



Australian Government  
Department of Defence

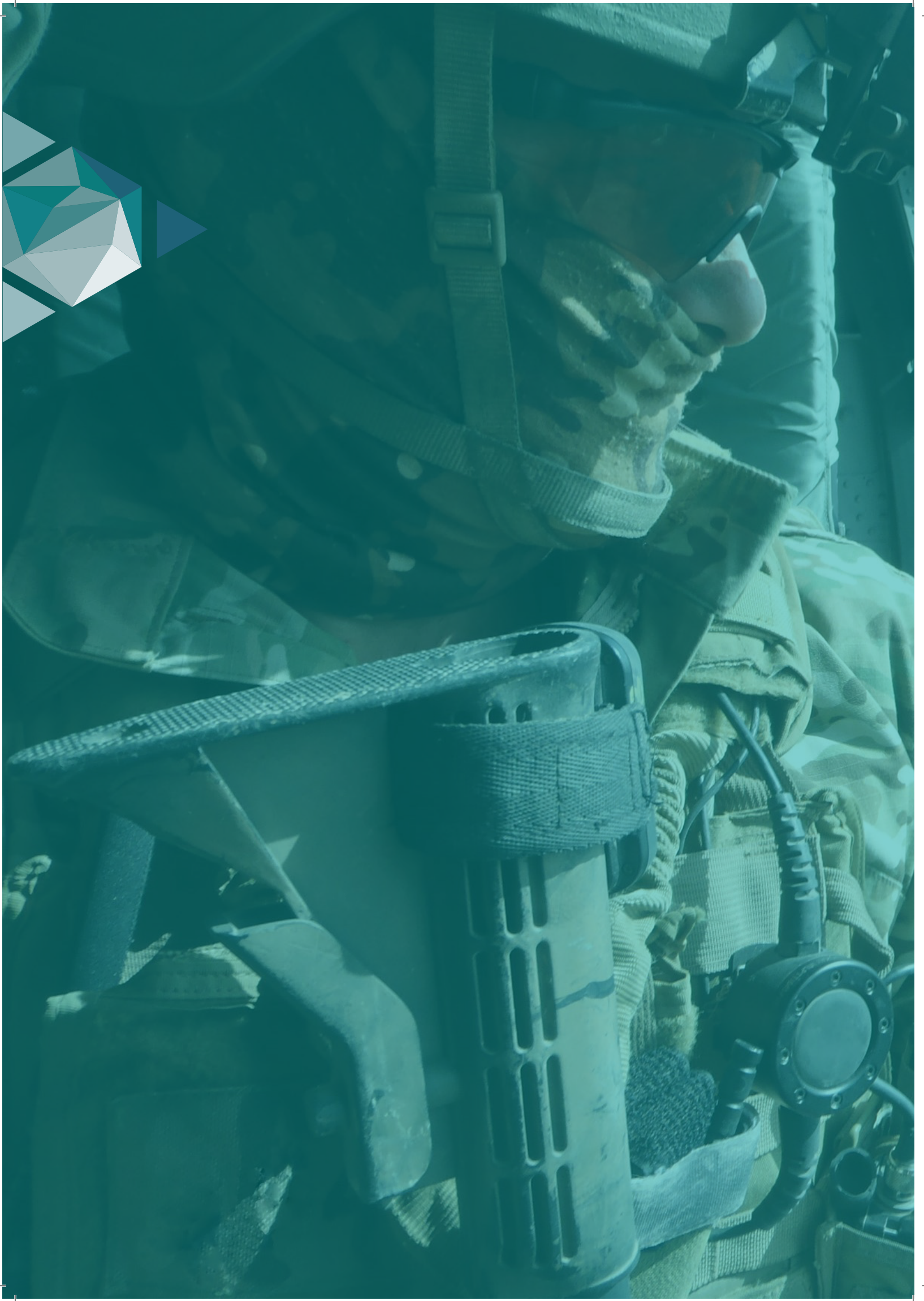


# SOVEREIGN INDUSTRIAL CAPABILITY PRIORITY IMPLEMENTATION PLAN

Combat Clothing Survivability and  
Signature Reduction Technologies

December 2019





# COMBAT CLOTHING SURVIVABILITY AND SIGNATURE REDUCTION TECHNOLOGIES

## Minister's foreword



I am pleased to release the second Sovereign Industrial Capability Priority Implementation Plan. This Implementation Plan is a key part of the Government's \$200 billion investment to build the sovereign capability of our military and defence industry.

The Combat clothing priority is an exemplar of how industry and Defence have successfully partnered to create a dynamic and diversified industry. Australia has a strong history of research, innovation and global collaboration in the combat clothing survivability and signature reducing technologies industry. This Implementation Plan builds on this strength.

It is through a strong and enduring partnership with Australian industry that we will empower small businesses to take a global approach to growing their business, and therefore our sovereign industrial base. Our home-grown technologies and products are among the best in the world, and it's my priority as Minister for Defence Industry to grow and support the many small businesses in our defence industry.

## A plan for a strong, sustainable and secure industrial capability

This Implementation Plan details the critical industrial capabilities that underpin the Combat clothing priority. It is supported by the companion Department of Defence (Defence) Industry Plan, which provides more detail on the industrial base and Government actions listed in this Plan. The Industry Plan can be found at <https://www.defence.gov.au/SPI/Industry/CapabilityPlan/implementationplans.asp>

Included in the scope of this Sovereign Industrial Capability Priority is:

- Survivability technologies in the form of armour plates, and ballistic fibre armour inserts that shield personnel from blasts, ballistic penetrators and fragmentation materials. These technologies are worn by individual soldiers as a 'system-of-systems' to absorb the impact energy of projectiles and impede fragment penetration from both the projectile and the armour plate itself.
- Signature reducing technologies, in the context of the soldier, is the concept of avoiding detection by reducing the visual, near-infrared wave and thermal-infrared bands of the ground combatant on the battlefield. Multi-spectral camouflage and concealment includes the use of fabrics, materials, textiles and face paints that passively and actively reduce signatures.

We will only achieve our shared goals by working together, and I invite all Australian businesses to think about how they can take part in this record build-up of Australian military capability.

**The Hon Melissa Price MP**  
Minister for Defence Industry



Critical Industrial Capabilities

The industry producing combat clothing survivability and signature reducing technologies must constantly consider and balance issues of competition for skills, supply chain access, and the protection of Australia’s strength in research and development. Among these challenges, there are three specific areas of industry capability which have been identified as critical.

1

**ADVANCED MATERIALS**  
The ability to develop and integrate advanced materials, protective element technologies, and advanced multi-functional textiles is necessary to maintain a warfighting advantage. This is primarily delivered through protective technologies in the form of helmet systems, soft insert technologies and hard armour plates, utilising materials such as advanced ceramics, composites and advanced textiles.

2

**DESIGN AND INTEGRATION**  
The ability to integrate advanced, multi-functional materials into the design of the soldier combat ensemble for the purpose of developing stronger, lighter, and more durable materials, coupled with cheaper, lower-energy production and manufacturing methods.

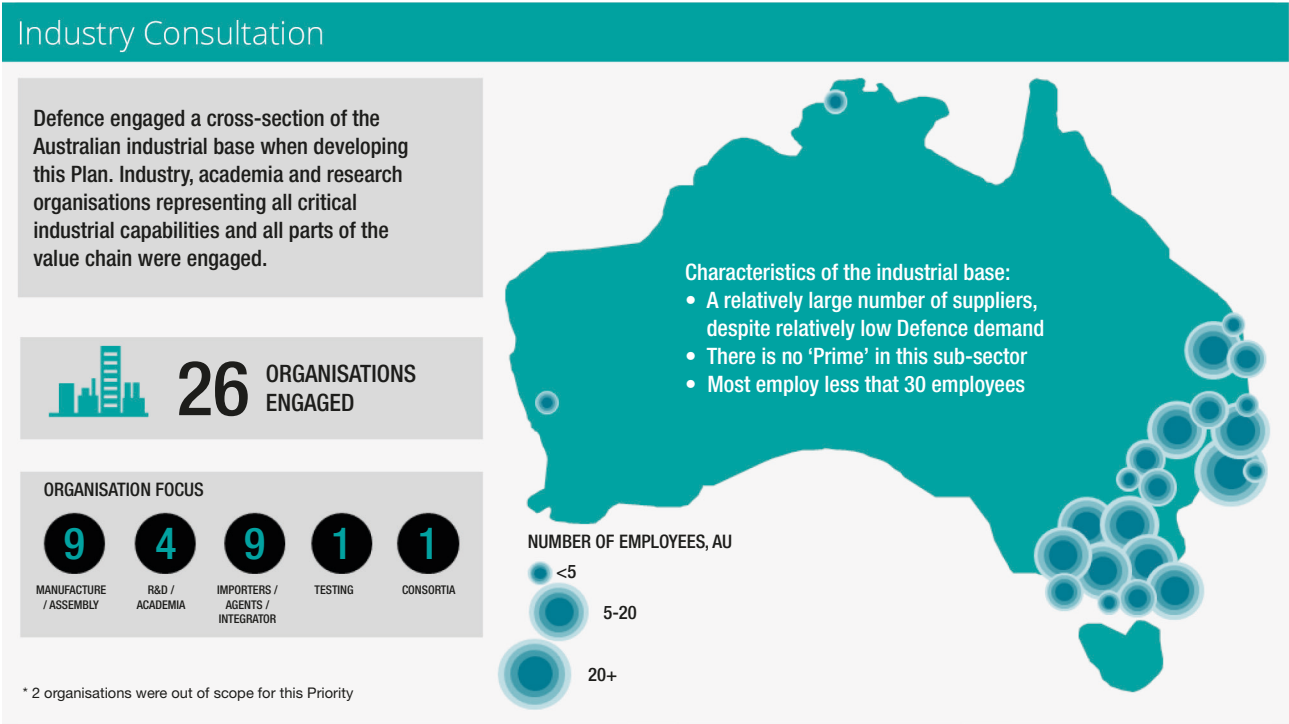
3

**SIGNATURE REDUCTION**  
The ability to develop signature reducing multi-spectral fabrics, coatings and materials, which includes the continued exploitation of protection equipment and advanced textiles to integrate signature reducing technologies.

Enabling the Critical Industrial Capabilities

To ensure Australia retains the identified critical industrial capabilities, by 2025, the Government seeks to build the following enabling capabilities in partnership with industry, starting with the Government actions on page 5:

- Test and evaluation: Ready access to domestic testing and evaluation enables Defence to rapidly understand product and integrated performance.
- Intellectual property (IP): Australian industry ownership of the IP associated with ballistic protection, multi-functional materials and signature reduction technologies is desired.
- Foster agility and collaboration: Agile and collaborative approaches are desired for product and system deployment.



The segment at a glance

The Australian industrial base that supports this priority is a dynamic, diversified industry that has become a recognised world leader and innovator in protective technologies. The focus of this Implementation Plan, and the companion Industry Plan, is to sustain current levels of capacity and encourage opportunities for the industrial base in local and international markets.

## Government actions

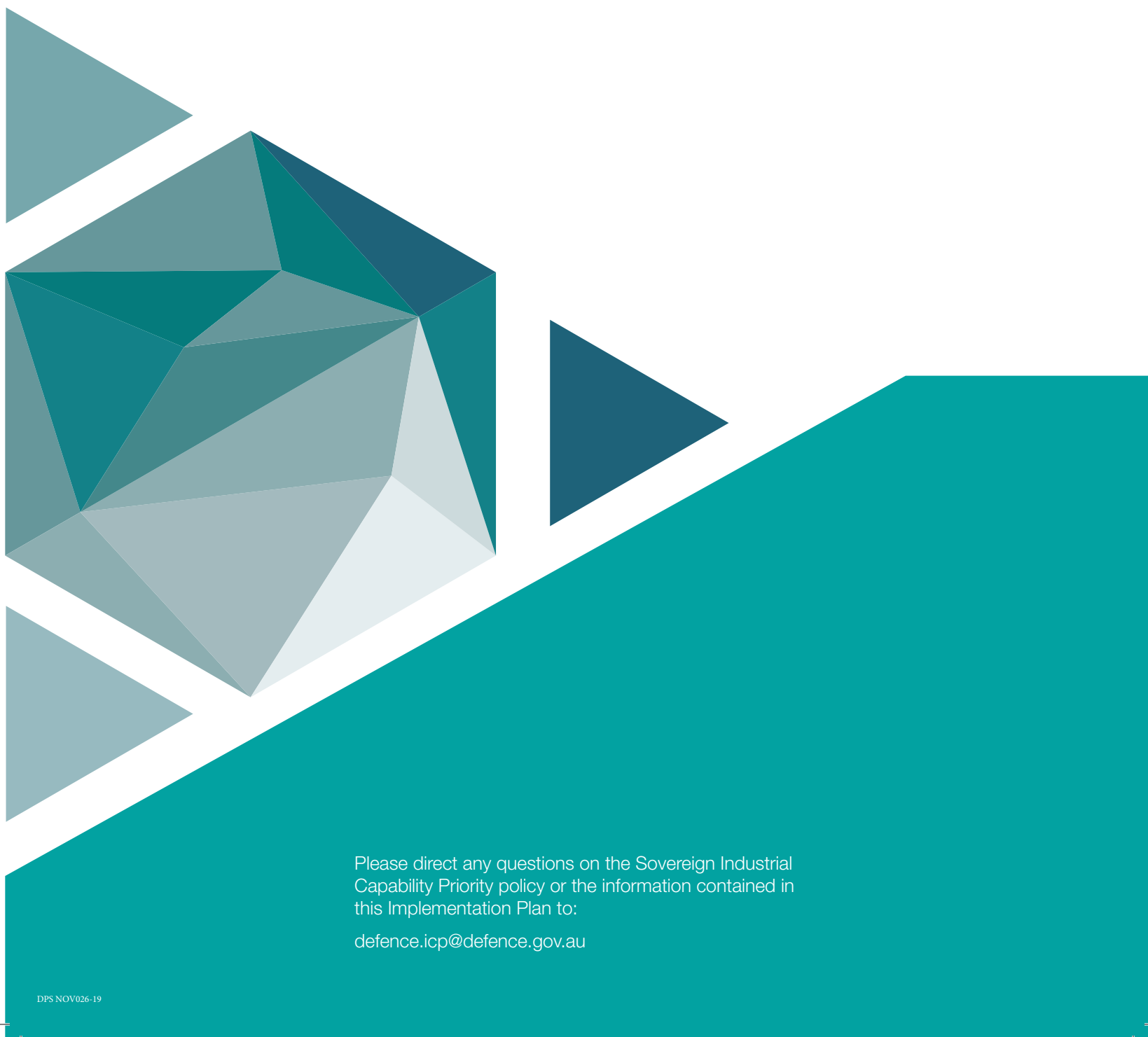
This Plan includes the following actions to be taken by Defence and/or Government to support the Combat clothing priority. Although responsibility has been attributed to a particular branch, group or agency, it is expected that a broader group of Defence and/or Government stakeholders will participate in, or contribute to, the action. Funding of the Government actions will be taken from existing funding.

Topic	Action	Responsible	Timeframe	Key Performance Indicators
<b>Intellectual Property (IP)</b>	Defence will develop guidance for industry on best practice regarding IP, including hints and tips for working with Defence and the range of existing IP strategies and requirements.	Strategic Policy and Intelligence Group	Quarter 4 2020.	Delivery of the guidance material.
<b>Support for Research &amp; Development</b>	Defence will:	Capability Acquisition and Sustainment Group	Ongoing.	Increase in the number of partner participants at Diggerworks.
	<ul style="list-style-type: none"> <li>Continue to provide opportunities to industry through Diggerworks with access to Defence personnel to obtain feedback on developmental equipment related to this priority.</li> </ul>			
	<ul style="list-style-type: none"> <li>Provide industry access to the Combat Application Lab, which was recently established within Army Headquarters as part of the Soldier Combat System Program. The Lab will provide a platform for industry to engage with end users and subject matter experts across the Defence portfolio, including Defence Science and Technology Group, Capability Acquisition and Sustainment Group and Capability Manager representatives.</li> </ul>	Army Headquarters	As required.	Increase in the quality and frequency of collaboration efforts between Defence and industry.
<b>Government Opportunities in Textiles</b>	<ul style="list-style-type: none"> <li>Continue to host forums and initiatives such as Army Innovation Day to provide Australian industry opportunities to display and pitch proposed innovations to assessors, Capability Managers and Defence Innovation Hub personnel.</li> </ul>	Strategic Policy and Intelligence Group Army Headquarters	As required.	Future approaches to market reflect a more informed end user and greater appreciation of the application of emerging disruptive technology.
	To enhance tender submissions and promotional activities, Defence will continue to provide letters for industry that confirm the ADF's use of their products.	Capability Acquisition and Sustainment Group	90 days from receipt of request for letters.	Request for letters of support are responded within 90 days.



Topic	Action	Responsible	Timeframe	Key Performance Indicators
<b>Access to new or existing markets and international supply chains</b>	<p>Defence, through the Australian Defence Export Office, will seek to provide export opportunities for Australian defence textile industry providers via international defence tradeshows. In 2020, Team Defence Australia will prioritise the introduction and support of export-ready companies with high value-add textile production capabilities to international contacts, networks and key international decision-makers.</p> <p>Expressions of interest will open closer to these events. Interested companies should email <a href="mailto:cdic_exports@industry.gov.au">cdic_exports@industry.gov.au</a> for more information.</p>	Strategic Policy and Intelligence Group	2020.	Increase in the number of export-ready textile companies participating in defence tradeshows.
<b>Reformed Defence Industry Security Program (DISP)</b>	<p>Defence will continue implementing the reformed DISP to strengthen security practices in partnership with industry.</p> <p>DISP supports industry to protect their interests from threats including foreign interference, and increases opportunities to compete for work with Defence and international partners by becoming 'Defence Ready'.</p> <p>Defence provides DISP members with access to security information, guidance and services, including personnel security vetting, certification and accreditation of facilities and/or ICT systems. In certain circumstances, Defence can also provide an assurance to international partners of an entity's DISP membership, promoting Australia's sovereign capabilities internationally.</p> <p>More information on DISP can be found at <a href="https://www.defence.gov.au/dsvs/industry/default.asp">https://www.defence.gov.au/dsvs/industry/default.asp</a></p>	Associate Secretary Group	Ongoing.	Increase in the number of DISP members.





Please direct any questions on the Sovereign Industrial  
Capability Priority policy or the information contained in  
this Implementation Plan to:  
[defence.icp@defence.gov.au](mailto:defence.icp@defence.gov.au)