EXECUTIVE SUMMARY

The Australian Government’s objective to develop a long term Defence Policy that is informed by a real understanding of the contribution and interdependence of industry capability and capacity within national security is shared by the TFIA. This submission is therefore written in support of this objective, and the TFIA welcomes the opportunity that this consultation brings.

As the peak representative body for the Australian Textile, Clothing and Footwear (TCF) sector the Council of Textile and Fashion Industries of Australia Ltd (TFIA) is a not for profit organisation that represents the collective interests of industry and which consists of companies engaged in the design, manufacturing, distribution, retail and government/business procurement activities of TCF products and services.

TFIA also consults widely with Government on all levels, as well as with educators, researchers and a variety of local and international stakeholders. It has a proud 70 year history in representing the sector and managing a diverse range of interests.

As part of our research for this submission we surveyed our database of relevant member and non-member businesses for feedback on their experiences and dealings with Defence. This is in addition to the experience gained through ongoing liaison with Defence, including specific activity such as in 2012, when the TFIA was contracted by Defence Material Organisation (DMO) to advise the Clothing Systems Programme Office as part of the My Defence Store Project. The TFIA has also collaborated with DIIC¹ and DMO in running tailored Defence Tender Training sessions for the TCF sector.

It is the experience from both our constant industry engagement and our interaction with Defence directly that has informed this submission to the Defence White Paper 2015.

Points from the Defence White Paper addressed in this submission from the perspective of the TCF Industry both locally and globally include the following:

- What defence capabilities do we need now, and in the future?
  - Which industrial capabilities are vital for the ability of the ADF to field forces and must be located in Australia?
  - Are there contingencies that Defence has not previously prepared for, but should?

- What should the relationship be between Defence and defence industry to support Defence’s mission?
- How can the Government best encourage the development of an internationally competitive Australian Defence Industry?

¹ Defence Industry Innovation Centre (DIIC) was part of Enterprise Connect (Dept. of Industry)
The ABN that the policy.

- What are the consequences for Australian industry of international trends in the defence industry sector?
- What is the future of existing industry support programmes provided by Government?

- How should Defence invest in its people, and how should it continue to enhance its culture.

The Australian TCF Industry is broad, innovative and capable. It is therefore a logical partner for Defence and the Government when planning for Australia’s role in providing stability in an evolving global geo-political landscape.

WHAT DEFENCE CAPABILITIES DO WE NEED NOW, AND IN THE FUTURE?

Which industrial capabilities are vital for the ability of the ADF to field forces and must be located in Australia?

From a TCF sector point of view this supply and capability has theoretically been managed by including elements of the Operational Combat Uniform (OCU) in the Priority Industry Capability (PIC) policy. While those supplying within these definitions have undoubtedly benefited from the certainty that comes with this policy, a holistic view finds that the gap between the theoretical risk management and the practical capabilities retained, is considerable.

PICs are defined as “those capabilities that confer an essential strategic advantage by being available from within Australia and which, if not available, would significantly undermine defence self-reliance and Australian Defence Force (ADF) operational capability”.

When considering the potential scenarios in which the value of the PIC may actually come into play, these could include:

- **Stock Availability** - Australian forces are in operation overseas and the normal off shore supply chain partners are busy supplying larger customers or their own forces due to the scale of operations. As a lower priority client, can the ADF and its suppliers ensure product can be provided quickly?
- **Offshore Manufacturing Availability** – Perhaps Australia is in a dispute of some kind with the countries that make or process the raw materials, components or finished items in our clothing and equipment, e.g. China or Vietnam.
- **Trade Route Availability** - We are in a health pandemic crisis that involves locking down borders, ports and trade to confine the problem, e.g. a virulent Spanish Flu in S.E. Asia. How does Australia deal with any stops to supply chains and the blocking of port/sea freight logistics?

Essentially, are there current, detailed, tested contingency plans for these types of scenarios?
There is the belief that Defence appears to currently work with the assumption that supply chains for what appear to be ‘common’ TCF products, e.g. breathable waterproof jackets and the specialist components included within them, can just be ‘turned on like a tap.’ However, the volumes managed by Australia, and the specialist nature of many TCF products, mean that DMO and the supply agents handling offshore chains need strong, consistent and long term relationships in order to access the items required in the event of a ‘run’ on stocks globally. One example of this supply/demand assumption is the Modacrylic fibre component in no-melt, no-drip\(^2\) fabrics. This is currently part of the OCU and is only made by Lenzing in Austria - no-where else. There is therefore, a permanent exemption to the Berry Amendment for this provision in the United States. These Austrian fibres used in the ADF supply chain are presently spun into yarn in the US. In a global shortage, who would get priority supply? Would the ADF have adequate access to this or something else deemed suitable in this circumstance?

The PIC definition of needing to be able to weave and print fabric was created in 2008.\(^3\) Since then knitting has become part of the process for the continuously evolving OCU. If this policy had been applied to the \(n^{th}\) degree, the capacity to ‘knit’ the shirt component locally could have already been lost and the purpose of the PIC rendered useless. The current definition is so narrow, Australian suppliers can’t spin the yarn\(^4\), so if that yarn processing supply chain is cut off, the rest of the PIC is irrelevant.

Please see Figure 1 (following page) for an indicative diagram of local and offshore capability for this PIC in regards to the operational combat shirt and pant.

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\(^2\) ‘No melt, no drip’ is a description for fabrics that have some fire-retardant properties. Modacrylic is blended in many fire retardant fabrics.

\(^3\) PIC Health check 2011, Combat Clothing and Personal Equipment, page 2

\(^4\) There is no more ring spinning (high quality) available any more in Australia, apart from research scale facilities at Deakin University in Melbourne. Australia can no longer spin superfine Merino for research or bulk production either, though high quality cotton and wool is grown in Australia.
It is the trade route availability, noted in the previous section, that we believe isn’t covered at all in the current consideration of the PIC definition and yet is a more likely scenario than a dispute with some supply partner nations.

Are there contingencies Defence has not previously prepared for, but should?

The definition of the ‘Defence Industry’ can range from very narrow, direct supply and sustainment definitions, through to any industry that contributes to the stability of Australia and the region, such as healthcare, fuel, agriculture, communications, technology, equipment as well as full supply chains from raw materials - whether grown or mined. Considering the latter, suggests that Defence industry policy and general industry policy are in fact one and the same when considering a nation’s ability to manage risk and sustain itself should it be without access to trade routes or stock, or in dire circumstances, whether caused by wars, natural disasters or virulent disease outbreaks.

The textile, clothing and footwear industry (and its ability to maintain itself) is an integral part of disaster operational capability providing elements such as:
Defence White Paper 2015
Response Submission from the TFIA regarding the Australian Textile, Clothing and Footwear Industry

- Specialist and generalist Personal Protective Equipment (PPE);\(^5\)
- Sterile healthcare products;
- Temporary shelters, mosquito nets, sand bags etc.

This may also include a combination of the TCF and polymer processing industries across items such as apparel, filters, eyewear, disposable tubing, IV bags, absorbent pads, and much more. For example, currently the pathogen liquid barrier membranes laminated locally for emergency worker PPE are sourced from Canada and laminated to fabrics that are and can currently be woven or knitted in Australia.

There are many other industries that would also be essential when viewed from this perspective, e.g. pharmaceutical, chemical production, fuel refining, refrigeration, water purification management. So if there are polymers, metals, fibres, chemicals, filters or any other consumables that are essential for operation of some of these sectors their global supply chain options need to be mapped and understood.

It is this model of thinking through practicalities in adverse scenarios that needs to be applied to the general process of procurement and capability management,\(^6\) across the whole of Government; and any assumptions about product or component availability from offshore supply chains need to be mapped and tested in detail.

It is essential for Defence and DMO; as well as the Departments of Industry, Health and Agriculture, that they consider a risk mitigation strategy for both Defence capabilities directly and national functional stability more broadly. This could perhaps be by understanding the following:

- Global supply chain mapping. Looking right back to the supply of raw materials and their common or rare market availability;
- Varying lifespans in regards to the storage of components and assembled items;
- Manufacturing geography and logistics;\(^7\)
- Identifying where assumptions about global availability of essential items have been made incorrectly and relevant solutions.

This task of risk mitigation would be ideally conducted in conjunction with reviewing what essential items and components for all industries fall into these risk categories as well as their storage requirements and lifespans.\(^8\)

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\(^5\) Personal Protective Equipment e.g. those used for healthcare workers dealing with infectious diseases, or structural and rural fire fighting.

\(^6\) For example if we want to be able to smelt, cast and weld metal, for munitions, vehicles etc. We need to clothe the workers. Currently the specialist protective wear can be locally made, but as more State Governments look to offshore supply for their fire fighting apparel the critical mass for this specialist sector could disappear.

\(^7\) What are the supply routes available to Australia in the event of an import lockdown? Liquid / pathogen barrier products, yarns, membranes and chemicals may mostly from Europe and North America, yet what are the supply routes? Do they depend on freight via busy ports in Asia, e.g. Shanghai, Singapore or Hong Kong that may not be available even if the items are available for purchase?

\(^8\) In the case of medical consumables with use by dates, a system could be designed to issue them to the public health system to be used, where relevant, before redundancy, and re-stocking items with a longer lifespan, continuing this cycle to avoid some waste in contingency planning.
Recommendation: A complete supply chain and process mapping exercise for all Defence and National stability essentials must be conducted to identify risks to general operational ability in the event of emergency scenarios.

WHAT SHOULD THE RELATIONSHIP BE BETWEEN DEFENCE AND DEFENCE INDUSTRY TO SUPPORT DEFENCE’S MISSION?

The TFIA proposes a whole of manufacturing industry approach by Government and Defence to innovation and the commercialisation of production. This would be both in product development for protection against future challenges as well as via more support and prioritisation of innovation into supply chain and inventory management and in products themselves. This would enable agile and responsive manufacturers based both locally and with suitable international supply chain partners, to have the capacity to respond to an ever changing global environment.

To achieve innovation there needs to be the ability for true collaboration between Defence and Industry without the arm’s length restrictions of the current Commonwealth Procurement Rules (CPR). These CPRs currently, in the name of probity and fairness, create an environment where DMO staff need to stay ‘distant’ from suppliers. Suppliers often find if they are in a position to advise in too much detail about a product, they could either be considered ineligible from tendering for production, or their hard won knowledge has to be shared with wider industry to allow tenders to be opened.

This challenge and perception, therefore does not encourage or reward the businesses prepared to invest in commercial risks, but does reward those prepared to be hot on their heels as ‘fast followers’, and in some cases in the TCF sector those with little product knowledge but exceptional tender preparation skills can become the winners of business.

Innovative, leading edge products are developed when there is an open, constant exchange between end users, procurers, suppliers and their suppliers, and allowing for example, a serving soldier to have a direct conversation with a garment technologist from the supply base about required amendments to improve an item, not via three or four degrees of separation with months of timelag can have considerable benefits. Diggerworks has indeed been improving this, but the CPRs are still a handbrake on evolutionary design.

The processes currently considered ‘Priority Industry Capabilities’ for Combat Clothing and Personal Equipment do need to be reviewed in regards to their effectiveness against the objectives of the policy. These may also need to change over time, to involve mass customisation\(^9\); new manufacturing techniques, fibres or chemicals; cross overs with polymer moulding and 3D printing capability. They may include as well methods of securing component supply capacity.

\(^9\) An example of this could be hand scanning to enable customised perfect fit biochemical protective gloves, for complete operational ability and protection.

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Defence White Paper 2015
Response Submission from the TFIA regarding the Australian Textile, Clothing and Footwear Industry

Recommendation: It would be prudent to consider a range of manufacturing capabilities to be kept local, as well as whether support in re-establishing capabilities and skills where there are current/potential gaps, should take place in regards to good risk management.

With this in mind, it is important to consider the national critical mass of manufacturing and manufacturing maintenance across all sectors; as the skills, engineering, design and sciences applied to manufacturing process control and development are critically interlinked. The concept of maintaining adequate product design and engineering skills locally without any local production, may last for another 5-10 years, as those currently doing this work, often learnt their craft while manufacturing these product types was still strong in Australia. However, the loss of practical production knowledge and the current limited understanding of new manufacturing technology, will impact both DMO and their suppliers in their ability to effectively manage their supply chains over the next 10-20 years, with more and more expertise needing to be imported, making ‘Value for Money’ much harder to realise.

Maintaining product innovation and leadership will also mean that those serving in the ADF shouldn’t have to constantly campaign to catch up with the latest ‘kit’ that their US/international counterparts have. The businesses in the Australian TCF sector supplying Defence have many products ADF personnel want to use; some made locally, some made overseas. There is a considerable market in supplying TCF and related items for Defence personnel that are in addition to the standard issued equipment. This suggests that there may be some products procured by DMO which may not be meeting the needs of those using them as well as they could. This is not to say that this option for purchasing personal equipment shouldn’t continue for ADF personnel, but simply, that DMO may be able to learn from understanding the shape and size of this market, and possibly avoid over stocking some items.

Recommendation: DMO conduct an ‘amnesty’ type survey of ADF members, to find the most commonly supplemented items they source themselves from private supply chains instead of using issued equipment.

HOW CAN THE GOVERNMENT BEST ENCOURAGE THE DEVELOPMENT OF AN INTERNATIONALLY COMPETITIVE AUSTRALIA DEFENCE INDUSTRY?

What are the consequences for Australian industry of international trends in the defence industry sector?
Within the space of Clothing and Personal Equipment the main challenge for Defence and DMO is the rate of equipment evolution, the variety of environments soldiers operate in, and the speed at which DMO is able to respond.

Suppliers involved supplying both international defence forces, and the private sector of equipment supply are operating in an environment of constant upgrade, rather like the software industry, or the multi-phased international fashion industry. A product concept will be produced, bugs included, and constant new releases can happen, with iterative improvements. Success comes from having the right product available at the right time; there is no time to perfect an idea before release anymore, now it’s done with user feedback.

The way these industries operate is in absolute contrast to the way in which DMO operates at present in this sector. It can take over a year to finalise a specification and it’s testing requirements, 6 months to let a tender, and easily another 9 months to get to contract which could easily mean at least 3-5 months before initial supply of the items.

If the Government wants a world class defence industry with innovative specialists accessing a global customer base it needs to start enabling its agencies to operate like world class procurers and supply chain managers. There is no technical reason why this isn’t possible.

- Industrial Experts running procurement to the request of the Defence Force’s needs.
- Procurement teams with both product development and supply chain experts and members of Defence whose first hand user experience will always be invaluable.
- Procurement teams allowed to operate with commercial discretion, if a direct purchase makes more sense than a tender this should be acceptable.
- Live and responsive stock management systems to allow touch of a button reporting of stock levels and locations (drilling to the size of each boot on a shelf).
- Long term collaborative partnerships with suppliers; all the major retail, clothing and sports brands are in decades long interdependent relationships where families of products made with the related manufacturing components or processes are common sourced for product and inventory agility, new suppliers are tried in low risk or innovative new areas, and if successful their opportunities will grow over time.

Recommendation: A complete review of the approach to procurement for both Defence and Government in general.

What is the future of existing industry support programs provided by Government?

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10 The combination of experienced product supply chain managers with supplier partnerships provides an environment where due diligence and product safety is integrated and therefore low risk for issuing iterative product evolutions.
Over the last decades, the TCF sector negotiated a series of phased support programs designed to ease the transition to an unprotected trade environment. These programs, including the Strategic Capability Program and the Building Industry Capability Program, were designed to finish in FY2014/2015 in conjunction with the last lowering of import tariffs that will occur in January 2015. The finish date of the BIC scheme is with the Senate for legislative change as the recent 2014 budget proposed to close the program one year early. This program has been well received by the sector. Its original end date has always been clear and eligible businesses have planned accordingly to that timetable. The budget changes have therefore caused challenges for some, including those supplying Defence and who had planned certain elements of their business growth and development around this final year of support. A final decision on the cut is still pending and the TFIA and those affected are naturally hoping for a return to the original timetable.

However, with that in mind, for many businesses in the TCF sector the best support Government could offer them would be less related to specific grants or support programmes and more in regards to improvements in Australia’s general trading/ doing business environment.

Many of the commercial challenges that do exist for Australian based TCF manufacturers are similar to those manufacturing in other sectors. These include:

- **Ensuring ‘a level playing field’**. Considering elements in doing business such as:
  - Labour costs\(^{11}\) and restrictions\(^{12}\)
  - Regulation costs and taxes\(^{13}\)
  - Time consuming regulation paperwork from multiple layers of Government (red tape).
  - Insurance costs, both general, and those additionally required to supply Government.\(^{14}\)

- **Skills shortages** e.g. in engineering, craftsmanship, technicians, equipment maintenance, technical supply chain management.

- **Consistent and reliable Government policy settings including and their application.**

The interdependence between Defence supply and general industry policy; in particular regarding manufacturing sustainability and its value to this Nation, needs to be reflected in the application of ‘Value for Money’ thinking and the interpretation of the Commonwealth Procurement Rules when procuring items for Government use. This relates to all areas, not only Defence.

It is worth noting that a recent (2012) study conducted in the UK called ‘Destinations of the Defence Pound,’\(^{15}\) stated that 36% of procurement from UK businesses came back as tax revenue. By even

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\(^{11}\) The TCF sector internationally has unfortunately become known for often providing poor working conditions and low wages. Governments need to do much more, to actively ensure they are not participating within these disreputable supply chains.

\(^{12}\) The TCF Award is currently the source of the most recent divestment of businesses in local TCF manufacturing. The unintended consequences of trying to protect some homeworkers in the sector has led to an unworkable commercial environment for many not operating in an unfair way. Defence suppliers have been less directly affected than many, but the loss of skills and industrial capacity to train and skill is a definite indirect impact.

\(^{13}\) For example Payroll tax, reducing or eliminating this requirement would make it easier for a business to take on a new worker and accommodate the training and skillling period.

\(^{14}\) The Commonwealth Procurement Rules require large levels of business insurance to be covered by suppliers. The total cost to the Government of all these individual insurances in the overhead costs of the supply chain must be far larger than if the government looked at the possibility of reducing the liability levels for small businesses with low value contracts.

imagining, for example, 26% instead of 36% as a rudimentary calculation, as a ‘local factor allowance’ to all Government procurement decisions, this alone could be a competitive game changer for some product areas.

Recommendation: The Commonwealth conduct a Productivity Review of the value of every dollar spent on local owned, local manufactured in Australia. NB: As long as the product or service is suitable.

Programmes that support innovation and investment in new technology, its development and the commercialisation that can come from that can be very effective. However, it is important that these schemes are not sector or agency specific as there can be many cross over collaborations between industries and end users that can benefit both. For example, the trialling of 3D printing using polymer composites would not traditionally be considered a textile product, but its application may include adding a solid/ flexible panel to a protective garment or piece of equipment and it may also be engineered to fit by using data collated from customised body scans. This concept may be applied to multiple markets such as defence, mining, sports, building and construction and many more.16

HOW SHOULD DEFENCE INVEST IN ITS PEOPLE, AND HOW SHOULD IT CONTINUE TO ENHANCE ITS MISSION?

The experience of the TCF sector with Defence, in general, and DMO in particular, is of dealing with people operating with the best of intentions though often in a very constrained environment. There are constantly changing procurement teams and decision makers, there are some industrial experts with specialisations in some areas, but there are also gaps in the industrial understanding of the TCF sector and the practicalities that come with delivering product. There are many doing their best within the limitations of the framework they operate in and there are others that seem so wedded to the ‘process’ of procurement they’ve forgotten to care about the product they are buying. This latter representative embeds mediocrity both in procurement and in the supply chain with disappointingly ‘lowest common denominator’ thinking as the prevailing attitude for both.

The following ideas could be considered in ensuring a culture of best practice:

- Allowing people working in procurement to grow in an area of specialisation and be rewarded and promoted if they are good at it, without having to leave to obtain career progression. This would apply to both civilian and defence personnel. It is a constant frustration for the TCF sector

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16 The Crye Precision combat wear has origins in skateboarding, i.e. a creative street culture sector unlikely to be considered part of the innovative mix for potential defence innovations by industry support policy makers.

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that the best people seem to move on far too quickly, 17 whereas in truth it probably takes 2 of a 3 year rotation for a senior officer to begin to really get an in-depth understanding of the way the TCF sector operates.

- When reviewing the impact of the Commonwealth Procurement Rules, the Review should include the opinion and recommendations for improvement from those operating within it, so that the restrictions of its application and its impact on allowing them to make the best procurement decisions are considered.

- A consistent procurement policy framework that allows long term development of people, capability and capacity should take place.

- The principles of finding the correct people for the role, rather than the correct corps being applied by Defence to cyber security, needs to be applied to all areas. The route people find to operating in an industry or a procurement environment are varied and the skills, experience and temperament required to deal with complex products, supply chains and real-time requirements are great. No matter how sophisticated the system or policy used to manage a process, the quality and experience of the people operating and managing it are critical to its efficacy.

Recommendations: 5 year senior officer term to take place at DMO CLOSPO. Consider the opportunity for industry, DMO and/or Defence Science & Technology Organisation (DSTO) Internships and Exchanges to take place; and rewarding specialists for remaining in their area of expertise.

With regard to DSTO, it is clear that there are some very competent people doing some great work in the areas of clothing and equipment: testing in the field, some assumptions that have been applied to performance textiles. TFIA’s Defence White Paper survey showed that while all respondents knew of DMO, only 60% knew about DSTO. Encouraging more collaboration between DSTO, Diggerworks and industry, needs to be continued so as to gain maximum benefit.

There is a good deal of difference between understanding in principle, proven testing methods for a particular technology, component choice or garment construction and in gaining the necessary knowledge, capability and agility to commercialise, manage and deliver bulk, consistent and on time product to soldiers in the field. This expertise cannot be relied on to come from within either DSTO or DMO. The experience and skills necessary are diverse and the TCF Industry needs to be valued, allowed and indeed encouraged to work in collaboration with Defence to develop and deliver the next new thing first.

17 This frustration applies to all levels of Government. It can take a long to educate people from each of the Government Departments about the TCF industry and the Government needs to reward good public servants for specialising. We shouldn’t move them around every time the Government changes and this loss of knowledge costs us all. Bright graduates can be very valuable, but they are at their best when working alongside real world experience.
CONCLUSIONS

When considering maintaining critical industrial capability, socks, underwear and footwear should also be discussed as a soldier needs more than a shirt and pants. These items currently can be done very well by Australian Industry\textsuperscript{18}, and by businesses not fully reliant on Defence contracts.

Total Global supply chain mapping back to raw materials; all the processing and auxiliary ‘ingredients’, their locations and their sources are all, required to make the final product. Therefore, in order to identify supply chain capacity gaps and risks, this mapping is an essential part of future Defence planning and Industry strategy.

Preparedness for Australian sustainability during a regional emergency must be reviewed, and national capability requirements with a view to decades ahead, must be established now, before these vital skills and knowledge are lost.

The Australian Textile, Clothing and Footwear Industry is active, and in places thriving. Those that have found their commercial niches and opportunities in today’s competitive environment are inherently innovative and resourceful. However, the actual scale and size of the industry nationwide is unknown, due to the very high number of micro and start up enterprises\textsuperscript{19}, and the difficulties in collating this information. Therefore, in order for Government strategists and decision makers to truly plan, there needs to be some extensive work done to update and improve the information collected by the Australian Bureau of Statistics (ABS).

Once again the Council of Textile & Fashion Industries of Australia (TFIA) thanks Defence and the Commonwealth Government for the opportunity to participate in this consultation. The TFIA welcomes being able to provide some thoughts and recommendations in regards to the Textile, Clothing and Footwear sector and its role within Defence, that would aim to improve both the way things are done in procuring and supplying the best and most suitable TCF product and services to Defence as well as the long term strength, resilience, capability and capacity of the TCF industry.

Should further information or discussion be required please do not hesitate to contact TFIA CEO, Kiri Delly on kdelly@tfia.com.au or T: 03 8680 9400.

\textsuperscript{18} Apart from the yarn spinning
\textsuperscript{19} One of which could become the next Crye Precision.