policy outcomes and strategies detailed in the NSW: Strong, Smart and Connected Defence Industry Plan. For example, Charles Sturt University reflected this viewpoint stating:

“We believe that the strategies in the Government’s defence industry policy will aid in encouraging defence industry innovation, research and education including developing the future workforce”

However, Charles Sturt University suggested that heavy investment by the NSW Government in several areas will be necessary in order to develop an internationally competitive defence industry workforce, including the need to enhance defence industry tertiary pathways. Specifically, the University recommended that the NSW Government improve these pathways by launching:

³ Paragraph 2.24, Page 20 of the Committee's November 2017 Discussion Paper.

“a defence industries technical skills development fund of up to \$25 million per annum, which would provide full and part scholarships to defence force personnel and future students looking to develop careers in the defence industries to off-set HELP debt”.”

Further, implementation of the range of recommendations included in our Submission of 18 June 2017 that address technology development and commercialisation and community capacity and workforce capability would contribute greatly to the on-going development of both Defence’s and the defence industry’s workforces. Given Charles Sturt University’s extensive capability in defence industries, our proven experience in regional on-campus, blended and distance education and our footprint which covers several defence intensive regions we are keen to assist the Government with this crucial element of industry development.

Research and innovation

Consistent with our position regarding the need to support the development of the defence industry’s future workforce, we support the research, contributions, analysis and findings presented in the Committee’s Discussion Paper regarding research and innovation, particularly as this relates to the role of SMEs in Defence procurement, see below.

In addition, implementation of the range of recommendations included in our Submission of 18 June 2017 that address technology development and commercialisation and to a lesser extent workforce capability would play an important contribution to the research and innovation intensiveness and effectiveness of New South Wales’ defence industries. In particular we draw the Committee’s attention to Recommendations 1.1(b), 1.2(b)iii in our Submission of 18 June 2017 (refer Attachment 1).

Supporting Small and Medium Enterprises (SMEs)

We support and concur with the Committee’s finding that:

There are some 6,500 SMEs in New South Wales working directly within the defence industry. As part of this inquiry, the committee has been privileged to meet with a selection of these innovative and capable SMEs from across the state. Representatives from SMEs have reported a number of common issues including: the need to enhance the accessibility of the Defence procurement environment and domestic and international opportunities; difficulties in accessing finance to support defence-based work; and, more generally, ensuring that the necessary hard and soft infrastructure is in place to support business activity and growth.

Apart from direct funding of vocational training and higher education for workforce skills development, Charles Sturt University believes that Government intervention in the defence SME environment would provide the greatest impact and return on investment. Indeed, in our Submission of 18 June 2017, we stated:

“Charles Sturt University supports the policy outcomes set by the New South Wales Government through implementation of the strategies detailed in New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017. We believe that the strategies in the Government’s defence industry policy will aid in encouraging defence industry innovation, research and education including developing the future workforce.”

However, the Government will need to invest heavily in defence industry innovation, research and education to ensure development of an internationally competitive future defence industries workforce in New South Wales.

Charles Sturt University is one of Australia's leading defence and security teaching, learning and research universities, which together with our regional footprint and colocation with several defence facilities, for example in Wagga Wagga, positions us uniquely to play a pivotal role in enabling the Government's attainment of the policy outcomes and program objectives in this sphere. A comprehensive overview of our teaching, learning and research capability is provided in Appendix II and III for reference.

Charles Sturt University believes that effecting defence industry innovation, research and education to ensure development of an internationally competitive future defence industries workforce will require direct investment by the State Government in a number of areas, by way of specific programs, such as:

- i. a defence industries technical skills development fund of up to \$25 million per annum, which would provide full and part scholarships to defence force personnel and future students looking to develop careers in the defence industries to off-set HELP debt;*
- ii. a similar, but smaller professional development fund of up to \$10 million per annum, which would provide for skills transition training which would enable employees of existing defence industries to upgrade their skills and ensure international competitiveness of the State's defence industry workforce; and,*
- iii. implementation of a "development-intensive" research fund of at least \$25 million per annum aimed unashamedly at developing solutions to defence challenges, with the fund design mirroring that of the highly successful Small Business Innovation Research Program (SBIRP) in the United States, see <https://www.sbir.gov/about/about-sbir>. This fund would align defence needs with the joint capability of a research institution and a private company, with the fund providing resources to undertake projects like those detailed at Appendix III. The Committee should note that the SBIRP in the US has played a significant role in the development of the economically successful US military-industrial complex."*

Further, we recommended to the Committee in our Submission that:

"...the defence industry innovation, research, education and future workforce elements of the New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017 be strengthened by direct Government investment, including:

- i. a defence industries technical skills development fund of up to \$25 million per annum;*
- ii. a professional development fund of up to \$10 million per annum; and,*
- iii. implementation of a "development-intensive" research fund of at least \$25 million per annum modelled on the highly successful Small Business Innovation Research Program (SBIRP) in the United States."*

Implementation of a SBIRP in New South Wales would enhance the accessibility of the defence procurement environment to SMEs and position them as the State's major driver of defence industry innovation, and in particular, would address:

- the need to enhance the accessibility of the Defence procurement environment and drive domestic and international opportunities;
- difficulties in accessing finance to support defence-based work, as working capital would be provided through part-payment of purchase orders; and,
- more generally, by ensuring that the necessary hard and soft infrastructure is in place to support business activity and growth, including technology development and commercialisation, building community capacity and boosting workforce capability and driving success through effective governance and management.

In closing, we support the defence industry policy outcomes and program objectives of the Government as set out in the defence industry strategy statement and the research, contributions, analysis and findings presented in the Committee's Discussion Paper. However, we do believe that the Government's outcomes and objectives would be best achieved through additional State investment in a range of initiatives, as set out in the recommendations of our Submission of 18 June 2017 to the Committee that would strengthen implementation of the Government's Strategy. In summary:

- Government consider further increasing its financial investment in the sector to ensure that its industry policy outcomes and project objectives are achieved.
- The defence industry innovation, research, education and future workforce elements of the Government's policy be strengthened by direct investment including, a defence industries technical skills development fund of up to \$25 million per annum, a professional development fund of up to \$10 million per annum and implementation of a "development-intensive" research fund of at least \$25 million per annum modelled on the highly successful Small Business Innovation Research Program (SBIRP) in the United States.
- Establishment of a Ministerial Council for Defence Industry Development.
- Strengthening the regional development element of the Government's policy by establishing a committee of the Ministerial Council for Defence Industry Development.
- Establishing a \$5 million per annum community development fund to support establishing and sustaining defensive supportive communities.

Importantly, in putting forward our recommendations, Charles Sturt University acknowledges the pressures on the State Budget. However, we argue in our Submission that development of defence force capacity and defence industry capability in regional New South Wales will be a key driver of regional economic growth that can address the prosperity disparity between city and country.

Therefore, Charles Sturt University urges the Committee to find and recommend to the Parliament that the Government ensure delivery of its policy outcomes and program objectives set out in the *New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017* Statement through tangible investment in real industry capability for a fair, accessible,

equitable and sustainable approach to economic development and participation in our regional communities.

I would be delighted to continue to provide further information to the Committee and would be available to provide additional evidence at any future hearings that that Committee may undertake in relation to considering the merits of the outcomes and objectives set from the *New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017* for the development and growth of the defence industry in the State.

Yours sincerely

Professor Andrew Vann
Vice-Chancellor

ATTACHMENT 1

**Charles Sturt University Submission - Standing Committee on State Development –
Defence Industry in New South Wales Inquiry. 18 June 2017.****1. Recommendations**

Charles Sturt University provides a range of recommendations relating to the policy outcomes and program objectives contained in the *New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017* that details the Government's defence industry strategy for the State as part of the New South Wales Parliament's Standing Committee on State Development as part of the Committee's inquiry into the defence industry in the New South Wales:

- 1.1 Maximise opportunities for NSW-based companies from Defence's growing exports and investment in defence capability – in both acquisition and sustainment

Charles Sturt University recommends that the New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017 defence industry strategy be implemented in its current form and that the Government consider further increasing its financial investment in the sector to ensure that its industry policy outcomes are achieved.

- 1.2 Encourage defence industry innovation, research and education including developing the future workforce

Charles Sturt University recommends that the defence industry innovation, research, education and future workforce elements of the New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017 be strengthened by direct Government investment, including:

- iv. a defence industries technical skills development fund of up to \$25 million per annum;***
- v. a professional development fund of up to \$10 million per annum; and,***
- vi. implementation of a "development-intensive" research fund of at least \$25 million per annum modelled on the highly successful Small Business Innovation Research Program (SBIRP) in the United States.***

- 1.3 Identify targets, programs and projects for defence spending in New South Wales

Charles Sturt University recommends establishment of a Ministerial Council for Defence Industry Development that would comprise members drawn from Defence, industry, scientific and community sectors.

- 1.4 Maximise the economic benefits of locating defence force bases and defence industry in the regions

Charles Sturt University recommends strengthening the regional development element of the New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017 by establishing a committee of the Ministerial Council for Defence Industry Development that we propose above, that would focus exclusively on maximising the regional economic benefit attained from colocation of Defence bases and defence industries in the State's regional centres, with membership of this committee comprising members drawn from regionally-based Defence, industry, scientific and community sectors.

1.5 How to establish and sustain defence supportive communities

Charles Sturt University recommends that the Government establish a \$5 million per annum community development fund to support establishing and sustaining defensive supportive communities.

1.6 Further enhance collaboration between the NSW Government and Commonwealth agencies

Charles Sturt University makes no recommendations with regards enhancing collaboration between the New South Wales Government and Commonwealth agencies.

1.7 Any other related matters

Charles Sturt University makes no further recommendations regarding the policy outcomes to be achieved and the program objectives to be implemented as part of the New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017.

11 September 2017

Hon Greg Pearce MP
Chair
Standing Committee on State Development
Parliament House
6 Macquarie Street
SYDNEY NSW 2000

Dear Mr Pearce

INQUIRY INTO THE DEFENCE INDUSTRY IN NEW SOUTH WALES – QUESTION TAKEN ON NOTICE DURING HEARING

I write regarding the New South Wales Parliament's Standing Committee on State Development's inquiry into the defence industry in the State.

On 14 August 2017, Charles Sturt University appeared before the Committee at its inquiry into the defence industry in New South Wales public hearing in Orange. The Chair requested that we provide additional information with regards examples of existing government funded industry and university innovation programs:

The CHAIR: It would help us if you were prepared to embellish that a little and give us some of the programs that we should refer to. If you could point to two or three existing programs that we could compare to support a proposition it would make it much more forceful for us. The Government will not be surprised to hear that we can tell them about some program that is already working.

Page 44, Report on Proceedings Before Standing Committee on State Development, Regional Development and a Global Sydney, Defence Industry in New South Wales, Uncorrected Proof. At Orange on Monday, 14 August 2017.

We have prepared our response in accordance with the Legislative Council's *Instructions on How to Correct Transcripts and Provide Answers*. Please find our response to the question taken on notice during the hearing below.

In addition to the SBIRF and the Innovate UK innovation programs detailed in our submission to the Inquiry and elucidated during our appearance at the hearing on 14 August, we provide the following examples of existing government funded innovation programs that the Committee could compare to support a proposition in its recommendations to Government that would be particularly convincing:

New South Wales

In addition to the, *Boosting Business Innovation Program*, see <http://www.industry.nsw.gov.au/business-and-industry-in-nsw/innovation-and-research/boosting-business-innovation-program>, which was discussed during the hearing, the New South Wales Government provides the following innovation support at the interface of industry development and public research institutions, including the State's universities:

The suite of programs contained in the four elements of *Bringing Big Ideas to Life*, New South Wales Innovation Strategy, see <https://www.innovation.nsw.gov.au>.

Victoria

The Victorian Government has a very long history of providing innovation support at the interface of industry development and public research institutions, including the State's universities. This commenced with the Kennet Government's \$310 million Science, Technology and Innovation Initiative *Creating Our Future* in 1997 and *Investing in Innovation* in 1999 and was subsequently renewed and expanding three times by the Bracks-Brumby Governments over the ensuing decade and a half.

During this time, the Victorian Government invested between \$5 and \$10 million per annum in technology commercialisation, through the initial \$20 million *Technology Commercialisation Program* and \$30 million in each of its two later iterations. In all cases the State's technology commercialisation investment required dollar for dollar cash contributions from the Government and the businesses commercialising the intellectual property outputs of public sector research and development.

Current programs that provide innovation support at the interface of industry development and public research institutions by the Victorian Government include:

- *Future Industries Fund*, see <http://www.business.vic.gov.au/support-for-your-business/future-industries>, which develops strategies in key industry sectors and provides funding for their development to ensure the State's future international competitiveness, for example the pharmaceutical industry strategy, see [http://yoursay.business.vic.gov.au/futureindustries/application/files/1414/5810/4612/Medtech_and Pharma Strategy - web version - 20160308.PDF](http://yoursay.business.vic.gov.au/futureindustries/application/files/1414/5810/4612/Medtech_and_Pharma_Strategy_-_web_version_-_20160308.PDF);
- *LaunchVic*, which in effect operates as an early stage venture capital provider where the Victorian Government has made an initial allocation of \$60 million in risk capital over two years, see <https://launchvic.org>. *LaunchVic*'s capital is co-invested on at least dollar for dollar terms in businesses commercialisation public sector research, as well as provides a range of market, people and financial development services for entrepreneurial businesses; and,
- the broader business and industry programs of the Department of Business and Innovation, see <http://www.vic.gov.au/business-industry.html>.

Queensland

The Queensland Government has recently increased its commitment to and funding of technology commercialisation, including providing innovation support at the interface of industry development and public research institutions through the:

- *Advancing Queensland* initiative and the Office of Advance Queensland, see <http://advance.qld.gov.au>;
- the entrepreneurial and technology commercialisation elements of *Advancing Queensland*, see <http://advance.qld.gov.au/entrepreneurs-startups.aspx>;
- the \$6 million *Advancing Regional Innovation Program*, which supports industry technology commercialisation in Queensland's regions, see <http://advance.qld.gov.au/entrepreneurs-startups/advancing-regional-innovation.aspx> and the \$40 million *Advancing Queensland Business Development Fund*, which directly invests between \$125,000 and \$2.5 million in Queensland technology businesses to help them commercialise advanced technology for future international competitiveness, see <http://advance.qld.gov.au/entrepreneurs-startups/business-development-fund.aspx>; and,
- Office of the Queensland Chief Entrepreneur, which is currently filled by internationally renowned technology entrepreneur, Mr Steve Baxter, see <http://advance.qld.gov.au/our-vision/chief-entrepreneur.aspx>.

These recent investments build on the Queensland Government's highly successful Smart State science, technology, innovation and commercialisation policies and programs that were rolled out last decade. Today, Brisbane in particular, is a national centre of technology commercialisation start-up businesses. The creation of this industry cluster in Brisbane is the direct results of public and private co-investment in commercialisation of public research and development in the State.

Commonwealth

The Commonwealth Government has recently increased its commitment to and funding of technology commercialisation, including providing innovation support at the interface of industry development and public research institutions through the:

- \$1 billion plus investment in the *National Innovation and Science Agenda* see, <http://www.innovation.gov.au/page/agenda>;
- the start-up and entrepreneur funding elements of the *Agenda*, see <http://www.innovation.gov.au/audience/startups-and-entrepreneurs>; and,
- the business innovation and technology commercialisation funding elements of the *Agenda*, including:
 - \$18 million for cutting edge technology-driven business innovation,
 - \$36 million for developing and growing the sophisticated international technology markets of the future,
 - \$19 million for provision of high-tech solutions to the Government, noting that this program is in effect a trial of the SBIRF which is mentioned throughout our submission to the Inquiry,
 - \$22 million for advanced digital technology application, and,
 - \$250 million for biomedical discovery commercialisation,
 - See, <http://www.innovation.gov.au/audience/business>.

These initiatives and programs are in addition to the Commonwealth's funding of public research and commercialisation including university research and development, CSIRO and the broader Australian Research Council (ARC), see <http://www.arc.gov.au> and National Health and Medical Research Council (NH&MRC), see <https://www.nhmrc.gov.au> research funding programs.

It is worth noting that Victoria and Queensland significantly outperform New South Wales with regards to leveraging the Commonwealth's substantial cash investment in technology commercialisation. Contrary to advice often given to Cabinet, New South Wales lags the other States on this front as the Government has historically under-invested in technology commercialisation and entrepreneurial services.

I would be delighted to provide further information to the Committee in relation to considering the merits of the outcomes and objectives sort from the *New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017* for the development and growth of the defence industry in the State.

Yours sincerely

Professor Andrew Vann
Vice-Chancellor