



LEGISLATIVE COUNCIL

STANDING COMMITTEE ON STATE DEVELOPMENT

Defence industry in New South Wales

Discussion paper



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November 2017

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Table of contents

	Terms of reference	v
	Committee details	vi
	Purpose of the discussion paper	vii
	Making a submission to the discussion paper	vii
	Chair’s foreword	viii
	Summary of questions	ix
Chapter 1	The defence industry in New South Wales	1
	Value of Defence and the defence industry in New South Wales	1
	The defence industry in New South Wales	1
	Defence presence in New South Wales	3
	Value of Defence and the defence industry to New South Wales	4
	Value of Defence in regional areas	6
	Maximising future Defence opportunities in New South Wales	8
	Australian Government commitment to Defence	8
	The need for a whole of government approach to supporting industry	10
Chapter 2	Supporting defence industry growth	13
	NSW Government commitment to supporting Defence	13
	Prioritising projects which focus on New South Wales’ strengths	14
	Enhancing Australian sovereign capability	17
	Welcoming a further naval presence on the east coast of New South Wales	18
	Enhancing export opportunities	20
	Understanding New South Wales capability	24
	Collaboration with the ACT	27
	Supporting a future workforce	27
	The promotion of STEM subjects	28
	Promoting STEM through collaboration with industry	31
	Tertiary education pathways for defence industry workforce	32
	Access to specialised TAFE courses in regional areas	33
	Promoting collaboration between Defence, industry and academia	34
	Research and Innovation	36
	The space industry	37

Chapter 3	Supporting Small and Medium Enterprises (SMEs)	39
	Enhancing the accessibility of the Defence procurement environment	39
	How does Defence procurement work?	39
	The role of the prime contractor	40
	Support through the Centre for Defence Industry Capability	40
	Identifying Defence opportunities through AusTender	41
	Supporting SMEs to access market opportunities	41
	Maximising the participation of Australian SMEs in supply chains	44
	Supporting SMEs to become ‘defence ready’	45
	Access to finance	46
	Enabling infrastructure	48
	Attracting workforce to regional areas	49

Terms of reference

1. That the Standing Committee on State Development, with reference to the *New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017*, inquire into and report on opportunities to incentivise and grow the defence industry in New South Wales to generate economic development and in particular:
 - a. maximise opportunities for NSW-based companies from Defence's growing exports and investment in defence capability – in both acquisition and sustainment
 - b. encourage defence industry innovation, research and education including developing the future workforce
 - c. identify targets, programs and projects for defence spending in New South Wales
 - d. maximise the economic benefits of locating defence force bases and defence industry in the regions
 - e. how to establish and sustain defence supportive communities
 - f. further enhance collaboration between the NSW Government and Commonwealth agencies
 - g. any other related matter.
2. That the committee report by June 2018.

The terms of reference were referred to the committee by the Hon Niall Blair MLC, Minister for Primary Industries, Minister for Regional Water, Minister for Trade and Industry on 3 May 2017.¹

¹ *Minutes*, NSW Legislative Council, 9 May 2017, p 1575.

Committee details

The Hon Greg Pearce MLC	Liberal Party	<i>Chair</i>
The Hon Mick Veitch MLC	Australian Labor Party	<i>Deputy Chair</i>
The Hon Rick Colless MLC	The Nationals	
The Hon John Graham MLC	Australian Labor Party	
The Hon Paul Green MLC	Christian Democratic Party	
The Hon Natasha Maclaren-Jones MLC	Liberal Party	

How to contact the committee

Members of the Standing Committee on State Development can be contacted through the Committee Secretariat. Submissions to this discussion paper and enquiries should be directed to:

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Purpose of the discussion paper

The purpose of the discussion paper is to seek stakeholder views on opportunities to incentivise and grow the defence industry in New South Wales.

The Hon Niall Blair MLC, Minister for Primary Industries, Minister for Regional Water, Minister for Trade and Industry has asked the Standing Committee on State Development to inquire into and report on opportunities to incentivise and grow the defence industry in New South Wales to generate economic development, with reference to the *New South Wales: Strong, Smart and Connected Defence and Industry Strategy 2017*.

Since the establishment of the inquiry in May 2017, the committee has been actively seeking evidence to inform the recommendations it will be making to government. It has received 36 submissions, conducted seven public hearings across the state and met with a number of defence industry representatives and organisations on site visits to the Shoalhaven and Illawarra, the Hunter and most recently, Queanbeyan and Adelaide.²

The committee is now issuing this discussion paper, which provides an overview of the key issues identified, based on the evidence received to date, to seek stakeholder views on various questions that have been developed in response to key issues.

This is an opportunity for individuals and organisations with an interest in the inquiry to provide specific feedback on what they would like to see the committee recommend to the NSW Government. A number of questions have been included to help you write your submission.

The committee will review all responses to the discussion paper and will then prepare its final report, for tabling in Parliament. All committee reports recommending action require a response from the NSW Government within six months of the report being tabled.

Making a submission to the discussion paper

The committee hopes to hear from a wide range of stakeholders including industry, government and non-government sectors, and academics. There is no special format for a submission and it does not need to address all of the questions posed in this discussion paper. Your name, address and telephone number is required for administrative purposes.

Submissions should be lodged via the committee website or sent to the Director of the committee by mail or email (see page vi). The closing date for submissions is **12 February 2018**. Please indicate clearly if you wish for all or part of your submission to remain confidential.

² Transcripts of public hearings, submissions and site visit reports are available on the committee's website: www.parliament.nsw.gov.au/statedevelopment.

Chair's foreword

Defence and defence industry makes a substantial contribution to the New South Wales economy and is a key driver of employment and economic growth in many regional centres in New South Wales. The unprecedented commitment by the Australian Government to invest \$195 billion in Australian Defence capability over the next decade presents considerable opportunity for New South Wales to grow its defence industry and increase its expertise, innovation and employment in this area. The committee is undertaking its inquiry in the context of this investment and the recent publication of the NSW Government's *New South Wales: Strong Smart and Connected, Defence and Industry Strategy*.

In 2017, the NSW Government established Defence NSW to provide an increased focus on major defence activities in the state. The committee acknowledges the important work undertaken by Defence NSW to date and believes that with continued commitment, it can lead the country in promoting and supporting defence industry. An essential focus for Defence NSW is to ensure that New South Wales remains the leader in complex systems integration and sustainment. This can be achieved by targeting major defence projects that align with these areas of expertise, including basing and sustaining the future submarines (SEA 1000) on the east coast of New South Wales.

To date the committee has heard from key stakeholders spanning government, industry and academic sectors. Each has offered valuable insights into how New South Wales can incentivise and grow the defence industry in New South Wales to generate economic development. The committee has been impressed by the capability and innovation displayed by industry. The committee has been fortunate to meet with industry leaders who are driving the development of world-class assets for the Australian Defence Force and international clients.

Stakeholders have sought to emphasise key opportunities and challenges facing the defence industry. Stakeholders frequently called for the NSW Government to take the lead in delivering a coordinated and committed approach to Defence related advocacy and to prioritise projects which align with its key areas of advantage such as systems integration and sustainment work; and further explore export market opportunities. Of some concern within the industry was the future availability of a highly skilled workforce and many inquiry participants called for action in this area.

Although Sydney, and especially the Harbour is an established defence hub, the defence industry in New South Wales includes some 6,500 Small and Medium Enterprises (SMEs). In regions such as Shoalhaven, and the Hunter, these SMEs form the backbone of the local economy providing a range of direct and indirect benefits. Whilst diverse in nature, many SMEs expressed similar opinions, and frequently called for further government support to increase the accessibility and visibility of domestic and international Defence procurement opportunities.

This discussion paper outlines some of the common themes and asks questions which seek to elicit specific actions that can be taken to support the defence industry in New South Wales to inform the committee's report. On behalf of the committee, I thank those who have contributed to our work, especially Rebecca Main, Stephanie Galbraith, and Angeline Chung and I invite interested parties to consider the issues identified in this discussion paper and encourage them to make a submission.



The Hon Greg Pearce MLC
Committee Chair

Summary of questions

The committee is seeking your views on how to support the defence industry in New South Wales. This is an opportunity for individuals and organisations with an interest in this area to provide specific feedback on what they would like to see the committee recommend to the NSW Government. Below are questions, based on the evidence received to date, to help you write your submission.

Chapter 1: The defence industry in New South Wales

- Question 1** **12**
 What additional measures, if any, should the NSW Government implement to improve coordination across government agencies, to support the delivery of the *New South Wales: Strong Smart and Connected, The NSW Government Defence and Industry Strategy*?
- Question 2** **12**
 Should the NSW Government establish a whole of government Ministerial Council to provide effective governance of the *New South Wales: Strong Smart and Connected, The NSW Government Defence and Industry Strategy* implementation? If so, what form should this body take, and who should it be comprised of?

Chapter 2: Supporting defence industry growth

- Question 3** **14**
 What more can the NSW Government do to ensure that its commitment to Defence and the defence industry is clear to stakeholders?
- Question 4** **17**
 a) What are the potential benefits of an aerospace precinct at the Western Sydney Airport and how can the NSW Government support this initiative?
 b) What further steps can the NSW Government take to support New South Wales's strengths in critical defence capability areas?
- Question 5** **17**
 What steps can the NSW Government take to support the enhancement of Australian sovereign defence capability?
- Question 6** **19**
 What further steps can the NSW Government and the defence industry take to optimise its chance of success in securing Future Submarine basing and accompanying sustainment work on the east coast of New South Wales?
- Question 7** **24**
 a) What steps can the NSW Government take to increase understanding of New South Wales defence industry capability with potential for export?

- b) What steps can the NSW Government take to enable New South Wales based defence industry to take full advantage of the supports provided by the Australian Government in this area?
- c) Should New South Wales seek to identify a state based export target to improve performance in this area? If so, what factors should the NSW Government take into consideration in determining this target?
- d) How best can the NSW Government support and lead a collaborative ‘Team Australia’ based culture to maximise the economic benefits for all states and territories from Defence expenditure?

Question 8 **26**

- a) What steps can the NSW Government take to better understand defence industry capabilities in New South Wales?
- b) What role should Defence NSW have in building connections between local industry and primes?
- c) Is the development of a Defence Capability Directory, such as that developed in the ACT, a useful model for the NSW Government to consider and adopt?

Question 9 **27**

Are there any additional steps that the NSW Government and ACT Government can take to enhance collaborative working arrangements for the benefit of defence industry?

Question 10 **30**

- a) What actions are currently being implemented by the NSW Government and other educational providers to promote STEM skills in primary, secondary, and tertiary education institutions?
- b) What further steps can the NSW Government take to promote STEM subjects and associated defence industry careers? Should the NSW Government launch an advertising campaign to promote the study of STEM subjects as well as promote New South Wales as a technology leader?
- c) Should the NSW Government take steps to embed defence-related industry interaction, within the education syllabus?

Question 11 **31**

- a) What steps can the NSW Government take to close gender gaps in the participation of females in STEM career pathways as relevant to the defence industry?
- b) What barriers exist for females seeking to undertake STEM education and access defence industries? What steps can the NSW Government take to address such barriers?

Question 12 **32**

- a) What benefits have been delivered by the ME Program to date? Based on this evidence, what steps should the NSW Government take to support the program and explore its roll out across the state?
- b) Are there any other best practice examples being implemented in New South Wales that also merit further consideration?

- Question 13** **32**
- a) Should the NSW Government consider a defence industry technical skills development fund as part of its strategy to entice prospective students to undertake defence industry related courses at universities?
 - b) Are there other approaches the NSW Government can take to promote tertiary pathways for defence industry workers?
- Question 14** **33**
- Should the NSW Government help facilitate increased coordination between government, the defence industry, and universities in the creation of university courses that meet the needs of defence industry businesses? How can the NSW Government achieve this?
- Question 15** **34**
- What measures can the NSW Government take to improve access to advanced trade courses in regional areas? For example, should the NSW Government provide financial support to create defence industry traineeships and apprenticeships in regional areas?
- Question 16** **35**
- What further steps can the NSW Government take to promote collaboration between Defence, industry and academia?
- Question 17** **37**
- What steps can the NSW Government take to further support research and innovation activities being undertaken by defence stakeholders?
- Question 18** **38**
- What steps can the NSW Government take to support New South Wales defence industry, and academic institutions tap into the opportunities created from Federal Government investment in a national space agency?

Chapter 3: Supporting Small and Medium Enterprises (SMEs)

- Question 19** **44**
- a) What steps can the NSW Government take to further support relationships between Small and Medium Enterprises and key suppliers and procuring entities?
 - b) What steps can the NSW Government take to ensure that federal support programs and initiatives are comprehensively utilised by New South Wales based industry?
 - c) Should the NSW Government invest further in supporting Small and Medium Enterprises to access trade shows and exhibitions? Are current efforts sufficient and are there any lessons for improvement?
- Question 20** **45**
- a) Is there widespread industry support for the changes to the procurement landscape as identified by the Australian Defence Industry Interest Group?
 - b) What actions should the NSW Government take to enhance the flow of Defence procurement opportunities to New South Wales Small and Medium Enterprises and New South Wales industry more generally?

- Question 21** **46**
- a) What further actions can the NSW Government take to provide additional support to businesses seeking to become ‘defence ready’? What form should this support take?
 - b) What other examples of exemplar practice exist to support New South Wales industry become ‘defence ready’?
- Question 22** **48**
- a) What actions can the NSW Government take to assist Small and Medium Enterprises to access the finance necessary to pursue business opportunities? Does the establishment of a body, with responsibilities akin to the Export Finance Insurance Corporation, merit further investigation?
 - b) What steps can the NSW Government take to ensure that New South Wales industry is aware of and is making use of the services offered by the Export Finance Insurance Corporation?
- Question 23** **50**
- a) What enabling infrastructure projects should the NSW Government target to support defence industry start up and growth?
 - b) What measures can the NSW Government take to help attract defence industry workers to regional areas? For example, should the NSW Government establish a community development fund to help create defence supportive communities in regional towns?

Chapter 1 The defence industry in New South Wales

‘Defence is important to NSW. NSW is important to defence’.³

Defence investment makes a substantial contribution to the New South Wales economy and is a key driver of employment and economic growth in many regional centres in New South Wales. The Australian Government’s commitment to invest \$195 billion in Australian Defence capability over the next decade presents a significant opportunity for New South Wales to grow defence-related expertise, jobs and innovation. This chapter provides a summary profile of the existing defence industry and illustrates the current economic value of the industry to the state and regional economies. It concludes by presenting the policy context underpinning future opportunities to defence and asks whether the establishment of a Defence focussed Ministerial Council is required to drive the implementation of the *New South Wales: Strong, Smart and Connected, The NSW Government Defence and Industry Strategy*.

Value of Defence and the defence industry in New South Wales

- 1.1** Investment from the Australian Defence Force and the Department of Defence (from here on referred to as Defence) makes a substantial contribution to both state and regional economies in New South Wales. This section provides a brief overview of the New South Wales defence industry, presents headline economic statistics, and discusses the value of the industry to state and regional economies.

The defence industry in New South Wales

- 1.2** The defence industry is made up of a diverse range of businesses and organisations that provide, or are developing, products and services for the Australian Defence Force. Around 25,000 people are directly employed in the defence industry in Australia⁴ of which it is estimated 6,500 are located in New South Wales.⁵
- 1.3** Defence is responsible for some of Australia’s most complex procurement activities.⁶ The defence market from which it procures is made up of a broad industry base dominated by large global defence companies known as ‘prime’ contractors. A substantial number of these global defence companies are located in New South Wales and include companies such as BAE Systems; Boeing; Northrop Grumman; Lockheed Martin; Thales; Rheinmetall and ASC. These primes are largely from the United States of America and Europe. Only ASC, a Government Business Enterprise (GBE) of the Australian Government, has Australian

³ NSW Department of Industry, *New South Wales: Strong, Smart and Connected, The NSW Government Defence and Industry Strategy 2017*, p 7. Hereafter referred to as *The NSW Government Defence and Industry Strategy*.

⁴ Centre for Defence Industry Capability, New to Defence, last updated 19 May 2017, <https://www.business.gov.au/Centre-for-Defence-Industry-Capability/New-to-Defence#overview>

⁵ NSW Department of Industry, *The NSW Government Defence and Industry Strategy 2017*, p 6.

⁶ Centre for Defence Industry Capability, New to Defence, last updated 19 May 2017, <https://www.business.gov.au/Centre-for-Defence-Industry-Capability/New-to-Defence#overview>

origins. At a national level, around 50 per cent of employment within the defence industry is attributable to prime contractors.⁷

1.4 Small and medium enterprises⁸ (SMEs) also have an important presence in the defence industry. While a limited number of direct supply opportunities to Defence exist, significant prospects exist within the supply chains of the prime contractors.⁹ It is estimated that there are some 6,500 defence related SMEs based in New South Wales.¹⁰

1.5 Mr Chris Jenkins, Chief Executive Officer, Thales Australia, described the emergence and proliferation of the defence industry SME:

We end up with a market structure where there are thousands and thousands of little businesses that do one thing very well, oil-water separators for minehunters, hydraulic systems for aircraft, landing gear for aircraft, rotor blades for helicopters, lots and lots of little companies. And those little companies are turning over between \$AU2 million and \$AU5 million, thereabouts.¹¹

1.6 In addition to providing services and products to Defence, a number of businesses in the industry supply international defence clients, either through the supply chains of the primes, or through their own connections.¹² The export of New South Wales products and services represents a significant opportunity for New South Wales industry and is discussed in chapter 2.

1.7 The defence industry in New South Wales is diverse and innovative. It is characterised by areas such as advanced manufacturing, systems integration, cybersecurity, aerospace, information and communication technology, and business services. It is widely acknowledged that these areas represent a considerable competitive advantage for New South Wales.¹³

1.8 Defence and businesses within the defence industry are complemented by Research and Development (R&D) activities by leading universities and research institutions in New South Wales. These organisations not only provide world class research and innovation to support defence capability but are also responsible for providing the extensive undergraduate and postgraduate teaching programs required to equip the existing and future workforce for the defence industry.¹⁴

⁷ Centre for Defence Industry Capability, *New to Defence*, last updated 19 May 2017, <https://www.business.gov.au/Centre-for-Defence-Industry-Capability/New-to-Defence#overview>

⁸ SMEs are typically defined as organisations with less than 200 employees.

⁹ Centre for Defence Industry Capability, *New to Defence*, last updated 19 May 2017, <https://www.business.gov.au/Centre-for-Defence-Industry-Capability/New-to-Defence#overview>

¹⁰ *The NSW Government Defence Industry Strategy 2017*, p 6.

¹¹ Evidence, Mr Chris Williams, Executive Chair, Sydney Aerospace and Defence Industry Group, 3 August 2017, p 31.

¹² Centre for Defence Industry Capability, *International and export support*, last updated 16 October 2017, <https://www.business.gov.au/Centre-for-Defence-Industry-Capability/International-and-export-support>

¹³ *The NSW Government Defence Industry Strategy 2017*, p 13.

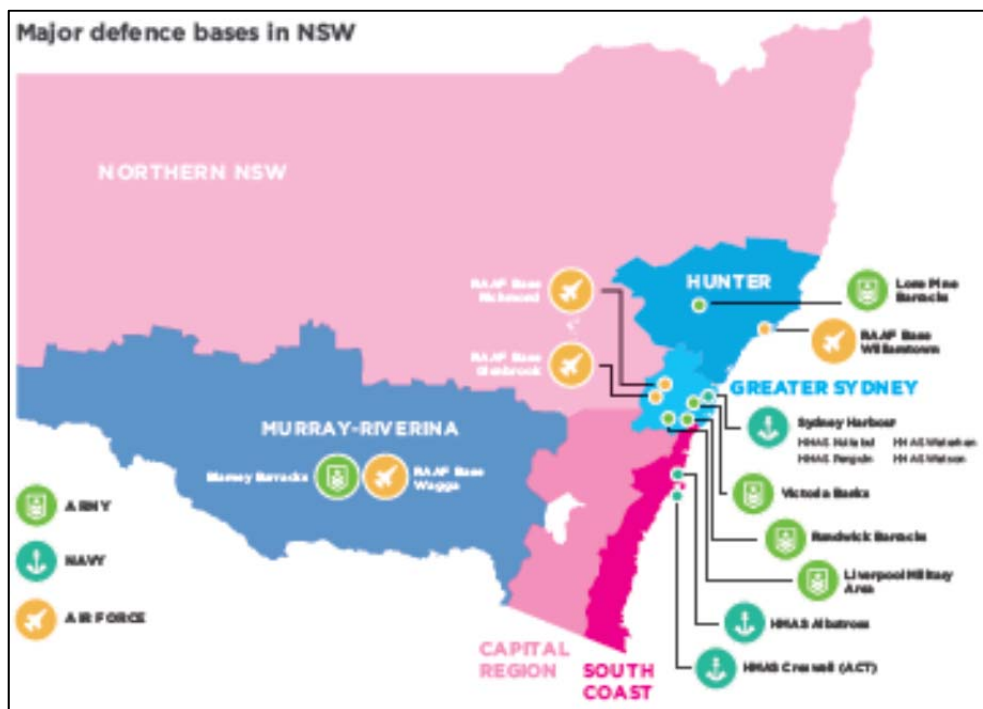
¹⁴ *The NSW Government Defence Industry Strategy 2017*, p 26.

- 1.9 Several industry and collaborative networks such as the Australian Industry Defence Network, Sydney Aerospace and Defence Interest Group and HunterNet also exist to drive collaboration, innovation and advocacy for the industry.¹⁵
- 1.10 In 2017, the NSW Government established a new government body, Defence NSW, within the Department of Industry to co-ordinate all defence related activities for the NSW Government. The roles and responsibilities of Defence NSW are discussed later in this chapter.

Defence presence in New South Wales

- 1.11 The Australian Defence Force is well represented in New South Wales. A large number of Defence bases and key platforms across maritime, land and air domains are located in New South Wales including all four operational command centres. A large number of training facilities are also found within the state.¹⁶ According to the NSW Government, some 80 facilities are operational across the state. Of these, there are 17 Defence establishments, accommodating approximately 27,700 Defence personnel.¹⁷ Figure 1 below provides a map showing the major defence bases in NSW.

Figure 1 Major defence bases in New South Wales.



Source: Department of Industry, *NSW South Wales: Strong, Smart and Connected*, *The NSW Government Defence and Industry Strategy*, Source, p 21.

¹⁵ Evidence, Commodore Peter Scott, Director, Defence NSW, NSW Department of Industry, 3 August 2017, p 5.

¹⁶ *The NSW Government Defence Industry Strategy 2017*, p 6.

¹⁷ Submission 32, Department of Defence, Australian Government, p 2.

Value of Defence and the defence industry to New South Wales

- 1.12** At the state level, Defence makes a substantial contribution to the economy in areas such as employment and jobs growth, regional activation and industry investment. The Department of Defence confirms that 27,700 of its employees are located in New South Wales.¹⁸ This workforce is comprised of permanent and reserve forces, and civilian personnel.¹⁹ At 26 per cent, New South Wales has the greatest share of the total Australian defence workforce of all the states and territories.²⁰ Defence employees are located across the state, with high concentrations found in areas such as the Hunter, Riverina, Illawarra and Shoalhaven regions.²¹
- 1.13** In addition to those employed directly by Defence, the NSW Government estimates that another 6,500 people are employed by the defence industry and that a further 29,500 are indirectly employed in jobs supporting defence operations. Acknowledging that precise estimates of industry size are difficult on account of existing Australian Bureau of Statistics reporting classifications, the NSW Government estimates that overall the defence sector (comprising Defence as well as direct and indirect industry supporting Defence) accounts for some 56,000 jobs in New South Wales.²² Approximately one third of these jobs exist in the state's regions.²³
- 1.14** According to the NSW Government, in 2014-2015 Defence expenditure in the state amounted to approximately \$7.9 billion. This was made up of \$5.5 billion in operational and \$2.4 billion in capital expenditure.²⁴ The economic impact and multiplier effect of this investment is significant. Research undertaken by KPMG estimates that for every \$1 billion of recurrent Defence expenditure invested in New South Wales, a \$1.4 billion uplift is achieved to the Gross State Product (GSP). Furthermore, for every \$1 billion dollars invested in the state, some 10,000 jobs (comprising 3,500 defence jobs + 6,500 jobs in other sectors) are supported.²⁵
- 1.15** As illustrated above, New South Wales has been privileged to host a substantial Defence presence and has developed a diverse and capable industry base to service its needs. Notwithstanding this achievement, a number of inquiry stakeholders suggested that New South Wales could further improve its comparative standing.
- 1.16** The production of comprehensive comparative data of Defence expenditure presents a number of challenges.²⁶ However, information provided by Defence NSW provides some indication as to New South Wales' performance:

¹⁸ Submission 32, Department of Defence, p 2.

¹⁹ Department of Defence, Defence Annual Report 2015-16, p 95.

²⁰ Department of Defence, Defence Annual Report 2015-16, p 95.

²¹ *The NSW Government Defence and Industry Strategy 2017*, p 23

²² *The NSW Government Defence and Industry Strategy 2017*, p 23.

²³ *The NSW Government Defence and Industry Strategy 2017*, p 23.

²⁴ *The NSW Government Defence and Industry Strategy 2017*, p 6.

²⁵ *The NSW Government Defence and Industry Strategy 2017*, p 8.

²⁶ Answers to questions on notice, Defence NSW, 1 September 2017, p 1.

- At December 2016 New South Wales had 32 per cent of the Australian population, and was responsible for 31 per cent of the Gross National Product in 2015-2016.
- In 2014/2015, New South Wales had 26 per cent of Defence employment, and 25.6 per cent of total defence expenditure (broken down into 25 per cent of Defence operational expenditure, and 27 per cent of Defence capital expenditure).²⁷

1.17 This is compared to Victoria, which in 2016 had 26 per cent of the Australian population, and 13 per cent of Defence employment; and the ACT which had 2 per cent of the Australian population, and 17 per cent of employment. It is noted that the high percentage of Defence employment in the ACT is attributable to the location of Department of Defence headquarters and agencies.²⁸

1.18 A number of inquiry participants commented on New South Wales's share of Defence expenditure. By way of example, Mr Chris Williams, Executive Chair, Sydney Aerospace and Defence Industry Group stated:

In some ways New South Wales has been a bit too lucky and to date we have not really had to do anything to get our slice of the pie. But this position is under siege from the other States that are willing to aggressively co-invest with industry to win work.²⁹

1.19 The value added by defence expenditure is particularly significant for some areas of industry. As outlined in Table 1 below, a number of sectors, notably business services; construction and manufacturing; and wholesale and retail trade, receive the greatest economic lift due to increased demand for their products and services. The estimated value added to certain industries as a result of \$1 billion of Defence operational expenditure invested in New South Wales is outlined in the table below.

Table 1 Impact by industry as a result of \$1 billion Defence expenditure³⁰

Industry	Value added (\$million)
Construction and manufacturing	162
Wholesale and retail trade	105
Transport, postal and warehousing	45
Telecommunications and information	41
Business services (including finance and insurance, rental, hiring and real estate, professional, technical and administrative services)	400
Accommodation, food, energy, water and waste services	56
Social services (including health care, arts and recreation,	59

²⁷ Answers to questions on notice, Defence NSW, p 1.

²⁸ Answers to questions on notice, Defence NSW, p 1.

²⁹ Evidence, Mr Williams, 3 August 2017, p 29.

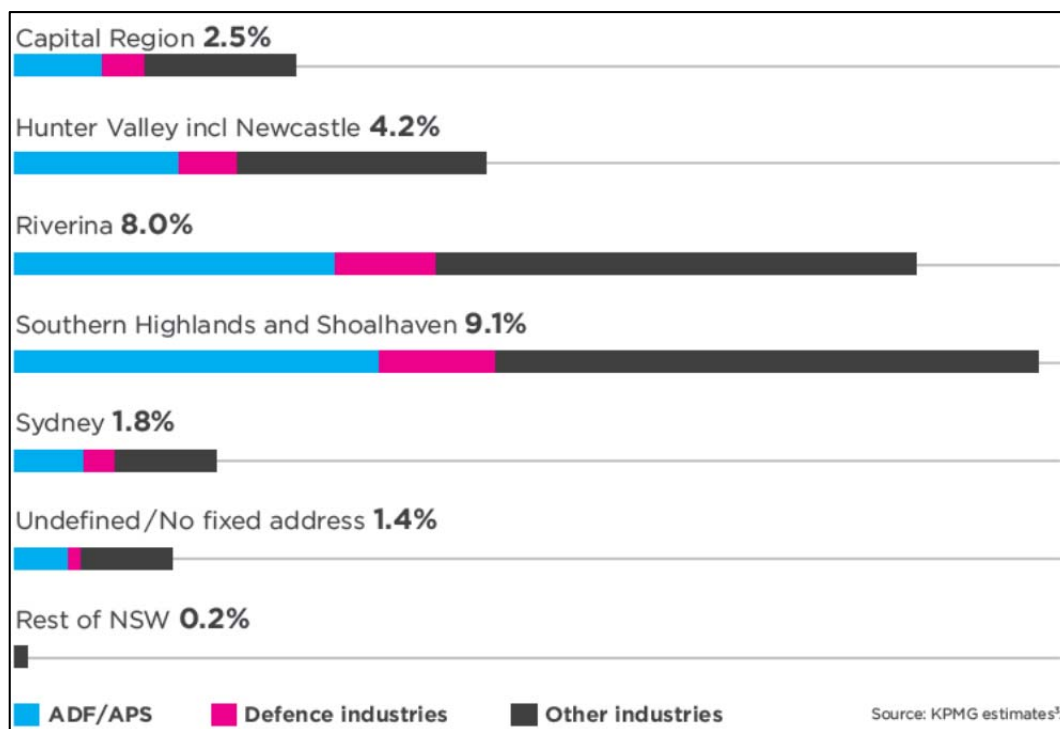
³⁰ *The NSW Government Defence and Industry Strategy 2017*, p 24.

Industry	Value added (\$million)
education and training)	
Other services (including public administration and safety)	40

Value of Defence in regional areas

1.20 For some regional centres in New South Wales, the importance of Defence and its contribution to the local economy is particularly significant. Figure 2 below shows the extent of defence related employment as a share of total employment by region. It clearly illustrates the importance of the Defence and defence industry sector in regions such as the Southern Highlands and Shoalhaven (9.1 per cent) Hunter Valley including Newcastle (4.2 per cent) and the Riverina (8 per cent).

Figure 2 Defence and defence industry – share of employment by region



Source: Department of Industry, NSW South Wales: Strong, Smart and Connected, The NSW Government Defence and Industry Strategy, p 23

1.21 As part of the inquiry process to date, the committee travelled to the Shoalhaven and Illawarra, as well as the Hunter region, to see first-hand, the value of Defence in these regional areas. The case study box below illustrates further the importance and opportunity of Defence investment for these areas.

Case Study: Value of Defence in the Shoalhaven area

The Shoalhaven has a long association with defence through the establishment of the naval bases of HMAS Albatross and HMAS Creswell. It is estimated that Defence makes a regional economic contribution of \$540 million per annum and employs almost 2,000 people in Defence and defence industries³¹ in sectors such as advanced manufacturing and aerospace. This, according to Shoalhaven City Council provides a variety of skilled and unskilled positions with ‘opportunities for career advancement in a regional area’.

The committee visited HMAS Albatross at Nowra and the Helicopter Aircrew Training System (HATS), delivered by Boeing Defence Australia that provides helicopter training to the next generation of Army and Navy aircrew. The committee also met with a range of businesses in the area including Global Defence Solutions, Air Affairs Australia and BAE Systems. Many of these businesses are located at Albatross Aviation Technology Park, providing a best case example of the economic benefits of co-location of defence bases and defence support industries.³² Mr Greg Pullen, Economic Development Manager of Shoalhaven City Council confirmed the importance of the defence industry in Nowra, noting that defence accounted for 25 per cent of its economy.³³

Shoalhaven City Council illustrated the ‘social impact’ of the presence of Defence in the Shoalhaven area noting that ‘Defence personnel are part of the social fabric of regional areas. Defence personnel live in our communities; their families work and attend schools in our communities. They are an integral part of the culture of Shoalhaven’.³⁴

Case Study: Value of Defence in the Hunter Region

The Hunter Region has a strong Defence and industry presence. It hosts key RAAF and Army bases, including RAAF Base Williamtown, as well as a diverse industrial base which services the defence sector. Some 4,620 people are employed in the Hunter region in Defence and defence related industries and the regional economic contribution of the sector 2014-2015 was estimated to be \$1.31 billion.³⁵

One example, demonstrating the important of defence investment to regional areas is the Joint Strike Fighter (JSF) project which will be introduced at Williamtown from 2019. It is reported that this will generate some \$1 billion of investment at the base. The committee met with representatives from BAE Systems Australia’s Aerospace Headquarters which has been awarded the role of Southern Pacific Regional Depot Airframe Maintenance, Repair, Overhaul and Upgrade provider for the JSF project. This is a significant contract that will involve the maintenance of not only RAAF aircraft, but also the aircraft of other nations including Japan, Singapore and the USA. It is estimated that this contract will lead to the creation of approximately 200 high technology jobs within the region, during the jet’s 30 years of service.³⁶

³¹ *The NSW Government Defence and Industry Strategy 2017*, p 39.

³² Submission 32, Shoalhaven City Council, p 4.

³³ Site visit report, Nowra/Wollongong, Friday 30 June 2017, p 1.

³⁴ Submission 32, Shoalhaven City Council, p 2.

³⁵ *The NSW Government Defence and Industry Strategy 2017*, p 35.

³⁶ Site visit report, The Hunter Region, Mr Andrew Chapman, BAE Systems, 18 September 2017, p 4.

- 1.22 Evidence provided by the Department of Defence further exemplifies the economic benefit to local areas of a Defence presence. With reference to the Naval presence in Sydney, the Department confirmed:

... Defence's Sydney Naval Bases contribute approximately \$637 million per annum to the NSW economy. The bases included in these estimates are Garden Island Defence Precinct, HMA Ships Waterhen, Watson and Penguin and relevant naval components of Randwick Barracks and Living-in Accommodation at North Strathfield and Homebush.³⁷

Maximising future Defence opportunities in New South Wales

- 1.23 As stated at the onset, the Australian Government has committed \$195 billion to enhance defence capability over the next decade. This presents significant opportunities for New South Wales industry. This section summarises the most relevant national and state policy underpinning future opportunities and asks whether the establishment of Ministerial Council is required to support the implementation of the NSW Government's Defence and Industry Strategy.

Australian Government commitment to Defence

- 1.24 In recent years, there has been a strong commitment by the Australian Government to embark on a major program of renewal of Defence capability, and with it a strengthening of Australia's defence industry.³⁸ This commitment is set out within a number of key policy documents including the *Defence White Paper*, the *Integrated Investment Program*, and the *Defence Industry Policy Statement*.³⁹
- 1.25 The *2016 Defence White Paper* sets out a 'comprehensive, responsible long term plan for Australia's Defence'. The Integrated Investment Program was published alongside the White Paper and outlines an investment of approximately \$195 billion over the next decade to strengthen defence capability in areas such as equipment, infrastructure, information and communications technology, science and technology and workforce.⁴⁰
- 1.26 Importantly, the Australian Government's defence policy recognises and acknowledges that close collaboration between Defence and industry is critical to meeting the challenges facing the future and delivering the Government's ambitious program of works. Accordingly, it commits to 'focuses on maximising Australian industry involvement and innovation in the delivery' of this capability. This commitment is articulated within the *Defence Industry Policy Statement* (DIPS) which, among other things, included a \$1.6 billion investment in defence industry and innovation programs over the next decade.⁴¹

³⁷ Submission 32, Department of Defence, p 2.

³⁸ Submission 32, Department of Defence, p 1.

³⁹ Australian Government, Department of Defence, 2016 Defence White Paper, <http://www.defence.gov.au/WhitePaper/>

⁴⁰ Australian Government, Department of Defence, Integrated Investment Plan, 2016, p 7.

⁴¹ Submission 32, Department of Defence, p 1.

1.27 The Centre for Defence Industry Capability was established by the Australian Government in 2016 to mentor and guide the Australian defence industry. It will focus on small to medium size enterprises to foster their competitiveness.⁴² The Government's Defence Innovation Hub (the Hub), also established in 2016, will allow for virtual collaboration within the Defence industry 'on innovation efforts that deliver a capability edge throughout the capability life cycle from initial concept, through prototyping and testing to introduction into service.'⁴³

1.28 The Minister for Defence Industry, the Hon Christopher Pyne MP recently affirmed this commitment:

This Government is determined to ensure that our defence dollar stays in Australia and benefits the local economy. The greater the ability of Australian industry to meet the Australian Defence Force's capability needs, the greater level of prosperity, security and sovereignty we enjoy.⁴⁴

1.29 Furthermore, the Australian Government released the Naval Shipbuilding Plan in May 2017. This outlines the Government's plan for the largest renewal of Royal Australian Navy since the Second World War and includes a \$90 billion investment in new naval capability and the sustainment of a larger and more complex naval fleet. The plan notes that the naval shipbuilding workforce will need to expand considerably in order to achieve this. The establishment of a Naval Shipbuilding College in 2018, to be headquartered in Adelaide, is an important initiative in this regard.⁴⁵

1.30 The Australian Government expects that states and territories be proactive in seeking out and securing the opportunities provided by the substantial increase in Defence investment. In its submission, the Department of Defence emphasised the role of each state and territory in supporting and maximising the involvement of local industry:

With many of the future acquisitions based on a national approach that is location agnostic, it will be incumbent on each State Government and industry to assess that state's industry's strengths and opportunities, leverage Commonwealth programs aimed at enhancing defence industry capability, and to partner with the Prime contractors competing for the projects to seek to maximise local industry involvement.⁴⁶

NSW Government approach to defence

1.31 The *NSW Defence and Industry Strategy 2017: Strong, Smart and Connected* was launched by the Minister for Trade and Industry, the Hon Niall Blair MLC in February 2017. The strategy 'represents the NSW Government's vision for supporting Defence and growing defence industries and related jobs, investment and innovation across the state'.⁴⁷

⁴² Media release, Prime Minister, the Hon Malcolm Turnbull MP, Centre for the Defence Industry Capability, 8 March 2016.

⁴³ Department of Defence, *2016 Defence White Paper*.

⁴⁴ Speech, The Hon Christopher Pyne MP, Minister for Defence Industry, Keynote address: Australian Business Defence Industry Sovereignty Forum, 27 July 2017.

⁴⁵ Submission 32, Department of Defence, p 3.

⁴⁶ Submission 32, Department of Defence, p 4.

⁴⁷ Submission 30, NSW Department of Industry, p 4

1.32 Key objectives of the strategy are to:

- support Defence in its objectives;
- assist Defence in the delivery of the investment program;
- maximise the economic opportunity for New South Wales; and
- collaborate with other states and territories to achieve national outcomes.⁴⁸

1.33 As mentioned earlier, a key initiative of this strategy was the establishment of Defence NSW, a dedicated body within the NSW Department of Industry, with responsibility for delivery of the Defence and Industry strategy. The team is led by the Director Defence NSW, Commodore Peter Scott, CSC, RANR, and is supported by the NSW Defence Advocate, Air Marshall (Retd) John Harvey, AM.

1.34 During evidence, Mr Simon Smith, Secretary, NSW Department of Industry, emphasised the role of Defence NSW in creating collaborative relationships between stakeholders, including industry and training institutions:

We want to foster that connection and build connections between the technical capabilities of universities and the up and coming smaller firms to create a hospitable environment for the stronger established firms.⁴⁹

1.35 Mr Duncan Challen, Executive Director, Industry Development, NSW Department of Industry, similarly commented on the importance of creating relationships between industry players and noted the role that the NSW Government can play in informing industry of opportunities:

A big focus is on helping small and medium enterprises understand what the opportunities are That is one of the things that we need to help them with. We need to help them understand what the global supply chain programs are, and the channels into building deeper relationships with the big prime contractors as well.⁵⁰

The need for a whole of government approach to supporting industry

1.36 As demonstrated above, the defence industry is important to New South Wales. A number of NSW Government agencies impact the sector either directly through defence specific initiatives or indirectly through the provision of enabling infrastructure and services which support the industry.⁵¹ A key function of Defence NSW is to ensure that all relevant NSW Government agencies are aware of their impact on the defence industry and to act as a point of contact for the industry on relevant matters.⁵²

⁴⁸ Submission 31, NSW Department of Industry, p 4.

⁴⁹ Evidence, Mr Simon Smith, Secretary, NSW Department of Industry, 3 August 2017, p 4.

⁵⁰ Evidence, Mr Duncan Challen, Executive Director, Industry Development, NSW Department of Industry, 3 August 2017, p 10.

⁵¹ Agencies that impact the sector may include but are not limited to: Department of Premier and Cabinet, Department of Planning and Environment, Transport for NSW, Department of Education, others delivering specific funding programs.

⁵² Submission 31, NSW Department of Industry, p 6.

- 1.37** The Department of Industry acknowledged that a whole of government approach was particularly important for regional New South Wales given the significant proportion of Gross Regional Product (GRP) attributable to the defence sector.⁵³ Economic development in regional New South Wales requires consideration of local issues and support from multiple government agencies on factors such as those affecting business costs, or those which impact amenity of location.⁵⁴ As such, the Department was eager to emphasise the priority it places on ‘whole of government leadership, advocacy and engagement with the sector, particularly in regional New South Wales, in order to successfully execute the Defence and Industry Strategy’.⁵⁵
- 1.38** Representatives from Charles Sturt University also raised the importance of a collaborative, whole of government approach given the significance of defence investment, particularly for the regions. It therefore called for the establishment of a New South Wales Ministerial Council to govern and support the implementation of the NSW Government’s Defence and Industry strategy. Such a Ministerial Council would comprise a broad range of experts including representatives from Defence, industry, scientific and community sectors.⁵⁶
- 1.39** Charles Sturt University contended that a subcommittee of such a Ministerial Council could also be used to strengthen the regional development element of the NSW Government’s policy. Professor Vann, Vice Chancellor, explained:
- The policy outcomes and program objectives sought by the State will be maximised through effective governance arrangements that are not only representative but skills based. To this end we recommend the 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 colocation 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.⁵⁷
- 1.40** As illustrated by this chapter, Defence and the industry which supports it, makes a substantial contribution to the New South Wales economy and is a key driver of employment and economic growth in many regional centres in New South Wales. The committee understands and commends the role to be played by Defence NSW as a coordinating body. The committee is also mindful of the importance of a coordinated, whole of government approach to the strategy’s success. The committee is therefore seeking submissions on whether the NSW Government should undertake further steps to ensure that coordination across the NSW Government is achieved, and whether the establishment of a Defence focussed Ministerial Council may enhance the benefits delivered for all relevant stakeholders through the NSW Government’s Defence and Industry Strategy.

⁵³ Submission 31, NSW Department of Industry, p 6.

⁵⁴ Submission 31, NSW Department of Industry, p 6.

⁵⁵ Submission 31, NSW Department of Industry, p 6.

⁵⁶ Submission 26, Charles Sturt University, p 7.

⁵⁷ Evidence, Professor Andrew Vann, Vice Chancellor, Charles Sturt University, 14 August 2017, p 42.

Question 1

What additional measures, if any, should the NSW Government implement to improve coordination across government agencies, to support the delivery of the *New South Wales: Strong Smart and Connected, The NSW Government Defence and Industry Strategy*?

Question 2

Should the NSW Government establish a whole of government Ministerial Council to provide effective governance of the *New South Wales: Strong Smart and Connected, The NSW Government Defence and Industry Strategy* implementation? If so, what form should this body take, and who should it be comprised of?

Chapter 2 Supporting defence industry growth

The NSW Government has indicated its clear intention to support Defence to achieve its objectives and its ambitious program of renewal and reform. In doing this, there are significant opportunities for New South Wales industry. A number of recurring themes were identified by inquiry stakeholders, including: NSW Government commitment to Defence and the defence industry; the need for New South Wales to focus its efforts on areas where it possesses a competitive advantage such as systems integration and sustainment work; potential opportunities provided by international export markets; and the need to support industry to ensure that a well-equipped future workforce is in place. These themes are discussed below.

NSW Government commitment to supporting Defence

2.1 From the onset, the NSW Government sets out its commitment to supporting Defence:

NSW is committed to supporting Defence to achieve its aims of defending Australia and its interests. *NSW: Strong, Smart and Connected Defence and Industry Strategy* is the Government's strategy for providing that support.⁵⁸

2.2 Notwithstanding this statement, some observations were presented to the inquiry that this support had not always been in place and that the NSW Government had been historically, somewhat equivocal in supporting Defence. In response to this assertion, Commodore Peter Scott, Director of Defence NSW, contended that, with the release of *New South Wales: Strong Smart and Connected, The NSW Government Defence and Industry Strategy* and the establishment of Defence NSW, the Government's commitment to Defence was evident and was on an 'upward path':

Myself, the team and the department are working very hard to help those who need to understand the relative value of Defence and defence industries in those particular areas, such as Garden Island and RAAF Williamtown. My observations are similar ...that there is in parts of the Defence environment, not a positive perception of the history of New South Wales as a supporter of Defence. We are demonstrating increasing momentum in that regard with the launch of the strategy, the creation of Defence NSW, the conduct of a committee such as this. These all demonstrate government commitment to Defence across the State. I think we are on an upward path in that regard.⁵⁹

2.3 Similarly, Mr Simon Smith, Secretary, NSW Department of Industry, also confirmed the Government's unreserved commitment to welcoming and retaining Defence facilities such as the Navy in Sydney Harbour, and the RAAF Base at Williamtown:

I think that anyone who does the numbers knows that those two military presences are dominant in value to the State; there is no doubt about that whatsoever. The Government has been very clear that it is unreservedly committed to and welcoming of the retention of those facilities where they are now.⁶⁰

⁵⁸ *The NSW Government Defence and Industry Strategy 2017*, p 6.

⁵⁹ Evidence, Commodore Peter Scott, Director, Defence NSW, 3 August 2017, p 4.

⁶⁰ Evidence, Mr Simon Smith, Secretary, NSW Department of Industry, 3 August 2017, p 4.

- 2.4 The NSW Defence Advocate, Air Marshal (Retd) John Harvey reiterated this position. Mr Harvey explained that since his position was created in 2016, there had been a ‘focus on the major Defence activities in New South Wales’ and that he, together with his state colleagues, had been ‘reinforcing’ New South Wales’s ‘strong support’ to Defence:

With Minister Roberts we visited the fleet commander, which is the first time that has happened in quite a while. I have been to the fleet base and Mr Scott has been talking directly to the commander there. I have been reinforcing to Defence generally our strong support. I am part of the Naval Shipbuilding Taskforce for the future. I was at RAAF Williamtown about two weeks ago, and it was great to see the work that is being done for the Joint Strike Fighter VA systems. I was talking to Lockheed Martin last night about how they are going to expand there. We are certainly committed to making it work, and if there are any concerns we will engage directly to address those concerns and make sure everyone knows we are committed to making sure that everyone knows we support Defence and it is a good outcome for New South Wales.⁶¹

- 2.5 The NSW Government’s support to Defence and the defence industry is clear to the committee and we welcome the release of the NSW Government Defence and Industry Strategy, the establishment of Defence NSW, and the appointment of a Defence Advocate for NSW. The committee seeks input on whether the NSW Government is doing enough to demonstrate its commitment to Defence and defence industry.

Question 3

What more can the NSW Government do to ensure that its commitment to Defence and the defence industry is clear to stakeholders?

Prioritising projects which focus on New South Wales’ strengths

- 2.6 New South Wales defence industry has a strong reputation in areas critical to Defence including system integration, cybersecurity and advanced materials. The NSW Government commits to building on strengths in ‘complex systems integration and sustainment to enhance Defence’s ability’ to deliver its investment program.⁶²
- 2.7 The concept of sustainment and maintenance of Defence assets is an important and valuable one for industry. Mr Chris Williams, Executive Chair, Sydney Aerospace and Defence Interest Group, sought to illustrate the financial significance of such work, stating that the value of such work could be three to four times the value of the original asset throughout its lifetime:

With sustainment, you end up spending three to four times the value of the asset through life. For a \$13 billion air warfare destroyer, you would spend \$52 million through life over 40 years—\$1.2 billion or a bit more. So it is a big deal.⁶³

⁶¹ Evidence, Air Marshall (Retd) John Harvey, Defence Advocate for NSW, 3 August 2017, p 4.

⁶² *The NSW Government Defence and Industry Strategy 2017*, p 13.

⁶³ Evidence, Mr Chris Williams, Executive Chair, Sydney Aerospace and Defence Interest Group, 3 August 2017, p 34.

2.8 Mr Chris Jenkins, Chief Executive Officer of Thales Australia also reflected on the significant opportunities that existed for New South Wales in the area of systems and sustainment:

The scale of the current investment in defence capability means that in order for the Australian Defence Force to get the platforms and systems it requires, each State needs to focus on its strengths. We believe the New South Wales strengths are the smart systems and sustainment that enable the next generation of platforms to deliver the highest levels of capability for the Australian Defence Force. If New South Wales were to capture its fair share of these systems it would drive investment and employment well beyond the time frame of individual programs and would generate second and third order economic benefits for the New South Wales economy.⁶⁴

2.9 The NSW Government acknowledges New South Wales's critical expertise in this area and commits to supporting and developing, 'including through the provision of infrastructure, regionally specific defence industry precincts focussed on locally relevant projects that build on comparative strengths'.⁶⁵ Accordingly, the NSW Government's Defence and Industry Strategy sets out a number of high level initiatives, underpinned by regional activities, which seek to support this commitment:

- ensuring that New South Wales remains Australia's leader in complex systems integration and sustainment
- building on New South Wales's strengths in cybersecurity and space and promote collaboration between experts in Sydney and the Capital Region, and ACT industry
- targeting major defence projects to take place in New South Wales through coordinated campaigns including Joint Strike Fighter (AIR6000), Air Force's Future Battle Management System (AIR6500), Combat Reconnaissance Vehicles (LAND400) and Future Submarines (SEA1000), Offshore Patrol Vessels (SEA1180) and Future Frigate (SEA5000)
- exploring Western Sydney Airport as a future aerospace precinct through engagement and partnership with NSW and Federal Governments.⁶⁶

2.10 In its submission, Defence NSW provided examples of projects which have been delivered as part of its work in this area. Examples include:

- NSW Government investment, in partnership with Thales, at the Port of Newcastle (see case study below)
- an incentive package for bidders of the Land400 Phase 2 project to build armoured reconnaissance vehicles
- regular support of the promotion of supply chain opportunities relating to maritime acquisitions platforms
- enabling NSW Defence Small and Medium Enterprises to participate at the Pacific 2017 conference
- industry roadshows.⁶⁷

⁶⁴ Evidence, Mr Chris Jenkins, Chief Executive Officer, Thales Australia, 3 August 2017, p 38.

⁶⁵ *The NSW Government Defence and Industry Strategy 2017*, p 13.

⁶⁶ *The NSW Government Defence and Industry Strategy 2017*, p 13.

Revitalising marine sustainment capability at the Port of Newcastle – Thales Australia⁶⁸

Thales Australia is an electronics and systems group serving defence, aerospace security and transport markets in Australia and around the world. Thales is a prime contractor for the Australian Defence Force. Nationally, it employs more than 3,400 people across 35 sites and generated revenues in excess of \$1 billion in 2016. In New South Wales, Thales employs some 1,900 staff in eight major sites, and engages more than 450 New South Wales small and medium enterprises within its supply chain.

In June 2017, Thales Australia and the NSW Government announced plans to renew the Fitzroy Street shipyard slipway to reactivate the Port of Newcastle and the Hunter as a major marine ship repair and maintenance precinct.

The committee met with representatives from the Thales facility at Carrington in September 2017 and were briefed on the proposals which will create an additional 70 new jobs for the Hunter.

The proposal comprises a three-step plan to re-establish both naval ship repair and commercial capabilities to the Newcastle region. The first Phase consists of a 12 month remediation process of Fitzroy Street wharf. This will include the construction of a slipway and the reactivation of the main warehouse maintenance facility. Once completed, the ship repair facility will be operational and available for small to medium sized vessels.



Once completed, the ship repair facility will be operational and available for small to medium sized vessels.

The second phase will involve the re-establishment of large ship lifting and maintenance capabilities; and the establishment of a marine disposal facility. A floating dry dock for large commercial and naval vessels, repair of the existing quay line and the development of new office and warehouse spaces will take place. After completion, the ship repair and marine disposal facility will be operational and available for large naval and commercial vessels.

The final phase will establish a secure disposal facility that is compliant with the International Traffic in Arms Regulations (ITAR). The construction time of the disposal facility will be 9 months. After construction is completed, an environmentally compliant disposal facility will be available to Defence.

2.11 It is evident to the committee that there is widespread acknowledgement that New South Wales holds particular strengths of direct relevance to Defence. The committee is therefore seeking submissions on industry opinion on the initiatives identified within the defence and industry strategy on this matter, in particular on the potential benefits of an aerospace precinct at the future Western Sydney Airport as limited information was received on this particular initiative. We also seek further submissions on whether any further actions should be undertaken by the NSW Government given the potential economic benefits of these critical capabilities.

⁶⁷ Submission 31, NSW Department of Industry, p 8.

⁶⁸ Evidence, Mr Jenkins, 3 August 2017, p 38; Presentation, Thales Australia, Carrington Proposal; Site visit report, The Hunter, 18 September 2017, Mr Greg Gocher, Project Manager, Thales, p 1.

Question 4

- a) What are the potential benefits of an aerospace precinct at the Western Sydney Airport and how can the NSW Government support this initiative?
- b) What further steps can the NSW Government take to support New South Wales's strengths in critical defence capability areas?

Enhancing Australian sovereign capability

- 2.12** Sovereign capability or priority industry capability refers to 'elements of broader industry capabilities that confer an essential strategic advantage by being resident in Australia, which if not available, would undermine the Defence self-reliance and Australian Defence force operational capability'.⁶⁹
- 2.13** As outlined above, a fundamental component of the Defence Industrial Capability Plan is the concept of Sovereign Industrial capability. As part of this plan, a Sovereign Capabilities Assessment Framework will be produced which will identify 'critical sovereign capabilities that underpin the Australian Defence Force's' requirements. In addition, an analysis of how Government and Defence measures can be implemented to support these sovereign capabilities 'health and sustainability'. Defence asserts that 'this is a seminal piece of work' which will rely on 'strong engagement and industry participation'.⁷⁰
- 2.14** Thales Australia identified a number of sovereign industrial defence capabilities already existing in New South Wales. These included:
- sonar and underwater systems development and manufacture at Rydalmere
 - munitions manufacture at Mulwala
 - small arms manufacture at Lithgow
 - ship repair and maintenance at Australia's largest naval base, Garden Island, and at Newcastle.⁷¹
- 2.15** The committee is seeking submissions on what further steps the NSW Government can take to support the enhancement of Australian sovereign capability.

Question 5

What steps can the NSW Government take to support the enhancement of Australian sovereign defence capability?

⁶⁹ Australian Government, Priority Industry Capability, <http://www.defence.gov.au/SPI/Industry/PIC.asp>

⁷⁰ Australian Government, Defence Industry Capability Plan, <https://www.business.gov.au/centre-for-defence-industry-capability/news-events-and-resources/defence-industry-capability-plan-development-roadshow>

⁷¹ Submission 28, Thales Australia, p 2.

Welcoming a further naval presence on the east coast of New South Wales

2.16 Building on discussions on maintenance and sustainment more generally, a number of inquiry participants referred to the opportunities afforded by the expansion of Defence's naval fleet and in particular, opportunities relating to the future basing and sustainment of submarines on the New South Wales east coast.

2.17 Commodore Scott advised the committee that he thought there were 'very strong prospects for east coast basing of submarines in the future' and that there were very 'logical arguments' to support this position. Commodore Scott explained:

I think there are very strong prospects for east coast basing of submarines in the future. There are very logical arguments for east coast basing of submarines today. As the force grows in numeric strength they will become even more compelling. I think that we can offer a welcome mat to Defence as they make those decisions.⁷²

2.18 In order to support a positive decision by Defence in this regard, Commodore Scott again emphasised the importance of state government support:

I deliberately say "east coast" rather than "Sydney". I think that if Defence sees that they will be supported by the State Government wherever they look to base any class of ship, that is the best that we can offer. It might be that they decide to operate the submarines from a port such as Newcastle and smaller vessels from a port such as Port Kembla. We can look to work with them and bodies such as the Naval Shipbuilding Taskforce to display the opportunities that are there, and make those opportunities appear attractive to Defence.⁷³

2.19 Air Marshall (Retd) Harvey, the NSW Defence Advocate, also supported this position adding that the State must adopt a 'long term-vision' to support this strategy noting that the State must make sure that it does not take any decisions now that may preclude future opportunities from occurrence. Mr Harvey referred to recent funding support provided by the NSW Government to Thales to reactivate the Carrington site at the Port of Newcastle as an example of forward thinking and collaboration in this regard.⁷⁴

2.20 Regional Development Australia – Illawarra suggested that the Illawarra region and the Port of Kembla was one option to support Navy East Coast operations:

The Illawarra region and the Port of Kembla are strategically positioned half way between both Canberra and Sydney and Nowra and Sydney. This proximity is a key strategic competitive advantage for Defence, should their East Coast presence grow in the long term...The Port of Kembla is an economic asset of national significance, critical to the future economic growth and development

- Deep water port, with fast access to continental shelf
- Advanced manufacturing with 24/7 access and logistics connectivity
- Ease of access and logistics connectivity
- Crew response times less than 30 minutes
- Housing affordability up to 30% cost saving on current Defence housing

⁷² Evidence, Commodore Scott, 3 August 2017, p 11.

⁷³ Evidence, Commodore Scott, 3 August 2017, p 11.

⁷⁴ Evidence, Air Marshall (Retd) Harvey, 3 August 2017, p 11

- Access to highly skilled workforce and spousal employment opportunities
- Access to world-class education facilities and R&D capabilities.⁷⁵

2.21 Mr Richard Anicich, Director of Hunter Business Chamber, supported an enhanced navy presence at the Port of Newcastle.⁷⁶ In its joint submission, HunterNet and the Hunter Business Chamber, stated that with the Department of Defence's assessment 'that Garden Island will need over \$700 million in works over the next 10 years to enable it to continue an expanded fleet', that there was opportunity for a naval presence at the Port of Newcastle:

This raises the possibility that the projected constraints with Garden Island creates an opportunity for some naval fleet presence in Newcastle Harbour or new ship repair and maintenance facilities, which fits with Port of Newcastle's five year development plan and the planned development of the Carrington marine precinct.⁷⁷

2.22 Mr Ramage, Department for Defence, in response to questioning about what steps the NSW Government and industry could take that may have a positive influence on future decision making in this area stated:

That is a defence capability-driven decision. The submarines do not start coming into service until the 2030s, so it is not an immediate decision. Defence will have to consider the future disposition of six of those 12 submarines. If I were the New South Wales Government, I would talk to Ministers and the senior people in Defence, whether it be the chief of the Royal Australian Navy or the secretary of the Department of Defence, to understand what is happening. However, I do not think it is necessarily something that can be influenced in one attempt now because it is a strategic decision and a big investment decision. Obviously talking to the right people at the senior level is the best way to go about it.⁷⁸

2.23 The future basing and sustainment of future submarines represents considerable opportunity for New South Wales. The committee therefore seeks further submission on what further steps can be taken by the NSW Government, as well as local defence industry, to encourage a positive response in this area.

Question 6

What further steps can the NSW Government and the defence industry take to optimise its chance of success in securing Future Submarine basing and accompanying sustainment work on the east coast of New South Wales?

⁷⁵ Submission, Regional Development Australia, p 7.

⁷⁶ Evidence, Mr Richard Anicich, Director, Hunter Business Chamber, 19 September, p 2.

⁷⁷ Submission 25, Hunter Business Chamber and HunterNet, p 11.

⁷⁸ Evidence, Mr Ramage, 3 August 2017, p 20.

Enhancing export opportunities

- 2.24** The Department for Defence contends that ‘a successful Australian defence industry cannot be sustained by domestic demand alone – exports are critical’.⁷⁹ Furthermore, ‘enhanced export outcomes will help make Australia’s defence industry more sustainable and internationally competitive, thereby improving its capability to contribute to’ Defence’s capability requirements.⁸⁰ This section discusses the evidence presented on export opportunities.
- 2.25** At a national level, statistics suggest that Australia is running a considerable deficit in the trade of military technology. The NSW Defence Advocate sought to illustrate the extent of this deficit suggesting that recent statistics positioned Australia as the fifth largest importer of military technology, and the nineteenth largest exporter of military technology, and that this trade was taking place at a ratio of approximately 12:1.⁸¹ The Australian Trade and Investment Commission (Austrade) website reports that Australia exports over \$750 million of defence products and services per annum, the majority of which are to USA, Europe and New Zealand.⁸²
- 2.26** In February 2017, the Minister for Defence Industry, the Hon Christopher Pyne MP, announced the development of a Defence Export Strategy which will consider a range of issues such as:
- the contribution of Australian defence exports to Australian Defence capability
 - the relationship between defence industry export outcomes and Australia’s broader foreign, defence and national security policy objectives
 - Australian defence industry export opportunities and priority markets
 - measures of defence industry exports and future goals
 - co-operation and coordination between government and industry to support Australian defence exports.⁸³
- 2.27** The Strategy is expected to be released later in 2017. In addition to the core objectives outlined above, it is expected it will also address ‘how the Department of Defence will work with the State and Territory Governments and industry to better coordinate export support and programs, including participation in international trade shows and overseas engagement’.⁸⁴

⁷⁹ Australian Government Department of Defence, Defence Strategy Policy and Intelligence Group, Export Strategy, Terms of Reference. <http://www.defence.gov.au/SPI/Strategy/ToR.asp>

⁸⁰ Australian Government Department of Defence, Defence Strategy Policy and Intelligence Group, Export Strategy, Terms of Reference. <http://www.defence.gov.au/SPI/Strategy/ToR.asp>

⁸¹ Evidence, Air Marshall (Retd) Harvey, 3 August, p 5.

⁸² Australian Trade and Investment Commission, *Australian Defence Industry*, <https://www.austrade.gov.au/local-sites/singapore/contact-us/australian-defence-industry>

⁸³ Australian Government Department of Defence, Defence Strategy Policy and Intelligence Group, Export Strategy, Terms of Reference. <http://www.defence.gov.au/SPI/Strategy/ToR.asp>

⁸⁴ Submission 32, Australian Government, Department of Defence, p 6.

- 2.28** Mr Ramage, Department of Defence, provided some further rationale for the development of the strategy:

Defence has not...focused on exports in the past. We do not have a system that allows us to work necessarily with the States and Territories to say, "Here are the capabilities you have in New South Wales. These are their strengths and this is what you are doing. How can we use ministerial, government defence resources, advocacy and support to help you achieve those opportunities?" In terms of the strategy, what we are trying to achieve is to provide better resourcing potentially of some of the existing initiatives which we have—things like a global supply chain program, which New South Wales companies already benefit from. We work with the primes and under contract they identify opportunities for small to medium enterprises. So to pull them through in terms of the international supply chains to be internationally competitive.⁸⁵

- 2.29** Mr Ramage also identified the Team Defence Australia initiative, as an important one in driving export outcomes. He explained:

We have Team Defence Australia, which is a national initiative where we go to international trade shows. At the next one in the United Kingdom in September will be the largest presence of Australian companies ever at a trade show. New South Wales also has trade events and goes overseas. So part of it is looking at how we better coordinate that. How do we have a national brand? How do we look at the early identification of capabilities within the New South Wales defence industry and across Australia to say, "Here is a great idea or capability that is coming on board. How do we look at it early and carry it through the system and think about exports in a strategic way rather than in a more ad hoc and uncoordinated way?" The strategy is about resourcing but it is also about doing business and normalising thinking about exports and thinking about at the Commonwealth and State and Territory level we are working together with a common goal and using those different levers to get the best outcome for Australian industry.⁸⁶

- 2.30** The issue of states, territories and the Federal Government working in a coordinated way to present an 'Australian' brand overseas is an important one. Some commentary was provided to the committee that suggested that there were instances that state-state competition was causing confusion to those procuring products and services and that further effort was needed to consolidate national Defence advocacy in this regard.

- 2.31** Offering opinion on this perspective, Mr Richard Anicich, Director, Hunter Business Chamber agreed that such an approach was 'absolutely essential' and suggested that the NSW Government should take a lead in working with the Federal Minister for Defence, to ensure that is the way Defence advocacy is implemented:

A good example of it is going back to the JSF. One of the contract packages was recently awarded to BAE, which is around logistics. Part of that came from Minister Pyne leading a "Team Australia" delegation to Luke Air Force Base, the home of JSF, with representatives of the Australian industry and State governments...It is also important for this Committee to make recommendations to the State Government that it should try to take the lead in working with the Federal Minister for Defence to

⁸⁵ Evidence, Mr Ramage, 3 August 2017, p 13.

⁸⁶ Evidence, Mr Ramage, 3 August 2017, p 13.

ensure that that is the way it works...We do not necessarily want to get into a bidding war with other States...Some of the work can be done in South Australia and Western Australia, but there is a lot of systems integration work and smart technology work that can be done in the Hunter and other parts of New South Wales, including Shoalhaven. A collaborative approach is very important.⁸⁷

Maximising export potential – Quickstep Holdings Ltd⁸⁸

Quicksteps Holdings Ltd is an Australian listed company that manufactures carbon composite components and assemblies in Australia and develops advanced composite manufacturing solutions for the global Aerospace, Defence and Automotive markets. It employs 220 people in Australia, of which 190 are based at its Bankstown facility in Western Sydney. Mr Mark Burgess, Chief Executive Officer of the business, outlined the company's export performance and explained: '95 per cent of our revenue is generated by the Bankstown facility with 95 per cent of our revenue from the export market. We have, particularly on the back of the JSF program, enjoyed substantive support from the New South Wales Government, both in terms of investment in capital equipment and associated training to support the ramp-up of JSF production. I would very much like to see one of the outcomes from your investigation to be a continuation of that support, but I would also like to see—and I know that there are steps in this regard already—more structured and consistent advocacy both within Australia on behalf of producers in New South Wales, but also internationally.'

2.32 Mr Williams, Sydney Aerospace and Defence Interest Group described some of the challenges facing Australian industry in seeking access to international markets, referring to the 'more aggressive' local content rules stipulated in foreign markets. Local content rules can be applied by countries to foreign companies seeking to manufacture goods in that particular country. These rules stipulate a minimum level of content that must be sourced locally from the country in question, rather than sourced from imports. Mr Williams explained:

The local content rules are much more aggressive. Canada has 100 per cent offset regime...That requirement does not exist in the Australian marketplace...That means companies like H. I. Fraser, Quickstep, Thomas Global and Varley Group are competing on a level playing field with overseas companies...To compete on that level and to win is challenging. It also means that we cannot do it in Australia. We cannot win that work in Australia; we must get on a plane and go overseas. The decision-makers for these programs are not in Australia; the engineering decision-makers for vehicles and ships are overseas. We have to be over there, and that requires financial resources and support, targeting and missions.⁸⁹

2.33 Dr Ben Greene, Chief Executive Officer and founder of Electro Optic Systems which specialises in military aerospace and one of the leading Defence exporters in Australia also cautioned on the 'double edged' nature of export opportunities, noting respective offset requirements stipulated in other countries:

⁸⁷ Evidence, Mr Richard Anicich, Director, Hunter Business Chamber, 18 September 2017, p 9.

⁸⁸ Evidence, Mr Mark Burgess, Chief Executive Officer, Quickstep Holdings, 3 August 2017, pp 38-39.

⁸⁹ Evidence, Mr Williams, 3 August 2017, p 30.

One of the things that governments have to remember is that exports are a double-edged sword; for every 10 jobs we create with a new product, between two and four come to Australia because of the offset requirements of the other countries. We could have more jobs out of every 10, but we never get enough cooperation within Australia to get the full benefit.⁹⁰

- 2.34** Dr Greene, also provided some insights into his experience in dealing in international markets, particularly in the United States of America, suggesting that the package of support provided by those state governments seeking to attract investment to their locations, was more comprehensive and coordinated:

Probably the best exercise I could tell you in terms of the current time is we are in the process of putting a footprint of 200 new jobs in the US, and the professionalism of the US-backed delegations in terms of what they bring to us...they literally cover everything: all the red tape, all the registration, all the green tape, everything is done, including all the approaches to package what we could call the payroll tax and other benefits that have come in. We are literally down to a short list. I will not identify the states, obviously, but we have two outstanding proposals from two states in America for those 200 jobs and we will make a decision within the next four to six weeks.⁹¹

Maximising export potential – Electro Optic Systems⁹²

Formed in 1983, and publicly listed in 2004, Electro Optic Systems (EOS) is a leading Australian technology company operating in the defence and aerospace markets, and is the sole indigenous provider of military space based services and remote weapon stations for land based tactical platforms.

EOS has a global presence with operating entities established in Australia, USA, Germany and Singapore. EOS Defence Systems currently operates from premises in Queanbeyan, New South Wales where they develop, market, manufacture and support remote weapon systems and related products for global military and defence, and will operate from purpose built facilities in Hume, ACT by the end of 2017. The EOS satellite laser ranging facility at Mount Stromlo, ACT is part of a global network of some 30 observatories using laser light to measure distances to orbiting satellites, and is currently home to EOS Space Systems. Dr Greene, the founder explained: ‘We have been at times the largest Defence exporter in Australia. We are currently, I think, still the largest in New South Wales’. ‘It took us 27 years to export our first billion dollars, but we are currently accruing export orders of about a billion dollars every five quarters. The company has been on a very, very rapid trajectory.’ Reflecting on the reasons for his export success, Dr Greene explained ‘Our export success is based on the fact that we deliberately identify niches that are too large for a normal SME to address and probably too small for large aerospace corporations and there has to an unmet need’.

- 2.35** In New South Wales, current export performance and potential is not well understood. Commodore Scott reported that information provided by industry stakeholder groups was important for Defence NSW.⁹³ The issue of capability mapping to inform potential export and other opportunities is discussed later in this chapter.

⁹⁰ Evidence, Dr Ben Greene, Chief Executive Officer, Electro Optic Systems, 24 October 2017, p 10.

⁹¹ Evidence, Dr Greene, 24 October 2017, p 10.

⁹² Evidence, Dr Greene, 24 October 2017, p 9-10.

⁹³ Evidence, Commodore Scott, 3 August 2017, p 5.

- 2.36** It is clear to the committee that there is merit in exploring the potential opportunities to be realised by New South Wales defence industry from participation in export markets. In this regard, the committee has a keen interest in the imminent publication of the Department of Defence's Defence Export Strategy. The committee seeks further submissions how best the NSW Government can support defence industry achieve export success.

Question 7

- a) What steps can the NSW Government take to increase understanding of New South Wales defence industry capability with potential for export?
 - b) What steps can the NSW Government take to enable New South Wales based defence industry to take full advantage of the supports provided by the Australian Government in this area?
 - c) Should New South Wales seek to identify a state based export target to improve performance in this area? If so, what factors should the NSW Government take into consideration in determining this target?
 - d) How best can the NSW Government support and lead a collaborative 'Team Australia' based culture to maximise the economic benefits for all states and territories from Defence expenditure?
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Understanding New South Wales capability

- 2.37** A recurring issue was the lack of a baseline in terms of understanding potential capacity and capability of New South Wales based Small and Medium Enterprises (SMEs). Such an understanding is important to enhance the matching of local SME capability with the requirements of prime contractors and other opportunities.
- 2.38** At a national level, the Department of Defence is working on strengthening the Defence Industrial Capability Plan, which is due to be published later in 2017.⁹⁴ This project seeks to:
- establish an industrial baseline of defence industry capabilities
 - develop the Sovereign Industrial Capability Assessment Framework
 - describe and identify Australia's sovereign industrial capabilities
 - produce a plan that will provide direction for Australian industry over the next 10 years, in particular where organisation may look to invest and grow.⁹⁵
- 2.39** Mr Ramage, Department of Defence, provided some insight into the status of the project and information collected from Australian industry to date:

Defence industries is a sector in its own right, but it has not been done that way before...We are trying to establish the baseline, establish a 10-year goal for what we

⁹⁴ Evidence, Mr Ramage, 3 August 2017, p 15.

⁹⁵ Department of Defence, Defence Industry and Innovation, Delivery of the Defence Industrial Capability Plan, 2016, p 3.

want defence industries to be, which we have never had. We have never said, "This is what our defence industries must be to meet our needs in five to 10 years and so we will aim and focus our resources accordingly." We are doing a lot of work on that side. We did a survey late last year, early this year to try to build the baseline.

We got about 1,400 responses, and that gives you a snapshot of industry... One of the things we found from that survey is that Defence work is only about 20 per cent of the vast majority of companies' work, at least of the companies that responded to our survey. There is a lot of diversity; not every company is just focused on Defence, and that diversification is a really important measure as is the ability to get into other sectors, because it builds greater resilience.⁹⁶

2.40 The Centre for Defence Industry Capability also has an important role in this regard with responsibilities to assist businesses navigate the defence marketplace and identify market opportunities to work with prime contractors or defence.⁹⁷ The work of the Centre for Defence Industry Capability is discussed further in Chapter 3.

2.41 At a state and territory level, Ms Kate Lundy, the Defence Advocate for the ACT, provided some insight into steps that had been taken to identify and promote defence capability in the ACT, noting the publication of the Canberra Region Defence Industry Capability Directory. This directory acts as a 'compendium of capability' for the broader ACT region, presenting capabilities and contact details for defence related businesses and other organisations such as educational establishments and government departments. Ms Lundy outlined the benefits of the directory:

What we wanted to be able to do was to attract business to our region and demonstrate to businesses wanting to grow that there was already a significant presence. Importantly, we included...reference to our education institutions and also the presence of Federal agencies and departments relevant to the defence-related opportunities. By compiling it in that way is like having a readymade explanation of what we do and who is involved. So in that sense it is very much a promotional tool both for the government but, more importantly, for companies contemplating growth and establishment in Canberra. They know who is here. They can develop their own connections through some of those businesses and see the depth of institutional presence both across the Commonwealth and the Australian Capital Territory, and indeed New South Wales and the surrounding area. It is an easy reference to that.⁹⁸

2.42 Mr Williams, Sydney Aerospace and Defence Interest Group, also commented on the importance of connecting local capabilities with the needs of primes. Reflecting on recent efforts by industry associations to compile an overview of capability for the Naval Group (Australia's international design partner for the Future Submarine Program), Mr Williams called for further support and collaboration with regional associations, and state government departments:

New South Wales, even in the regional areas, has a whole range of very good capabilities that can be leveraged quite easily. The issue has always been connecting those capabilities and understanding where they are so we can present a coherent

⁹⁶ Evidence, Mr Ramage, 3 August 2017, p 15.

⁹⁷ Australian Government, Centre for Defence Industry Capability, Domestic Opportunities, <https://www.business.gov.au/Centre-for-Defence-Industry-Capability/Domestic-Opportunities>

⁹⁸ Evidence, Ms Kate Lundy, ACT Defence Advocate, 3 August 2017, p 25.

picture to the primes. One of the things we have found was that when Naval Group was building the submarines, they sent a French delegation out to Australia. When they approached New South Wales they said, “What's in New South Wales? Where is it? What does it look like?” That has always been a challenge—to have a coherent picture. Generally what we have had is that the Australian Defence Industry Network [ADIN] has put together a picture, the Shoalhaven net, the Hunter net and us. So what we have tried to do for the first time with the submarines is to actually put together a coherent picture with all the industry associations, with all the skill sets. We need more of that leveraging of regional industry associations, using the Department of Industry, the Defence NSW organisation...⁹⁹

2.43 Mr Williams also contended that there would be a ‘lot of benefit if Defence NSW were to have a relationship with primes to link them easily to the skill set they need’ suggesting that a first stop shop type responsibility would be of considerable value to the industry:

The primes are now going through Australian industry to see what is left of it and trying to work out what is there that they can use...The primes have taken a lot more aggressive interest in our industry. There would be a lot of benefit if Defence NSW were to have a relationship with the primes to link them easily to the skill sets they need. A prime might say that it is looking for something, and Defence NSW would say that it had it in Albury, in the Shoalhaven, or in the Hunter. Defence NSW could be a very good clearing house. A request might come from a prime and Defence NSW would be able to direct it to the best source. It could be a conduit to the greater industry.¹⁰⁰

2.44 The committee acknowledges that understanding a region’s defence capability is an important step in optimising the opportunities emerging from Defence expenditure. The committee is therefore seeking further submissions on what steps the NSW Government can take to enhance the visibility and understanding of the defence industry in New South Wales.

Question 8

- a) What steps can the NSW Government take to better understand defence industry capabilities in New South Wales?
 - b) What role should Defence NSW have in building connections between local industry and primes?
 - c) Is the development of a Defence Capability Directory, such as that developed in the ACT, a useful model for the NSW Government to consider and adopt?
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⁹⁹ Evidence, Mr Williams, 3 August 2017, p 29.

¹⁰⁰ Evidence, Mr Williams, 3 August 2017, p 30.

Collaboration with the ACT

- 2.46** The importance of interjurisdictional collaboration in promoting the defence industry was raised by both the defence industry advocates of New South Wales and the ACT.
- 2.47** Ms Kate Lundy, Defence Industry Advocate for the ACT Government explained that collaborative arrangements between New South Wales and ACT were formalised, to ensure that both jurisdictions could work ‘interchangeably’ to represent industry based in the border areas:

The ACT sits, of course, within the south-east of New South Wales. One of the key points the Chief Minister made on my appointment is that he did not want to have a visible border...between the ACT and the surrounding New South Wales region. Rather, he wanted me to approach my work as Defence Industry Advocate looking at the whole region as an economic region and to collaborate strongly with New South Wales, particularly with the...New South Wales Defence Industry Advocate, John Harvey. This was formalised, in an agreement using the cross-border forum that simply said we will collaborate to promote the defence industry in this region.

That allowed our respective industry departments...economic development in the ACT Government and New South Wales industry as expressed in those cross-border arrangements, to have a level of collaboration that allows us to work interchangeably when representing and taking the interests of the companies in our region forward. For example, there are companies in Queanbeyan that we are really inclusive of in all of our initiatives. We try to understand their issues and their challenges. Equally, I know Mr Harvey is quite conversant with some of the challenges facing companies that operate either really close to the border or in the ACT. We share knowledge and understanding about what those challenges are and work really closely in accessing some of the services and support.¹⁰¹

Question 9

Are there any additional steps that the NSW Government and ACT Government can take to enhance collaborative working arrangements for the benefit of defence industry?

Supporting a future workforce

- 2.48** New South Wales currently has the largest number of defence-related skilled workers of all the states and territories and displays considerable expertise in the engineering, ICT, manufacturing, and systems integration sectors.¹⁰² Despite this foundation, a key issue raised by industry was the need for the government to take steps to encourage and promote STEM subjects in order to mitigate a potential skill shortfall in the future. This section discusses evidence presented on this matter as well as other workforce issues including access to specialised training in regional areas.

¹⁰¹ Evidence, Ms Lundy, 3 August 2017, p 22.

¹⁰² *The NSW Government Defence and Industry Strategy 2017*, p 13.

- 2.49** Low student participation rates in STEM subjects are hindering the development of the technically skilled workforce. Engineers Australia reported that such trends are ‘entrenched’ across academia:

Building a technical workforce of the future is undermined by entrenched trends in school studies away from vital enabling subjects. Nationally less than 10 per cent of year 12 students study advanced maths, less than 20 per cent study intermediate maths, about 14 per cent study physics and under 18 per cent study chemistry.¹⁰³

- 2.50** Furthermore, and in a study of STEM education in New South Wales schools by the NSW Parliamentary Research Services, it was reported that ‘since 1995, Australia’s STEM school performance has generally declined; both in absolute terms and relative to other comparable nations.’¹⁰⁴

The promotion of STEM subjects

- 2.51** It is widely acknowledged that STEM skills are vital to the development of the defence industry’s future workforce. The NSW Government’s Defence and Industry Strategy acknowledges this committing to: ‘promote interest and accessibility of STEM in New South Wales’s secondary and tertiary institutions, and promote careers paths in defence industry and technology through industry partnerships and incentive programs’.¹⁰⁵

- 2.52** An example of a project undertaken by the NSW Government as part of this initiative was the ‘Pitch@Parliament’ program, which sought to connect STEM graduates with Defence businesses and develop a sustained skills renewal in the Defence industry.¹⁰⁶

- 2.53** The Federal Government’s Department of Defence also recognises the need to support the industry to secure its future workforce:

Defence also has a major focus on defence industry skilling and encouragement of Science, Technology, Engineering and Mathematics (STEM) skills to ensure that Australian defence industry has a workforce with the right skills to meet current and future Defence demand in an environment of rapid technological change. This is also a major focus as part of the implementation of the Naval Shipbuilding Plan and the Naval Shipbuilding College will have a key role in this area as part of growing Australia’s naval shipbuilding industry.¹⁰⁷

- 2.54** Mr Jenkins, Thales Australia, voiced major concern about the potential shortfall of students and graduates with STEM skills coming through in the future, stating that he thought this was one of the biggest issues that was going to negatively impact the defence sector.¹⁰⁸ To address this issue, Mr Jenkins emphasised the importance of increasing the profile and visibility of science and engineering subjects:

¹⁰³ Submission 24, Engineers Australia, p 4.

¹⁰⁴ NSW Parliamentary Research Service, *STEM education in NSW schools*, September 2017, p 17.

¹⁰⁵ *The NSW Government Defence and Industry Strategy 2017*, p 13.

¹⁰⁶ Submission 31, NSW Department of Industry, p 8.

¹⁰⁷ Submission 32, Department of Defence, Australian Government, p 7.

¹⁰⁸ Evidence, Mr Jenkins, 3 August 2017, p 43.

I think the biggest thing that is going to negatively affect our sector and the State as a consequence and all of Australasia is the STEM shortfall coming through schools—science, technology, engineering, maths. The prominence of science and engineering as a very good thing and an exciting thing is really important. We have got some great universities in this State. At Wollongong the welding actually made the Bushmaster story a success—direct contribution from the State to the safety of Australian soldiers on deployment.¹⁰⁹

- 2.55** Mr Jenkins suggested that what was needed was a ‘catalyst of really positive messaging’ from the NSW Government, perhaps through a TV campaign, about the industry, future job opportunities and the state’s vision as a technology leader:

We have some of the best universities in the world, not Australia, the world, and presenting that image, capitalising on what industry is doing itself and with the State and amongst itself, investing in some really brilliant technologies. If you bring that together with a very positive message I am hopeful that kids today who have not even thought they might want to be an engineer might start thinking, “You know what, I would like to be an engineer because I will get to work on unmanned vehicles with BlueZone and I will get to export to the world”, and there will be composites made in Australia that are world-leading through Quickstep, the global market opening up with Thales. This State has the perfect message to sell publicly I think and unless we change gears on that I worry that we will see a fall-off in engineers and scientists coming through the schools, coming through the universities. That means we have to export that work and that is the beginning of the end for the kind of clever stuff we do...The New South Wales Government could help – even though it is not a silver bullet – just with a TV campaign or some other campaign that advertises the really amazing technologies being created in this State and the work that is happening in universities that leads to real things being generated, exported and used in defence, infrastructure and around the place.¹¹⁰

- 2.56** Mr Burgess, Quickstep Holdings Limited, expressed a similar opinion, stating that ‘encouraging younger people to find what we do in our industry exciting, challenging, rewarding, is a really important thing’.¹¹¹ Reflecting on his industry experiences from outside of Australia, Mr Burgess suggested that initiatives to support the industry should be further embedded within education policy and respective curriculums:

One of the things I have seen done well elsewhere, and one of the things I cannot seem to get to the bottom of here is that it is one thing to phone a school and say, “Would you like your year 8 to come around to my factory? We build parts for JSF.” It is quite another thing for that to be woven into the curriculum and for 15 schools in my locality to call me and say, “We have this coming up in three weeks time; could you spare us 1½ hours?” That is the way we need to approach this. It has to be structured and part of the education policy as opposed to me going around.¹¹²

- 2.57** The committee acknowledges that a workforce that is equipped for future challenges with adequate qualification in STEM capabilities is essential to support the defence industry. The committee did however receive limited information on what actions are being undertaken by

¹⁰⁹ Evidence, Mr Jenkins, 3 August 2017, p 43.

¹¹⁰ Evidence, Mr Jenkins, 3 August 2017, pp 43-44.

¹¹¹ Evidence, Mr Burgess, 3 August 2017, p 44.

¹¹² Evidence, Mr Burgess, 3 August 2017, p 45.

the Department of Education and other educational providers to promote STEM across primary, secondary and tertiary institutions. We therefore invite further submission from stakeholders on what actions the NSW Government can take to promote and generate interest in STEM subjects, as well as submissions on what actions New South Wales' educational providers are currently undertaking in this area.

Question 10

- a) What actions are currently being implemented by the NSW Government and other educational providers to promote STEM skills in primary, secondary, and tertiary education institutions?
 - b) What further steps can the NSW Government take to promote STEM subjects and associated defence industry careers? Should the NSW Government launch an advertising campaign to promote the study of STEM subjects as well as promote New South Wales as a technology leader?
 - c) Should the NSW Government take steps to embed defence-related industry interaction, within the education syllabus?
-

2.58 Some stakeholders expressed concerns about a lack of female representation in STEM subjects. For example, Engineers Australia contended that, 'at present, the majority of year 12 students, nationally, are young women, but their participation in maths and science subjects is especially low'. Engineers Australia advised that only '6.5 per cent of young women study year 12 physics and advanced maths' and this was adding to problems created by 'entrenched trends in school studies away from vital enabling subjects'.¹¹³ Engineers Australia went on to state that this trend 'reflects unfortunate and unacceptable attitudinal legacies and the failure of governments to adequately invest in teachers and the teaching of science and maths in Australia's schools'.¹¹⁴

2.59 The NSW Government also noted the under-representation of females in defence industries. Mr Duncan Challen, Executive Director at the NSW Department of Industry, suggested that targeted support was required to address this imbalance:

We need more women to come through into defence industries. We need to start targeting it through Science Technology Engineering Mathematics [STEM] and the young schoolkids in lavish entities like Space Camp Australia and those types of initiatives that can then get young schoolkids and also the parents to understand what their career pathways could be in the defence industries.¹¹⁵

2.60 The committee is inviting submissions from stakeholders on how the NSW Government can promote STEM education and defence industry careers to females, and address any barriers that may inhibit them from accessing the industry.

¹¹³ Submission 24, Engineers Australia, p 4.

¹¹⁴ Submission 24, Engineers Australia, p 4.

¹¹⁵ Evidence, Mr Duncan Challen, Executive Director in Industry Development, NSW Department of Industry, 3 August 2017, p 12.

Question 11

- a) What steps can the NSW Government take to close gender gaps in the participation of females in STEM career pathways as relevant to the defence industry?
- b) What barriers exist for females seeking to undertake STEM education and access defence industries? What steps can the NSW Government take to address such barriers?

Promoting STEM through collaboration with industry

- 2.61** During the inquiry, the committee was interested to hear about initiatives to promote STEM careers. One example was the ME Program which was established by the Hunter branch of Regional Development Australia and delivered in the Hunter region. This program was identified as best practice example by a number of inquiry participants, including the Hunter Business Chamber which recommended that the NSW Government provide financial support and commitment to the program given its success.¹¹⁶ Evidence to the inquiry indicates that the NSW Government has some appetite to consider this recommendation stating in its submission that ‘there is potential to expand this program to other regions of the state’.¹¹⁷

Promoting STEM through collaboration – The ME Program¹¹⁸

The ME Program was established in 2010 by the Hunter branch of Regional Development Australia. The aim of the program is to equip ‘students with the skills and expertise that will prepare them for 21st century STEM careers.’ The ME program seeks to achieve this through establishing collaborative projects between local schools and STEM industries, giving primary and secondary school students practical industry experiences, increasing their awareness of career opportunities in STEM fields.

The Hunter Business Chamber reports that the ME program has been highly successful in achieving its objectives. For instance, it has provided more than 25,000 students with industry based experiences¹¹⁹ and overall has boosted student participation in STEM subjects by 19.2 per cent since its inception in 2010¹²⁰. Furthermore, it has experienced significant growth and exposed ever increasing numbers of students to defence and defence industry related careers through its Defence Industry Skilling Program.

The ME Program is supported by over 50 businesses in the Hunter region and receives funding from the Department of Defence.¹²¹ Collaboration between schools and local industries is what underpins the success of the ME program. Some of the ME program’s partners include BAE Systems Australia, Bohemia Interactive Solutions, Lockheed Martin, and Thales.¹²²

¹¹⁶ Submission 25, Hunter Business Chamber, p 20.

¹¹⁷ Submission 31, Defence NSW, NSW Department of Industry, p 8.

¹¹⁸ ME program, Regional Development Australia – Hunter, ME Program equips individual students with the skills and expertise that will prepare them for 21st century STEM careers, <http://www.meprogram.com.au/>.

¹¹⁹ Submission 25, Hunter Business Chamber, p 10.

¹²⁰ Submission 18, Regional Development Australia, p 11.

¹²¹ Submission 25, Hunter Business Chamber, p 10.

¹²² ME program, Regional Development Australia – Hunter, STEM Partners, <http://www.meprogram.com.au/stem-partners/>.

- 2.62** The committee invites submissions from stakeholders, and in particular industry and education based stakeholders, on the potential benefits of supporting the ME Program and its potential roll out to regions across the state.

Question 12

- a) What benefits have been delivered by the ME Program to date? Based on this evidence, what steps should the NSW Government take to support the program and explore its roll out across the state?
 - b) Are there any other best practice examples being implemented in New South Wales that also merit further consideration?
-

Tertiary education pathways for defence industry workforce

- 2.63** Evidence presented to the inquiry demonstrated general support from tertiary education stakeholders of the policy outcomes and strategies detailed in 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.¹²³

- 2.64** 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.¹²⁴ Specifically, the university recommended that the NSW Government improve these pathways by launching: '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.'¹²⁵
- 2.65** The committee did not receive further comment on this approach and invites submissions on the proposal to establish a defence industry technical skills development fund.

Question 13

- a) Should the NSW Government consider a defence industry technical skills development fund as part of its strategy to entice prospective students to undertake defence industry related courses at universities?
 - b) Are there other approaches the NSW Government can take to promote tertiary pathways for defence industry workers?
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¹²³ Submission 26, Charles Sturt University, p 14.

¹²⁴ Submission 26, Charles Sturt University, p 14.

¹²⁵ Submission 26, Charles Sturt University, p 14.

- 2.66** It has been recommended to this inquiry that consultation should take place between the government, defence industry businesses, and universities in the creation of university courses that meet defence industry needs. Ms Kate Lundy, the Defence Industry Advocate for the ACT Government, reinforced this recommendation by saying that this is what currently takes place in the ACT.¹²⁶ She advised that this development of university courses in coordination with the government and defence industry businesses is vital:

In the ACT and surrounding area universities often are training people into areas that are identified as crucial areas of future capability or current capability for defence companies. We know that the defence companies we work with see the creation of people with the requisite skills to allow them to grow and expand is an essential component of their business plan, their business strategy. From a government's point of view and from a Defence Industry Advocate's point of view, working closely with universities to make sure the courses they provide meet the needs of the businesses in the sectors that are trying to grow and respond to defence capability requirements is essential.¹²⁷

- 2.67** The committee invites further submissions from stakeholders on how the NSW Government can facilitate increased coordination between government, the defence industry, and universities, in the creation of university courses that meet the needs of defence industry businesses.

Question 14

Should the NSW Government help facilitate increased coordination between government, the defence industry, and universities in the creation of university courses that meet the needs of defence industry businesses? How can the NSW Government achieve this?

Access to specialised TAFE courses in regional areas

- 2.68** Stakeholders identified particular difficulties in accessing TAFE and specialised advanced trades training courses, in regional areas. This viewpoint is expressed by Mr Burgess who stated: 'We faced some peculiarities in terms of an absence of, for example, avionics manufacturing and maintenance training available at TAFEs locally. It has been offered in the State, but quite some distance away from the site.'¹²⁸
- 2.69** A similar concern was also identified by Mr Greg Pullen, the Economic Development Manager at Shoalhaven City Council, who noted that even with the significant defence industry in the Nowra region, there was only 'one facility in New South Wales that trains an aviation mechanical engineer and that is at Padstow by TAFE.'¹²⁹ Furthermore, Shoalhaven

¹²⁶ Evidence, Ms Kate Lundy, Defence Industry Advocate, ACT Government, 3 August 2017, p 22.

¹²⁷ Evidence, Ms Lundy, 3 August 2017, p 22.

¹²⁸ Evidence, Mr Burgess, 3 August 2017, p 39.

¹²⁹ Evidence, Mr Greg Pullen, Economic Development Manager, Shoalhaven City Council, 29 June 2017, p 47.

City Council contended that despite vocational education being highly important to the defence industry, students and staff are often required to travel long distances, usually to Sydney, in order to undertake vocational training at TAFE.¹³⁰

2.70 Shoalhaven City Council argued that this this necessity to travel can be very expensive both for students and defence industry enterprises and could therefore potentially dissuade some students from pursuing study in an advanced trades course, and by extension, a career in the defence industry.¹³¹ To address these financial and regional vocational education access issues, Shoalhaven City Council recommended that the NSW Government should:

Provide financial support for defence support industries to create traineeships and apprenticeships.

Establish and resource Defence NSW so that they can work with training providers to identify any specialised training needs in defence support business.

Establish and resource Defence NSW so that they can work with training providers, such as TAFE, with an aim to deliver vocational training at regional locations.¹³²

2.71 The committee invites stakeholders to provide further information regarding access to specialised TAFE courses and other vocational education providers in regional areas. The committee would like to know what steps the NSW Government can take to assist with these issues.

Question 15

What measures can the NSW Government take to improve access to advanced trade courses in regional areas? For example, should the NSW Government provide financial support to create defence industry traineeships and apprenticeships in regional areas?

Promoting collaboration between Defence, industry and academia

2.72 There was widespread recognition from stakeholders that collaboration between Defence, industry, and academia is vital to the successful development of the defence industry's future workforce in New South Wales.

2.73 The NSW Government recognises the importance of collaboration and details a range of initiatives in its *NSW: Strong, smart and connected* plan aimed at improving collaboration across the state. For example, initiative 5B of the government's plan is to 'Support collaboration between primes, SMEs and research institutions to develop defence capability.'¹³³ Another example is the NSW Government's intention 'to establish a network of its leading research institutions to collaborate on projects with industry, and position this to link to other research

¹³⁰ Submission 19, Shoalhaven City Council, p 3.

¹³¹ Submission 19, Shoalhaven City Council, p 3.

¹³² Submission 19, Shoalhaven City Council, p 3.

¹³³ Submission 31, NSW Department of Industry, p 8.

funding mechanisms such as the Next Generation Technology Fund.¹³⁴ This is known as the Defence Innovation Network and is discussed further later in this chapter.

Promoting collaboration – Defence Security Aerospace 18 Hub¹³⁵

In November 2017, the University of Newcastle will open a new collaborative space dedicated to Defence, Aerospace and Cyber Security engagement between industry, government and academia.

The committee met with representatives from the Hub in September 2017. Professor Deb Hodgson, Pro-Vice Chancellor, Research and Innovation, and Ms Mikey Pinkerton, Manager, Entrepreneurship and I2N, advised the committee that the Hub will comprise co-working space for 18 desks, with meeting rooms, breakout spaces and small rooms for confidential communications. An equal allocation of desks will be provided to Defence Industry Scholarship PhD students, UON researchers working on defence projects and corporate clients, specifically SME and Prime Defence organisations. As well as providing the physical space, a suite of networking events and seminars offering opportunities for engagement with local and national companies in the defence sector are being developed collaboratively with Defence and defence industry partners.

2.74 Stakeholders have commended the NSW Government for its dedication to improving collaboration. However, suggested several ways that can further strengthen the NSW Government’s plan to improve collaboration across defence, industry, and academia in developing the workforce for the defence industry. For example, Professor Valerie Linton, at the Faculty of Engineering and Information Sciences at the University of Wollongong, stated that:

The New South Wales Government should seek further opportunities to leverage partnerships with research institutions and industry, especially start-ups, to generate greater collaboration and commercialisation of research, such as innovation hubs between universities and business in regional areas.¹³⁶

2.75 Stakeholders also encouraged the NSW Government to provide bigger incentives for universities and other tertiary institutions to seek collaborative projects with the defence industry. The BlueZone Group called on the government to: ‘Incentivise academic organisations to seek collaboration with SME businesses in commercialisation-focused research.’¹³⁷

Question 16

What further steps can the NSW Government take to promote collaboration between Defence, industry and academia?

¹³⁴ Submission 31, NSW Department of Industry, p 8.

¹³⁵ Site visit report, The Hunter, 18 September 2017, p 2.

¹³⁶ Evidence, Professor Valerie Linton, Faculty of Engineering and Information Sciences, University of Wollongong, 29 June 2017, p 18.

¹³⁷ Submission 4, BlueZone Group, p 1.

Research and Innovation

- 2.76** New South Wales has a significant level of local and international investment in Research and Development through its leading universities and research institutions.¹³⁸ Such research and development is essential to developing and maintaining Defence's capability requirements into the future.
- 2.77** The Department of Defence confirms that there are major opportunities for state-based industry and the research sector to partner with Defence to support Defence capability, noting in particular the establishment of the Defence Innovation Hub, and the Next Generation Technologies Fund.¹³⁹
- 2.78** The Defence Innovation Hub was launched at the end of 2016 as part of a \$1.6 billion investment from the Australian Government in Defence innovation. The Department of Defence reports that the Hub is 'managing a portfolio of Defence innovation investments bringing together Defence, industry, academia and research institutions to collaborate on innovative technologies that can be developed into advanced capability for Defence'.¹⁴⁰
- 2.79** The Next Generation Technologies Fund has been established to facilitate new approaches to strategic research partnerships to meet future Defence needs. With a budget of \$730 million over the next 10 years, the fund seeks to address Defence science and technology priorities through collaborative programs. The Department for Defence noted strong engagement with universities and defence industry in New South Wales for those initiatives that are underway.¹⁴¹

High-tech research and innovation by industry – Dexata¹⁴²

Dexata is a company specialising in breakthrough analytic capabilities within the Intelligence, Surveillance and Reconnaissance (ISR) domain. It currently has locations in Australia and the UK. The committee met with Mr Mike McMahon and Mr Jarret at the Dexata facility at Williamstown in September 2017. The committee was briefed on Dexata's Horus technology, a globally unique product which is designed to enhance surveillance of Australian skies by providing air surveillance operators with greater certainty in immediately identifying flights that exhibit unusual or suspicious behaviour. The objective of the technology is to identify, validate and appropriately respond to a developing event, in the shortest possible timeframe. The project is part of ongoing collaborative exploration with the RAAF to test the utility of such capabilities in an operational environment.

- 2.80** As outlined above, the New South Wales Defence Innovation Network is an initiative that will be supported by the NSW Department of Industry. The network 'brings together Defence businesses, universities, government and the Commonwealth Defence Science and Technology Group, with the primary aim of making New South Wales businesses more

¹³⁸ *The NSW Government Defence and Industry Strategy 2017*, p 26.

¹³⁹ Submission 32, Department of Defence, pp 10-11.

¹⁴⁰ Submission 32, Department of Defence, p 10.

¹⁴¹ Submission 32, Department of Defence, p 12.

¹⁴² Site visit report, The Hunter, 18 September 2017, Mr Mike McMahon, Chief Executive Officer, Dexata, p 2.

competitive and innovative and able to better respond to the national Defence Research and Development objectives'.¹⁴³ Six New South Wales universities are participating in the network.

- 2.81** The committee invites further submissions on what steps the NSW Government can take to further support research and innovation activities being undertaken by defence stakeholders.

Question 17

What steps can the NSW Government take to further support research and innovation activities being undertaken by defence stakeholders?

The space industry

- 2.82** In September 2017 the Federal Government announced its intention to establish an Australian space agency. The agency will be responsible for providing international representation, supporting critical partnerships, and coordinating national strategies and activities to support industry growth. A review of Australia's space industry capability is being led by an Expert Reference Group. It is expected that a final report, including a charter for the space agency, will be delivered to the Australian Government in March 2018.¹⁴⁴

- 2.83** The application of an Australian space program has both civilian and defence implications and a number of inquiry stakeholders identified the opportunities emerging for industry as a result of government action in this area. For example, Dr Greene, Chief Executive Officer of Electro Optic System, reflected on the potential for Australia to increase its focus on space related capabilities, advising:

We have a very good platform of expertise in this country now and we are quite intelligent users of space. It is time we started to be more intelligent exploiters, in our own right, of space.

In civil space I think there is huge potential for us to do more of what we are doing. ... In military space it is a bit more difficult because those programs are all siloed within each country, but we have significant military activities in space in four countries now and we have all the appropriate clearances and so on to do that.¹⁴⁵

- 2.84** Mr Robert Boz, Managing Director, Meccanica, a SME based in Queanbeyan, also advised the committee that opportunities existed on account of the developing space sector. Mr Boz explained:

Meccanica provides an engineering consultancy and precision machining services to Defence itself, our local Defence contractors, and the developing space sector that is being developed at the University of New South Wales Australian Defence Force Academy [ADFA]. In that case, we are the preferred supplier to the CubeSat program

¹⁴³ Submission 35, University of Newcastle, p 8.

¹⁴⁴ Australian Government, Department of Industry, Innovation and Science, Review of Australia's Space Industry Capability, <https://industry.gov.au/industry/IndustrySectors/space/Pages/Review-of-Australian-Space-Industry-Capability.aspx>.

¹⁴⁵ Evidence, Dr Greene, 24 October 2017, p 11.

that is developing there and we see a lot of opportunity both in the space and Defence sectors.¹⁴⁶

- 2.85** The committee invites further submissions on the space industry and its potential application for defence industry in New South Wales. In particular, it seeks submission on what steps the NSW Government can take to ensure that opportunities emerging from investment by the Federal Government are maximised for New South Wales based SMEs and academic institutions.

Question 18

What steps can the NSW Government take to support New South Wales defence industry, and academic institutions tap into the opportunities created from Federal Government investment in a national space agency?

¹⁴⁶ Evidence, Mr Robert Boz, Managing Director, Meccanica, 24 October 2017, p 2.

Chapter 3 Supporting Small and Medium Enterprises (SMEs)

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. This chapter discusses these issues in further detail.

Enhancing the accessibility of the Defence procurement environment

3.1 Throughout the inquiry, New South Wales based SMEs identified a number of barriers to participating in Defence procurement opportunities. One of the most common areas of frustration was the inherent complexity of procurement process and procedures, and difficulties in identifying domestic and international defence opportunities. A considerable administrative burden, particularly for those SMEs seeking to enter the market for the first time, was also identified. These concerns, as well as existing initiatives in place to support the industry access opportunities are discussed below.

How does Defence procurement work?

3.2 Defence is the largest procurement agency in the Commonwealth and is responsible for some of Australia's most complex procurement activities. Procurement activities are driven by the capability needs of the Australian Defence Force, and the Department of Defence engages with industry to deliver these capabilities. A comprehensive suite of legislation and policy govern the procurement of products and services by the Australian Government. In simple terms, the purpose of this policy ensures that procurements achieve a value for money outcome.¹⁴⁷

3.3 For Defence, a single overarching procurement framework exists and is managed and implemented by the Capability Acquisition and Sustainment Group (CASG) which is a section of the Department of Defence, which holds responsibility for purchasing and maintaining military equipment and supplies for the Australian Defence Force. In effect, CASG acts as the project manager and deliverer, undertaking activities such as evaluating tenders from industry.

3.4 CASG seeks to implement a 'smart buyer' model which is 'reliant on an enhanced relationship with industry which would provide expertise in managing projects in the acquisition and sustainment phases'. This enables CASG to focus on planning and governance of procurement activities whilst leaving the industry to focus on execution of the capability requirements.¹⁴⁸

¹⁴⁷ Department of Defence, Procurement in Defence, <http://www.defence.gov.au/dmo/DoingBusiness/ProcurementDefence/>

¹⁴⁸ Evidence, Mr Ramage, 3 August 2017, p 14.

- 3.5 A number of important information sources are available to industry, which are seeking to further understand the Defence procurement environment. These are outlined below.

The role of the prime contractor

- 3.6 The majority of Defence contracts for major acquisitions are with global, prime contractors who own the intellectual property of the capabilities purchased by Defence. While a limited number of direct opportunities to contract with Defence exist for SMEs, a significant number of opportunities exist to work within the supply chains of these prime contractors.¹⁴⁹
- 3.7 The Department of Defence's Australian Industry Capability (AIC) Program seeks to secure and build the Australian industrial base necessary to meet current and future Defence capability requirement. As part of this policy, the Australian Government requires all tenderers for projects in excess of \$20 million to clarify how they will engage and involve Australian industry during the course of their project. AIC plans submitted by potential contractors form an important part of Defence's procurement evaluation process.¹⁵⁰
- 3.8 Advice from the Australian Government, recommends that industry should closely monitor public AIC plans published on the Defence website, as they provide 'a valuable resource for businesses wishing to identify, and understand and engage with defence prime contractors'. These plans also 'provide a specific point of contact in the prime contractor's organisation to discuss business opportunities associated with that contract'.¹⁵¹

Support through the Centre for Defence Industry Capability

- 3.9 A number of initiatives at state and commonwealth levels are undertaken to support defence industries access the Defence marketplace. Of particular importance is the Centre for Defence Industry Capability (CDIC) which has a primary responsibility to provide advice to the Australian defence industry to support growth and innovation.¹⁵² The CDIC is the single entry point for Australian industry to Defence and is 'a critical asset for state-based industry seeking to support Defence's current and future needs'.¹⁵³
- 3.10 The CDIC has an office in Sydney with dedicated advisors available to work with New South Wales industry, government representatives and industry groups. The CDIC delivers a range of services including:
- advisory and facilitation services to defence sector SMEs to improve business management, skills development, innovation and access to export initiatives and domestic and international supply chains

¹⁴⁹ Centre for Defence Industry Capability, New to Defence, <https://www.business.gov.au/Centre-for-Defence-Industry-Capability/New-to-Defence>

¹⁵⁰ Submission 32, Department of Defence, p 6.

¹⁵¹ Australian Government, AIC Program and Public AIC plans, <https://www.business.gov.au/Centre-for-Defence-Industry-Capability/About-the-CDIC/AIC-program-and-AIC-plans>

¹⁵² Submission 32, Department of Defence, Australian Government, p 9.

¹⁵³ Submission 32, Department of Defence, Australian Government, p 10.

- grants to defence sector SMEs to implement recommendations from advisory and facilitation services
- providing advice to key stakeholders on the development of a sustainable defence industry in line with Australia's defence priorities
- identifying industry capability gaps and solutions and funding industry capability projects to address them.¹⁵⁴

3.11 The Department of Defence confirms that New South Wales based companies are increasing their engagement with the CDIC and expressly encourages the industry, as well as the NSW Government to leverage opportunities available through CDIC programs.¹⁵⁵ The NSW Government has outlined its commitment to work closely with the CDIC 'to leverage federal industry support programs such as Team Defence Australia and the Global Supply Chain initiative'.¹⁵⁶ Further information on these specific initiatives is discussed below.

Identifying Defence opportunities through AusTender

3.12 AusTender is the Australian Government's procurement information website. It provides a central point for publication of all Australian Government business opportunities – including those relating to Defence. Registered users of the site can view annual procurement plans for Defence including a list of all proposed acquisitions, register areas of interest and receive email notifications of potential opportunities, and receive communications regarding relevant industry days, or training opportunities. A link to the AusTender site is provided in the footnote below.¹⁵⁷

Supporting SMEs to access market opportunities

3.13 Throughout the inquiry process SME representatives frequently called for support in identifying and accessing Defence procurement opportunities. A number of measures to support access to markets were identified by inquiry participants. A number of these suggestions are outlined in the narrative and case studies below.

3.14 Mr Tony Green, Executive Officer of i3net, a network of innovative industry based in the Illawarra region, suggested that small businesses need support in the facilitation of relationships between industry and those with procurement opportunities. Mr Green acknowledged the roles of Defence NSW and the CDIC in this regard however, suggested that further work was required to strengthen relationships between relevant organisations and regional stakeholders:

What we probably need assistance with in that area is...understanding which doors to knock on and who to go and talk to. Two organisations that are being developed—from a State level, Defence NSW; and from a Federal level, the Centre for Defence

¹⁵⁴ Submission 32, Department of Defence, Australian Government, p 9.

¹⁵⁵ Submission 32, Department of Defence, Australian Government, p 10.

¹⁵⁶ Department of Industry, *New South Wales: Strong, Smart, Connected, The NSW Government Defence and Industry Strategy*, p 14.

¹⁵⁷ Access AusTender at <https://www.tenders.gov.au/>

Industry Capability—have what we see as a critical need to have good connections with the Illawarra. That is the sort of soft infrastructure we need help from. We need those organisations working more closely with us to say, "From our understanding and from our audits, these are some of the capabilities companies are looking for. You have that capability here in the region. These are the sorts of people you need to talk to and these are the sorts of things you need to do to bring those opportunities to the Illawarra."¹⁵⁸

SMEs realising their full export potential – Advanced Navigation¹⁵⁹

Advanced Navigation is a high tech company specialising in navigation technology. Their products can be installed on drones, armed vehicles, or submarines. Mr Chris Shaw, a founding director of the business, explained: 'We tell our customers, there is nothing that we can't track'. Its customer base includes many of the major global primes including Lockheed Martin, Boeing, and Thales, however are little known in Australian based industry.

'Our approach is probably different from that of other SMEs. We have gone offshore and conquered the global arena first. We are very successful in the US and in Europe, and we are also emerging in the Asia-Pacific area'.

'One of the challenges we sometimes face is finding customers for our products. The most common response we get from our customers is that they have never heard of us, We get a lot of that, even in New South Wales. Just last week we had a meeting with a New South Wales company with whom we will probably do a lot of business. They said that they did not know we existed and they were buying technology from the Canadians who do what we do...'

3.15 The benefit of trade shows and exhibitions in building networks and generating opportunities was commonly identified as a useful support. By way of example, Mr Laurie Koster, Shoalhaven Defence Industry Group advised:

One of the crowning glories of what New South Wales has done over the last 10 years is getting back into being involved in the trade shows. That makes a big difference. It makes a difference to the people who are exhibiting on the trade show, because some of them would never be able to get to the trade show without being on the New South Wales stand. It also allows a focal point where people with some influence within the Defence organisation can come and see the widget that you are trying to sell. No Prime Minister or general is ever going to make the decision, but he or she can direct their staff to go and have a look at that. Once you get that bit done, it becomes far easier, because you now have a name to go and talk to. With New South Wales pushing that, it is really good.¹⁶⁰

3.16 The Department of Defence currently supports a number of trade initiatives to support access to markets. This includes the Team Defence Australia as well as the Global Supply Chain initiatives. Mr Matthew Ramage, Acting First Assistant Secretary Defence Industry Policy, Department of Defence explained how the Team Defence Australia approach works and why it is successful:

¹⁵⁸ Evidence, Mr Tony Green, Executive Officer, i3net, 29 June 2017, p 14.

¹⁵⁹ Evidence, Mr Chris Shaw, Director, Advanced Navigation, 3 August 2017, pp 7-8.

¹⁶⁰ Evidence, Mr Laurie Koster, Shoalhaven Defence Industry Group, 29 June 2017, p 14.

It works because the companies themselves do not necessarily have the ability to go overseas and market themselves into the big primes and the big opportunities overseas. So what Defence does with the Centre for Defence Industry Capability, who run it for us, is bring that together so you get a whole group of companies, we support them, we facilitate access within those companies, we run events for them. So it is coordinating and organising in a way that allows them to get the best opportunity to market themselves, which you cannot do as a small to medium enterprise particularly. And that is where it is targeted; it is not the big primes who have the resources to go overseas themselves necessarily and do that, it is the companies who need that extra help to bring that together. With a national brand that gives you greater leverage because you are bringing that view. Rather than a Tasmanian - or a New South Wales- or a Queensland-only view, you are bringing a whole set of capabilities together and showcasing them overseas.¹⁶¹

- 3.17** The NSW Government is also taking steps to support SMEs to access markets and bring industry and Defence together. The recent Pacific 2017 and Sea Power Conference held in Sydney in October 2017 is one such example. The going need to support SMEs in identifying opportunities was acknowledged by Mr Duncan Challen, Executive Director of Industry Development at the Department for Industry:

A big focus is helping SMEs understand what the opportunities are. I think that there are a lot of them that do not realise that some of the activities and technologies that they have could be applicable within the defence industries space. That is one of things that we need to help them with. We need to help them understand what the global supply chains are, and the channels into building deeper relationships with the big prime contractors as well. I think that we can help them understand the difference between how contractors work and what they look for from an SME.¹⁶²

Supporting SMEs access domestic and international markets and opportunities - Carbonix¹⁶³

Carbonix is a small company of around 10 people which builds unmanned aircraft systems. The company has developed a product called a VTOL, or vertical take-off and landing, which cruises into horizontal once it has reached a certain height. The committee spoke with the company's Executive General Manager, Mr Jeff Eager who explained:

'We are very small in the sense that we are emerging in this space. We evolved out of marine, hence the location at Cockatoo Island...We are domestic focussed but we export as well. We have a lot of interest from offshore.'

'I think on the surface the government has been very supportive so far. We have had involvement in a couple of major exhibitions in the land forces. We were invited to join the State booth...as well as the Avalon Air Show. Those two events gave us great exposure at an affordable rate where we could participate otherwise we could not have.'

Mr Eager further advised that another issue to consider was inter-governmental communication: 'government-to-government communication can introduce a small company and can take us into places

¹⁶¹ Evidence, Mr Ramage, 3 August 2017, p 13.

¹⁶² Evidence, Mr Challen, 3 August 2017, p 10.

¹⁶³ Evidence, Mr Jeff Eager, Executive General Manager, Carbonix, 3 August 2017, p 7.

where we could wave our arms for a long time and never be seen. Those sorts of delegations, introductions and associations with government will certainly help us.¹⁶⁴

3.18 It is clear to the committee that support which enhances and facilitates relationships with prime suppliers and procuring entities is highly sought after by industry and that participation in trade shows and exhibitions can be of considerable value to SMEs. The committee is therefore seeking submissions on what additional steps the NSW Government should take to facilitate relationships between SMEs, prime contractors and procuring entities.

Question 19

- a) What steps can the NSW Government take to further support relationships between Small and Medium Enterprises and key suppliers and procuring entities?
 - b) What steps can the NSW Government take to ensure that federal support programs and initiatives are comprehensively utilised by New South Wales based industry?
 - c) Should the NSW Government invest further in supporting Small and Medium Enterprises to access trade shows and exhibitions? Are current efforts sufficient and are there any lessons for improvement?
-

Maximising the participation of Australian SMEs in supply chains

3.19 The Australian Industry and Defence Network (AIDN) represents over 750 SME companies in the defence and security industry sectors across Australia. Some 130 of these are located in New South Wales. AIDN put forward a strategic position on how SMEs should be supported and urged the NSW Government to support a number of proposals designed to maximise the flow of work to New South Wales SMEs and New South Wales industry more generally.¹⁶⁵

3.20 A summary of AIDN's recommendations are outlined below:

- reconsideration of the term value for money in the assessment of procurement tenders to take account of Australian industry as a Fundamental Input to Capability and Sovereign Capability
- mandatory inclusion of Sovereign Industrial Capability in the AIC plans for projects, with clear objectives and milestones and appropriate public reporting
- where AIC plans fail to deliver Australian content of at least 75 per cent of the value of projects that the contractor be required to make up the shortfall through an Australian Industry Participation Program
- prime contractors be held accountable for the achievement of AIC KPIs in their contracts and that penalties be applied should prime contractors be non-compliant

¹⁶⁴ Evidence, Mr Eager, 3 August 2017, p 7

¹⁶⁵ Submission 16, Australian Industry and Defence Network NSW, p 3.

- AIC Plans to include contractually binding deeds of agreement between the prime contractors and supporting SMEs, with performance requirements to be designated for both parties
- consistent with the Defence First Principles Review and the establishment of the CDIC, that a strategic and integrated system be put in place to manage all aspects of SME participation.

3.21 While many of AIDN's recommendations are directed towards policy determined by the Australian Government, the committee is seeking industry opinion on the positions as summarised above and whether there is a role for the NSW Government in supporting and advocating for such changes.

Question 20

- a) Is there widespread industry support for the changes to the procurement landscape as identified by the Australian Defence Industry Interest Group?
 - b) What actions should the NSW Government take to enhance the flow of Defence procurement opportunities to New South Wales Small and Medium Enterprises and New South Wales industry more generally?
-

Supporting SMEs to become 'defence ready'

3.22 Many inquiry participants referred to the complexities associated with supplying goods and services to Defence. This was seen as a particular challenge for those businesses seeking to enter the industry for the first time, or for those who may currently work in alternative sectors with transferable skill sets. The need for businesses to be 'defence ready' was therefore emphasised by a number of SMEs.

3.23 The commentary provided by Mr Green, Chief Executive of the i3net was illustrative of that put forward by a number of SMEs. He explained:

For us it is about the intricacies of supplying to Defence. The requirements of Defence are that bit higher, so it is about making sure that they are aware of that and making sure that we can demonstrate that they can fit that bill. That comes down to those organisations – Defence NSW and the Centre for Defence Industry Capability...We need to make sure they work very closely with regions like ours.¹⁶⁶

3.24 Evidence received to the inquiry demonstrated a number of exemplar practices undertaken by organisations designed to support SMEs become defence ready. Of particular note was the example provided by Professor Valerie Linton, University of Wollongong. Further information about this initiative is outlined in the case study box below.

¹⁶⁶ Evidence, Mr Green, 29 June 2017, p 15

Supporting companies to become ‘defence ready’ – University of Wollongong¹⁶⁷

The University of Wollongong has been undertaking benchmark welding studies in regions across Australia in an effort to support companies become ‘defence ready’. The initiative benchmarks the capability of local fabrication companies, against the specific requirements of Defence.

Professor Valerie Linton explained how the initiative worked: ‘Companies were given a pseudo defence manufacturing job to do. I was the technical expert that they had to talk to about their welding. We put it through a full Defence style work-out and assessment and then we got them in and gave them feedback every step of the way about how good or not they were.’

Professor Linton also advised of indirect benefits being delivered as a result of the initiative, stating that after one program, ‘the companies even said, “Right, before we leave this room we are going to agree that we will join forces and look for opportunities to work together.” It is a big thing for companies which are competitors in the marketplace to agree that in the Defence space they want to work together. They are back working with us at the university, as well, to get higher skills to get them over the line.’

- 3.25** The committee is seeking submissions on what steps the NSW Government can take to support New South Wales SMEs become ‘defence ready’. It is also seeking information on other examples of exemplar practice that can inform the committee’s future recommendations in this area.

Question 21

- a) What further actions can the NSW Government take to provide additional support to businesses seeking to become ‘defence ready’? What form should this support take?
- b) What other examples of exemplar practice exist to support New South Wales industry become ‘defence ready’?

Access to finance

- 3.26** Access to finance, particularly for smaller SMEs or those seeking to break into the defence market, was identified as a significant barrier. Inquiry participants identified a reluctance by certain banks to lend to SMEs for defence related purposes, possibly on account of a limited understanding of the defence procurement environment and the intricacies of the defence contracts. This made it difficult for SMEs to secure the necessary funding to deliver larger, more valuable contracts.

- 3.27** The issue was illustrated by the Shoalhaven Defence Industry Group which identified a particular concern regarding the access of credit from ‘regional’ banks:

In the main, regional areas such as the Shoalhaven have banking facilities more attuned to the requirements of agriculture and small(er) local/consumer based businesses... The model quickly falls apart when dealing in defence. The concepts, the time and the products are outside the comfort level of the “local” banks. Regional

¹⁶⁷ Evidence, Professor Valerie Linton, Faculty of Engineering and Information Services, University of Wollongong, pp 20-21.

branches do not understand defence or its project structure. This makes it exceptionally difficult for defence related businesses, especially SMEs, to secure funding for larger multi-million dollar projects where the family home, business premises and cash reserves do not meet the required collateral.¹⁶⁸

- 3.28** Mr Steve Bowden, Director of Spearpoint Solutions, an SME based in Queanbeyan, identified similar concerns regarding cash flow and access to financing.¹⁶⁹ Mr Bowden explained that limited access to financing was restricting expansion opportunities for the business:

We intend to expand, but our major problem is cash flow. As a small company with very little equity, generally speaking the banks do not want to know us. We cycle a lot of our resources into stock that we can hold and distribute to our customers but because of the nature of our business—that is, defence-related—the banks just do not care. Stock has no meaning to them because they cannot resell it because it is so specialised...An increase in stock of a particular type of product line, and then to expand the support services and the construction-type activities that are associated with that product, will allow us to take it to a broader audience than just Defence, such as local councils and other government and State agencies. It has been very frustrating to run a \$5 million to \$7 million company with a \$50,000 overdraft. That is all the access to cash reserves that we can get.¹⁷⁰

- 3.29** To address this barrier, the Shoalhaven Defence Industry Group called for the establishment of an independent body with a comprehensive understanding of Defence, which could ‘review and vouch for the capability of the company and assist the company in obtaining credit’.¹⁷¹
- 3.30** In effect, such an entity could act as a state version of the Australian Government’s Export Finance Insurance Corporation (Efic) – a corporate entity established by the Australian Government to provide finance to Australian companies seeking to undertake export related initiatives but have been unsuccessful in securing adequate finance from the private sector. The Efic’s website reports that in the last 3 years it has worked with more than 262 small businesses providing more than \$350 million in financial support.¹⁷² No further evidence was received to the committee regarding the Efic
- 3.31** The committee is seeking further submissions on what appropriate steps should be taken by the NSW Government to assist SMEs secure the necessary finance to deliver defence related projects. The committee received limited evidence on the success of the Export Finance Insurance Corporation and New South Wales based experiences with using this service. We therefore seek further submissions in this area to ascertain lessons that can be applied in New South Wales.

¹⁶⁸ Submission 12, Shoalhaven Defence Industry Group, p 3.

¹⁶⁹ Evidence, Mr Steve Bowden, Director, Spearpoint Solutions, 24 October 2017, p 9.

¹⁷⁰ Evidence, Mr Bowden, 24 October 2017, p 13.

¹⁷¹ Submission 12, Shoalhaven Industry Group, p 4.

¹⁷² Efic, About Efic, <https://www.efic.gov.au/about-efic/>

Question 22

- a) What actions can the NSW Government take to assist Small and Medium Enterprises to access the finance necessary to pursue business opportunities? Does the establishment of a body, with responsibilities akin to the Export Finance Insurance Corporation, merit further investigation?
 - b) What steps can the NSW Government take to ensure that New South Wales industry is aware of and is making use of the services offered by the Export Finance Insurance Corporation?
-

Enabling infrastructure

- 3.32** A number of inquiry participants reflected on the role of the state in providing the necessary infrastructure to support and grow local business. The implementation of appropriate infrastructure projects was also considered important to ensuring that regional areas could attract and retain the necessary workforces to support industry.
- 3.33** The National Broadband Network (NBN) is an example of one such enabler. The committee heard repeated references that failure to connect to NBN was frustrating businesses and in one extreme case, was a direct inhibitor to future expansion.

The importance of enabling infrastructure - Bohemia Interactive Simulations, Williamtown

Bohemia Interactive Simulations specialises in the creation of software that military and defence organisations use worldwide for tactical training and mission rehearsal. With operations in Australia, the United States and Europe, it currently employs around 250 staff. Its customers include military organisations including the U.S Marine Corps, Australian Defence Force, UK Ministry of Defence, as well as industry prime contractors such as Thales, Lockheed Martin and others.

Speaking with the committee on its site visit to Williamtown in September 2017, Mr Ryan Stephenson, Managing Director, spoke of the constraints placed on the business by limited access to the NBN. This restriction, given the nature of the business, will constrain business growth as existing bandwidth only provides capacity for a fixed number of software programmers. Mr James Garvey, co-owner of the Williamtown Aerospace Centre, reiterated this issue noting that this constraint remained despite ongoing liaison with the providers and efforts to reroute the necessary infrastructure on-site.¹⁷³

¹⁷³ Site visit report, The Hunter, 18 September 2017, pp 3-4.

Attracting workforce to regional areas

3.34 Developing the defence industry's future workforce and attracting that workforce to regional areas is vital. This is because the defence industry is highly important to these areas, often representing a significant portion of the local economy. For instance, the defence industry is the biggest sector in Nowra, representing 12 to 14 per cent of the local economy.¹⁷⁴ Therefore, the success of local defence industry businesses is important to the overall economic success of these regional areas. However, for these businesses to be successful and grow, they must have access to a sufficient number of defence industry skilled workers.

3.35 To help ensure that defence industry businesses have this access, regional stakeholders have called for the NSW Government to direct more investment into improving the liveability and infrastructure of their towns. These stakeholders believe that such investment would help retention rates of defence industry workers and ultimately create defence industry supportive communities.

3.36 Mr Pullen has strongly advocated for the NSW Government to support improved facilities and infrastructure in regional towns so that towns like Nowra can not only retain the defence industry workers they already have but also to attract more to the area:

The issue there is that these people do other things other than go to work and fix aeroplanes. They play sport, they do social and cultural activities. And we are competing in a town of 75,000 people. To satisfy the non-work need we need to have facilities that are of the metropolitan standard to retain them. Otherwise they stay here for one, two or three years and do out their indentured time or contracted time with the defence department and then they move on and go to Brisbane or they go to Sydney where those services are and work for Qantas and other places. We have always pushed that we need some special consideration when we go in for applications for certain assets because we are not just trying to satisfy the people who are here and who live in our community but also the people we are trying to attract into our community as key skilled workers in our industries.¹⁷⁵

3.37 To help create defence supportive communities in regional towns, Charles Sturt University called for in their submission to this inquiry the creation of a community development fund of around \$5 million per annum by the NSW Government.¹⁷⁶ The money 'would be allocated to community organisations, including regional teaching, learning and research institutions on a merit based selection processes.'¹⁷⁷

3.38 It is clear to the committee that there is a role for the NSW Government in providing and supporting critical enabling infrastructure in new South Wales, and that such infrastructure is essential for encouraging industry start up and growth. The committee seeks further submissions from defence industry on priority areas for government. We also invite further submissions on the establishment of a community development fund, with the aim of enhancing defence supportive communities, particularly in regional towns.

¹⁷⁴ Evidence, Mr Greg Pullen, Economic Development Manager, Shoahaven City Council, 29 June 2017, p 46.

¹⁷⁵ Evidence, Mr Pullen, 29 June 2017, p 46.

¹⁷⁶ Submission 26, Charles Sturt University, pp 17-18.

¹⁷⁷ Submission 26, Charles Sturt University, p 18.

Question 23

- a) What enabling infrastructure projects should the NSW Government target to support defence industry start up and growth?
 - b) What measures can the NSW Government take to help attract defence industry workers to regional areas? For example, should the NSW Government establish a community development fund to help create defence supportive communities in regional towns?
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