

Defence industry: a fundamental input to defence capability

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Through its 2016 Defence White Paper and its accompanying Defence Industry Policy Statement, the Australian government has changed the way it engages with Australia's defence industry. Here, Chris Jenkins describes these changes and how defence industry is responding, using his own company as an example.

Key words: Australia; Bushmaster; defence policy; defence purchasing; industry business model; industry culture.

In this paper, I am going to address the changes that are happening in the way Defence is engaging with industry to deliver capability, not just in the acquisition phase, but also throughout the life of the system, to ensure it is always able to serve the Defence Force at the level that is needed. In my 35 years in Defence industry, I think this year has seen the most significant change in the way Defence goes about acquisition and the way it is building its relationship with industry to ensure that capability.

The Bushmaster

Lieutenant General Angus Campbell, Chief of Army, at a recent Australian Strategic Policy Institute conference declared the importance of soldier's kit. He showed a video taken inside an Australian Army vehicle during an improvised explosive device (IED) attack. The vehicle was an Australian-designed and built Bushmaster and everyone inside survived that blast. The important point arising is that industry capability, and the way industry delivers capability to Defence, has consequences. While I have not served in the Defence Force, I have had the honour to meet with many people that have used equipment like the Bushmaster and I have gained from them an understanding how important the kit really is. The IED attack on the Bushmaster illustrates the



Bushmaster protected mobility vehicle
[Source: Department of Defence]

challenges our Defence Force faced in Afghanistan. The rest of this paper will look at our current Defence policies through the perspective of the Bushmaster story.

If you look at the way Defence policies are structured from the *2016 Defence White Paper* (Defence 2016a) and the *2016 Defence Industry Policy Statement* (Defence 2016 b), all of the vectors are pointing towards creating Defence capabilities at a level where they will be best able to protect our soldiers and allow successful operations, providing a capability advantage and sustaining this advantage over the life of that platform or system.

This last point is critical. The things that made Bushmaster successful were the local engineering competencies and the production capabilities that were able to evolve that vehicle for the entire period of the Afghanistan conflict. We were able to evolve what started out as a troop vehicle well protected against IEDs and small arms fire to a significantly higher level at very little extra cost to Defence as the threat level increased.

We were able to do that quickly and we were able to evolve Bushmaster from being just a troop carrier to being seven different variations of vehicle. This shows that having the capabilities in industry to adapt and modify, and the ability to make those changes, is vital for delivering a defence capability advantage in step with the dynamics of operations. And it applies not just to vehicles. It applies to everything that Defence relies upon.

Defence Policy

So, in the *2016 Defence White Paper* and in the *Defence Industry Policy Statement* there was a very clear articulation of the importance of industry and its ability to master a sustainable engineering capability to support Defence.

Defence policy setting is directed to the importance of industry from a defence capability standpoint, but also as the prime minister has said: "It has a significant economic aspect as well, because generating the engineering and science capability in industry and future STEM (science, technology, engineering and mathematics) careers is really important for the Australian economy going forward – so there are multiple benefits". If I synthesise the spirit of the *2016 Defence White Paper* and the *Defence Industry Policy Statement* with regard to defence capability, the government is talking about having superior defence capability – in the

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case of the submarine, a regionally superior capability – and that goal for superior defence capability is to be sustained throughout a platform or system life. Policy now clearly emphasises the importance of achieving agility, innovation and the ability to adapt.

What made Bushmaster such a success? It was because we did something other countries had not been able to do: create a very high level of protection through that unique hull shape, being able to withstand high blast loads and ballistic impacts within a weight envelope much lighter than anything others could field – it is 15 tons; America's comparable capacity vehicles weigh 23 tons. Being able to adapt the vehicle to do multiple tasks: not just being a troop carrier, being a command vehicle, being an ambulance, doing a wide variety of tasks beyond its original specification.

It is also critical that Defence has a sustainable industry that it can rely on. Defence must be able to generate industry's trust and have trust in industry. Confidence in delivery and the availability of equipment is absolutely paramount. Industry has been delinquent in past times, both through the acquisition phase and in the sustainment phase, in failing to generate the level of trust essential to Defence expectations. My own company has in past times needed to improve and we have continued to improve. We are not as good as we want to be, so the drive is on for us is to continue to find ways to deliver more efficiently and effectively.

Furthermore, Australia should not be totally beholden to the strategic goals of other nations, because they can vary with time. Australia needs to be able to act with a level of independence, not withstanding our important strategic ties with countries like the United States, Europe and nations within our region. Our industrial capabilities give us the ability to sustain defence capability needs with a level of national independence.

The *White Paper* and *Industry Policy Statement* align the goals of Defence and industry with great clarity; and for the first time with the organisational changes in the Defence Capability Acquisition and Sustainment Group (CASG) which will activate those policies. It is one thing to have policy, but it is also critical to have the budget (Defence 2016c provides for this) and the organisation to execute those policies. So, this is a policy with not only good intentions but also a great prospect for solid outcomes. Everything I have seen in the way Defence is changing its shape and the way it is wanting to work with industry is incredibly encouraging. I think you will find my message to you today is very similar to what you would hear from other members of industry.

The organisational changes in CASG are recognising we need to have sustainable industry for a long period of time to hold on to the expertise and the experience, to manage risk better, to be able to generate results in a more reliable and consistent way – avoiding the 'valleys of death' which have impacted areas such as ship building. We need industry to be sustainable.

Defence Purchasing

The Defence customer is adopting smart buyer principles where they recognise value in having a sustainable industry.

Broadly speaking, this value is delivered through delivery to schedule. When an acquisition task goes forward, it is critical the capability is delivered on time. If Bushmaster and

its many upgrades over time had run late during the Afghanistan conflict, there would have been significant additional deaths. Many Australian lives were saved. Having seen some of the outcomes of what has happened during those conflicts, including the people that have been affected and the impact on their families, it is clear that the speed of delivery has value.

Risk mitigation also has value. The smart buyer in CASG realises that having an experienced management that knows how to manage risk is a lot better than trying to avoid risks. If you avoid risk you end up with second-rate capabilities with the last generation of technology. The risk is low in acquisition, but the risk is extremely high for the Defence personnel who may have to utilise that capability. So being able to manage risk is critically important and has value.

Having the experience base and sustaining it is critical. We need an industry that is sustainable so we can service the long-term needs of Defence. There is value in having business that is trusted, with people that are able to deliver on their commitments to Defence and not walk away when things get difficult.

The ability to form long-term strategic relationships has value – future-proofing, with the ability to innovate when the circumstances change. The Bushmaster vehicle is an exceptional example of the ability to be able to adapt and innovate throughout the life of a piece of equipment. Being able to take equipment throughout its evolution in operations and assure its increased capability is critical and has value.

And finally, agility – the ability to respond quickly and make the changes when needed. Having Bushmaster as an example, a problem in-theatre today with the solution to it coming two years down the track is too late for the soldiers who have had to operate in the meantime. Speed to adapt has value and often lives depend on it.

Those five areas have value to the smart buyer and what that means is when CASG is making assessments on delivery of new equipment or sustainment contracts, it is looking to the value that has been created against these criteria. For industry, it is a breakthrough to have it clearly stated and to have the Service Chiefs absolutely buying into this approach. This approach with CASG is something completely new – all vectors are aligned such that very strong momentum is developing around this change in approach to acquisition and sustainment.

Defence Industry Business Model

In industry, we have to have a matching business model to this new CASG approach. This is not a hit and run kind of business proposition. Defence wants sustainable long-term relationships, so we have to be able to innovate, invest in our capabilities, and ensure we are efficient and globally competitive for the long term.

We have to innovate and we have to form knowledge partnerships with Defence. A lot of the knowledge we used to evolve Bushmaster came from Army. We had an integrated project team with Army so as to learn from what was going on in Afghanistan and bring it back to the engineering teams in Bendigo.

Industry has to invest. It is one thing to say you are doing innovation; you actually have to invest in creating things as well. Over the next three years, I will be investing \$100 million in Australia on research and development into Defence capabilities – on vehicles, ordnance, rifles, submarine sonars and air traffic management. Industry must be

able to invest to grow engineers and the expertise and facilities needed to generate Defence capability – not only in my own company but right through our supply chain to the Defence supply chain and the small and medium-sized enterprises (SMEs) particularly.

In Thales Australia, there are 3500 people. Globally, the company has some 60,000 to 65,000 people and we are integrated into that network. We can acquire knowledge, we can exchange ideas, and we can pull experience from overseas into Australia.

Further, in Australia there is something like 90,000 SMEs in manufacturing. A large amount of knowledge on how to do things in a clever and innovative way, resides inside the SME industrial base in Australia. So, we have made a very important shift in engaging with our supply chain enterprises rather than being one large prime company trying to do everything ourselves, or 80 per cent of activity done inside the prime with 20 per cent outsourced as it used to be. We have flipped that. We are now putting 80 per cent of activity outside of the company. I rely on the supply chain as part of my enterprise now more than ever before.

So, over the coming years, you will not see the population of large prime-contractor companies growing very much. Workforce growth will be in the supply chain. With the Hawkei² story as an example: 80 per cent of the Bushmaster vehicle was produced in Bendigo by the company. With Hawkei, 80 per cent is being produced by our supply chain. That is a fantastic switch and it helped reduce the overall cost base of each vehicle by about 25 per cent making Hawkei not only more cost effective for Australia but also making it globally competitive and a great export opportunity for Australia. It has increased the dynamic in our industry enterprise engineering team. It is a much larger engineering team now. It is not just the people I am paying for in Thales, it is all the people within our supply chain. It is really powerful. Energising that supply chain and investing in it as an enterprise is key.

Being globally competitive is now critical to all Australian industry. If defence industry is not globally competitive, it is a net burden on the taxpayer – not fair to the taxpayer and not sustainable in the long term. In the last 10 years, Thales has exported \$1.6 billion worth of high technology products and systems from Australia: \$200 million in Bushmasters, about \$500 million in sonar systems and nearly \$1 billion in air traffic management systems. These are not low technology exports. These are at the highest level of advanced technology and performance criticality. As an example, we support the French and United Kingdom nuclear submarines with sonars that are produced in Sydney. We export air traffic management systems right through Asia: 75 per cent of Southeast Asia's air traffic control systems are built by us in Australia; 60 to 70 per cent of China's airspace is managed with systems we produce in Australia.

And the final point is, just as in the property market it is “location, location, location”, if you are in the defence market it is “deliver, deliver, deliver”. Any company that is delinquent on its delivery commitments to Defence is creating an important risk for our service people and that is unacceptable. So, companies are being measured against

their ability to deliver and I think that is exactly as it should be.

Defence Industry Culture

This Business model only works if the culture within your organisation is right. When Thales acquired 100 per cent of Australian Defence Industries (ADI), we needed to transform ADI into a modern globally competitive capability. To do that it was about getting the culture right, getting the people engaged and understanding the importance of the work they do. We set about creating very clear values and behaviours. We measure people and people succeed on the basis of their demonstrated values and behaviours.

Firstly, we set the values and behaviours. Then we set the priority on safety and security. Safety brings with it the very positive practices of diligence and planning at work. When people are dedicated to creating a safe and a secure environment, it means they are thinking all the time about the precise actions they are taking, what risks exist and what is the best way to do their various tasks. When you have that mind-set, people plan their work better and efficiency and safety both improve.

Secondly, we have invested in high grade managers. We invested in training our local team and we have brought people in from overseas to share knowledge and their global experience.

And finally, the efficiency and performance drive becomes something that the culture actually embraces. People want to be the gold medallist in the Olympics not the bronze or the “also ran”. Coming second is not a sustainable business prospect. So we have created a culture in the organisation where you have to be the very best.

Conclusion

I believe the current *Defence White Paper*, *Defence Industry Policy Statement* and most importantly, the organisation of Defence to deliver on the outcomes guided by these documents, creates the most positive environment for Australia's security in the long-term. Industry is lifting its game to meet this need and I hope my paper has given you some evidence of this important change.

The Author: Chris Jenkins has been Chief Executive Officer of Thales Australia and New Zealand since 2008. A mechanical engineer who has worked in defence industry for 35 years, he has held senior roles in Thales locally and internationally for over 19 years. He is currently the Chairman of the Australian Industry Group (AIG) Defence Council; National President of the Australian Industry Group; and a Member of the Centre for Defence Industry Capability (CDIC) Advisory Board. He is a Fellow of Engineers Australia and is an adjunct professor at the University of New South Wales. In 2013, he received the Insignia of Knight in the Order National de la Légion d'Honneur. [Photo of Mr Jenkins: the author]

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²Hawkei is the Australian Army's new 4x4 light protected mobility vehicle which will replace the Land Rover.