Defence Industry Leadership Program

# DILP Research Paper

## Securing the Future - Enhancing Australia's Defence Supply Chains

# Securing the Future

## Enhancing Australia's Defence Supply Chains

Defence Industry Leadership Program

DILP25 TEAM 2

# Executive Summary

Australia is highly reliant on overseas suppliers for manufactured goods. As demonstrated by the COVID-19 pandemic, these supply chains can be fragile, with a remote island nation such as Australia being particularly exposed. For our military, which depends on highly capable, technologically advanced systems to maintain an edge over potential adversaries, this reliance represents a potential strategic risk. We are therefore motivated to explore what needs to be done to ensure that this risk is mitigated, and that adequate supplies of critical materiel can be maintained in a time of war.

Complete onshore manufacturing of all of Defence's materiel needs is neither feasible nor economically sensible. Australia's competitive advantage lies in its skilled workforce and capacity for designing complex systems. The strategic approach should focus on positioning Australian industry downstream in supply chains while leveraging optimal offshore opportunities upstream, creating a hybrid model that achieves both efficiency and resilience.

Success requires developing sophisticated processes to assess supply chain criticality – from acquisition to through-life support – and implementing appropriate resilience measures. Enhanced situational awareness through emerging technologies and processes can provide Defence with better visibility into complex supply networks. The imperative is ensuring Australia can acquire and sustain essential defence capabilities even when traditional supply lines are disrupted. This represents a fundamental shift from viewing supply chain policy as an economic concern to treating it as a core national defence strategy.

Through the research conducted in the development of this report, we have established six key findings on the state of Australia's domestic defence industry, and have proposed a course of action that we believe is critical to ensuring the resilience of Australia's defence supply chains (Figure 1).

**Finding 1:** The Pendulum has Swung Too Far

- The focus on 'speed to capability' risks losing sight of the importance of a resilient, domestic supply chain.

**Finding 2:** 'Speed of Resilience'

- Speed to Capability must be balanced by the concept of Speed of Resilience during both acquisition and sustainment of defence capability.

**Finding 3:** Collaboration is Still King

- No one organisation can provide resilience on its own. Collaboration across all stakeholders remains paramount.

**Finding 4:** Contracting is Key

- Realistic, enforceable resilience requirements must be baked into contracts from the outset.

**Finding 5:** A Consolidated Approach is Needed

- Effective management of critical components requires firm Commonwealth guidance informed by industry.

**Finding 6:** The Time is Now

- Industry is investing in data automation and digital transformation - Commonwealth has a unique opportunity to leverage this momentum to ensure it supports Defence's resiliency needs.

**Action 1:** Establish dedicated funding

- Up-front investment is needed. This needs to be targeted and guaranteed to ensure it delivers value-for-money.

**Action 2:** Provide Commonwealth leadership to a whole-of-industry initiative

- A government-led steering group with active participation across industry is required to ensure that resilience goals are achievable and fit for purpose.

**Action 3:** Assign accountability for execution

- Accountability for supply chain resilience outcomes must lie with a Government agency that has visibility of both operational needs and industry capability.

**Figure 1 Key findings and actions**

# The Authors – DILP Team 2

**James Connell**
BAE Systems Australia

James is a Senior Manufacturing Engineer with over 13 years' experience in Defence industry, primarily working with Submarine Programs.

**Candice Francis**
PMB Defence

Candice is a Senior R&D Engineer with 12 years' experience in Defence industry on submarine battery technologies.

**Simon Geraghty**
Raytheon Australia

Simon is a Project Manager with over 18 years' experience in the ADF and the Defence Industry. As a veteran he is passionate about a highly capable and innovative Defence Industry supporting our Defence Members.

**Adam Hughes**
Saab Australia

Adam is a Systems Engineer with a software development background. He has over 20 years' experience in the Defence industry, predominantly in the Land domain and most recently in the specific area of Ground Based Air Defence and Radars.

**Phil Marlow**
Bastion Defence

Phil is a Systems Engineering consultant with 25 years' experience in Australia's defence industry. During this time, he has worked in small to medium enterprises, prime contractors, and within the Department of Defence across a variety of major programs.

# Table of Contents

**Executive Summary** ..... **ii**

**The Authors – DILP Team 2** ..... **iv**

**Table of Contents** ..... **v**

**Table of Figures** ..... **vii**

**Glossary of Key Terms** ..... **viii**

**Acknowledgements** ..... **viii**

**1 Introduction** ..... **1**

**2 Background** ..... **2**

2.1 Problem Refinement ..... 2
2.2 Strategic Context ..... 3
2.3 Economic Context ..... 5
2.4 Research Motivation ..... 7

**3 Scope and Research Methodology** ..... **8**

3.1 Scope ..... 8
3.2 Research Methodology ..... 9
3.3 Existing Literature ..... 9
3.4 Primary Research ..... 16

**4 Research Survey** ..... **17**

4.1 Demographics ..... 17
4.2 Results ..... 18
4.2.1 Connotative Words ..... 18
4.2.2 Recent Trends in Supply Chain Enhancement ..... 19
4.2.3 Future Plans in Supply Chain Enhancement ..... 22
4.2.4 Criticality of Supplies ..... 26
4.2.5 Domestic Supply and Manufacturing ..... 28
4.2.6 Other Comments ..... 30

**5 Research Findings** ..... **31**

5.1 Finding 1 – The Pendulum Has Swung Too Far ..... 32
5.2 Finding 2 – Speed of Resilience ..... 36
5.3 Finding 3 – Collaboration is Still King ..... 37
5.4 Finding 4 – Contracting is Key ..... 38

5.5 Finding 5 – A Consolidated Approach is Needed ..... 38
5.6 Finding 6 – The Time Is Now ..... 38

**6 Recommendations ..... 40**

6.1 Action 1 – Establish Dedicated Funding ..... 40
6.2 Action 2 – Provide Commonwealth Leadership to a Whole-of-Industry Initiative ..... 41
6.3 Action 3 – Assign Accountability for Execution ..... 41

**7 Conclusion ..... 43**

**8 Acronyms and Abbreviations ..... 44**

**9 References ..... 45**

**11 Appendix A: Detailed Survey Results ..... 49**

11.1 Connotative Words ..... 49
*11.2 Recent Trends in Supply Change Enhancement* ..... 49
*11.3 Future Plans in Supply Change Enhancement* ..... 52
*11.4 Criticality of Supplies* ..... 59
*11.5 Domestic Supply and Manufacturing* ..... 63
*11.6 Other Comments* ..... 65

# Table of Figures

Figure 1 Key findings and actions ..... iii
Figure 2 Australia's dependence on maritime trade ..... 4
Figure 3 The decline of Australia's economic complexity ..... 5
Figure 4 Australia's GDP growth has shown susceptibility to external shocks ..... 6
Figure 5 Survey Response Organisation Types ..... 17
Figure 6 Organisational Roles of Survey Respondents ..... 18
Figure 7 Word association results ..... 19
Figure 8 Enhancement types implemented in the last 5 years ..... 20
Figure 9 Objectives of recently implemented enhancements ..... 21
Figure 10 Planned enhancement types ..... 23
Figure 11 Barriers to enhancement implementation ..... 24
Figure 12 Recommend actions to remove barriers ..... 25
Figure 13 Enhancement priorities with barriers removed ..... 26
Figure 14 Adoption of risk based management for critical supplies ..... 27
Figure 15 Factors influencing 100% domestic supply mandates ..... 28
Figure 16 Perceived benefits of the Future Made In Australia program ..... 29
Figure 17 Key findings ..... 32
Figure 18 Recommended actions ..... 40

# Glossary of Key Terms

**Resilience** - the ability to anticipate, withstand, adapt to, and recover from disruptions, minimising impact on operations and capture lessons learnt to emerge in a stronger position after disruption.

**External supplier** – supplier located outside of Australia.

**Critical** – Refers to physical components, available only from a sole source or limited sources, necessary for the manufacture and sustainment of Australian Defence Force (ADF) capability where disruption would lead to a significant loss of vital ADF capability.

**Essential** – Refers to physical components necessary for the manufacture and sustainment of ADF capability where disruption would lead to a significant loss of ADF capability.

**Domestic supply chain** – Supplier or network of suppliers able to provide materiel to the ADF from within Australia without reliance on external suppliers.

**Small to Medium Enterprise (SME)** – A firm with fewer than 200 full-time equivalent employees.

# Acknowledgements

The compilation of this whitepaper has been made possible with the vital guidance and support from our mentors, Andy Oliver and Neill Morgan, and the Defence Industry Leadership Program (DILP) and Skills Lab. We are extremely grateful to them and to the numerous individuals and companies across the defence industry who contributed to this research. Their insights, recommendations, and stories gathered from extensive experience in dealing with the Australian and global defence industry have been instrumental as the team worked systematically through our industry surveys and interviews. To maintain confidentiality and encourage open dialogue, the names of contributors have not been disclosed in alignment with Chatham House Rules.

- Defence Teaming Centre
- BAE Systems Australia
- PMB Defence
- Bastion Defence
- Saab Australia
- Raytheon Australia
- Neomech
- Coras
- SAGE Group
- TALON ZULU
- Axiom Precision Manufacturing
- GME
- GPC Electronics
- Rapier Electronics
- Silentium Defence
- ASC
- FarPoint Solutions
- Queensland University of Technology

# 1 Introduction

Australia's security has long benefitted from its geography and historical alliances. An era of stability in our region has come with an assumption of at least ten years' warning of an impending conflict, affording us ample time to stockpile resources and onshore vital manufacturing capabilities.

Recent events, however, have called this assumption into question. Consider how things have changed in just the last five years:

- COVID-19 has exposed structural weaknesses in our economy, particularly the deep, offshore supply chains that make us dependent on foreign manufacturers.
- The war in Ukraine has demonstrated the enormous strain that a modern conflict places on defence logistics, and the sheer pace at which militaries must develop and adopt emergent technologies to remain viable on the battlefield.
- Technological progress in areas such as drones and hypersonic weapons has eroded the long-standing defensive advantage of distance.
- Geopolitical tensions in the Indo-Pacific, driven by China's territorial ambitions and the increasingly isolationist posture of the United States, have introduced an era of strategic uncertainty.

It is apparent that we can no longer expect a significant window in which to prepare for conflict. A robust defence industry, properly incentivised by government and integrated with Defence's capability needs, will be a vital component in ensuring that Australia can quickly pivot to a wartime posture should the need arise.

Key to this will be ensuring that the organisations that make up Australia's defence supply chain are not only profitable, but are also at the right size, are doing the right work, and are properly integrated into a well-managed network of suppliers, efficiently and robustly supporting defence capability. This paper seeks to assess whether Australia's defence industry meets this vision and, if not, establish the path that leaders in government, Defence, and industry must do better – must do *differently* – to ensure that we are securing the future.

# 2 Background

## 2.1 Problem Refinement

The defining question for this research paper was put to the research group during their participation in the Defence Industry Leadership Program (DILP)[1]:

> ***"How can Australia enhance its domestic supply chain to reduce reliance on external suppliers and strengthen industrial capabilities?"***

We saw this as a wide-ranging question, open to a great deal of interpretation. To help us refine our research and develop actionable outcomes, we have chosen to focus on the section of the supply chain where, arguably, the bulk of the work is done in translating defence's needs into tangible capability and sustaining that capability through its lifecycle. This covers the primes[2] and their immediate, domestic Small to Medium Enterprise (SME)[3] suppliers.

To ensure consistency throughout our research, we have taken care to establish firm definitions of some of the key concepts related to the topic.

By **Resilient**, we mean not just the ability to withstand shocks and disruption, but also the capacity to incorporate lessons learned and achieve a stronger state afterwards.

When we talk about a **Domestic supply chain**, we mean a supplier or network of suppliers within Australia able to provide materiel without reliance on foreign sources. This excludes foreign entities who simply set up a mailbox and register their business in Australia to claim 'domestic' status.

Finally, we have taken care to define what we mean by criticality. While there are many components that are essential for the manufacture and sustainment of Australian Defence Force (ADF) capability, it is often the case that these are commodity items that can be obtained readily and in quantity on the open market.

---

[1] Defence Teaming Centre, *Defence Industry Leadership Program* (Defence Teaming Centre 2025)
[2] The Commonwealth identifies thirteen Australian Defence Prime contractors: Babcock, BAE Systems, Boeing, HII Australia, Kongsberg, L3Harris, Lockheed Martin, Moog, Northrop Grumman, Raytheon Australia, Rheinmetall, Saab, and Thales. While these organisations all have foreign-based parent companies, for the purposes of this paper we consider them sufficiently well-established in Australia to be considered 'domestic'.
[3] We have used the Department of Finance's definition of SME as a "firm with fewer than 200 full-time equivalent employees."

There is, however, a subset of necessary components that are available only from sole or limited sources; we have defined these as **Critical Components**. This supply limitation could be due to a variety of reasons such as being a niche product or technology, requiring sophisticated manufacturing processes, or being limited to certain vendors due to security concerns. These critical components are our primary concern in this research.

## 2.2 Strategic Context

Australia's maritime geography is – and has historically been – an enormous defensive advantage. There is, however, a downside to this: if we cannot control our sea lines of communication, we lose our military and economic connection to the outside world.

Figure 2 illustrates our dependency on international maritime trade[4]. Represented here are an annual total of $365B in exports and $244B in imports, a significant proportion of which transit the constrained straits to our north.

These trade routes are long, narrow, and highly concentrated. In an era of technological advances and military expansion in our region, they are especially vulnerable to denial through interdiction and blockade.

Furthermore, almost half of those exports and about a third of the imports are with a single country: The People's Republic of China. Even in the absence of a 'hot' war, the prospect of disruption by trade embargoes or other forms of economic coercion is abundantly clear.

Although successive recent governments have focused a great deal of spending on enhancing our means of defending these critical lifelines, we must nevertheless be prepared for them being disrupted, if not cut off entirely in the eventuality of conflict, a new pandemic, or other unforeseen crisis.

Within this context, the post-Cold War global order we have long taken for granted is changing. The National Defence Strategy[5] (NDS) asserts that 'Increasing strategic competition between the US and China is a primary feature of Australia's security environment and will likely have the greatest impact on the regional strategic balance'.

[4] David Uren. *The Trade Routes Vital to Australia's Economic Security*. (Australian Strategic Policy Institute 2024)
[5] Department of Defence, *National Defence Strategy* (Commonwealth of Australia, 2024)

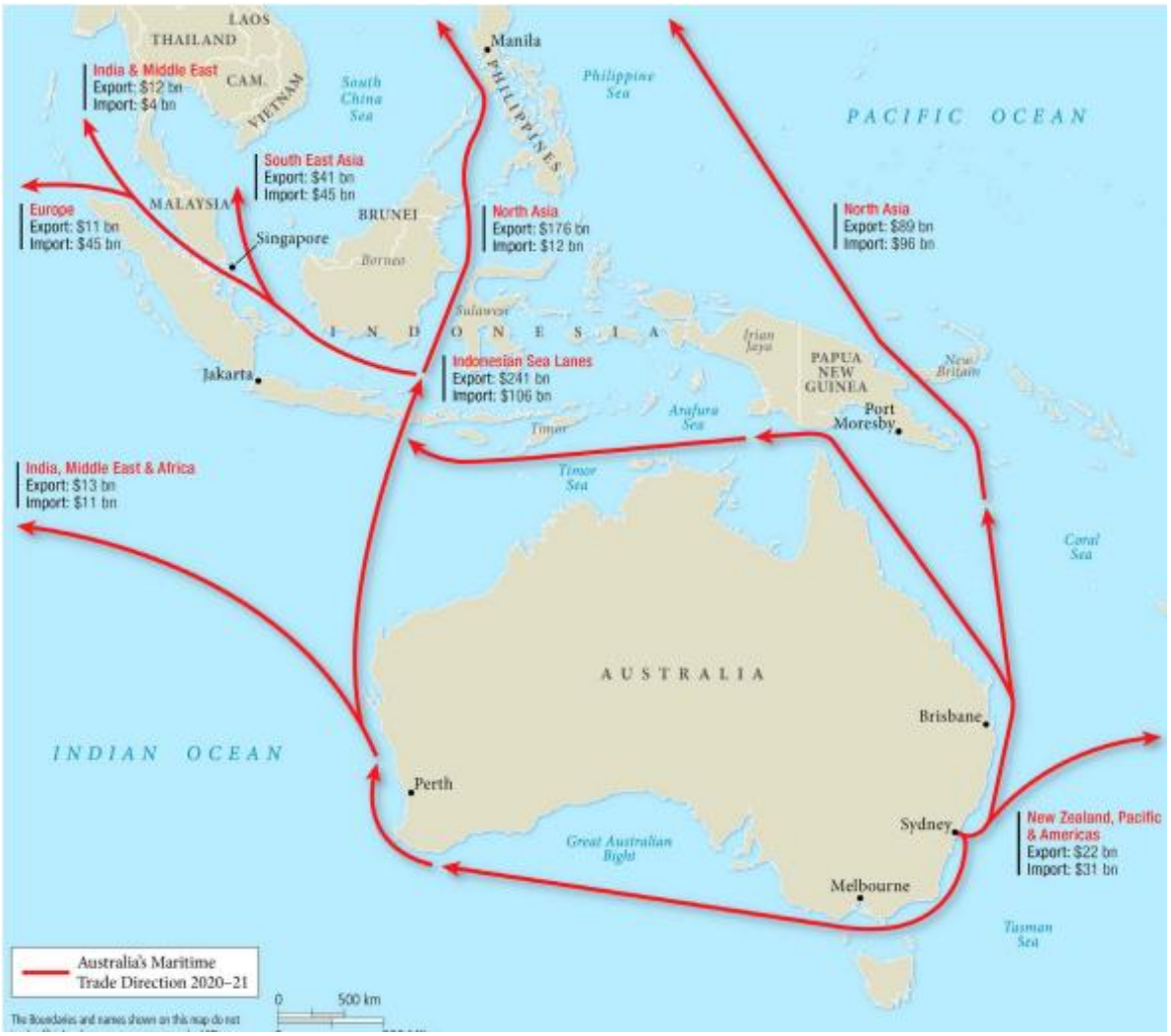


**Figure 2 Australia's dependence on maritime trade[6]**

As this competition plays out, the strength of extant alliances will be tested: President Trump has explicitly stated that US international relations will always prioritise American interests[7] and, already, there have been indications that the US' longstanding support for Taiwan is faltering[8]. A failure of the US to prevent or oppose a Chinese invasion of Taiwan would have profound implications for its other strategic partners in the Pacific, challenging the assumption that regional democracies will be guaranteed by American military and economic power.

[6] See note 4 above

[7] Parliament of Australia. *Australia's defence strategy adjusts to an increasingly volatile regional environment*. (Commonwealth of Australia n.d.)
[8] Nathan Attrill. *Trump's US can still defend Taiwan. But will it?* (Australian Strategic Policy Institute 2025)

## 2.3 Economic Context

We might ask how this prospect of isolation threatens Australia, a prosperous nation with an educated, industrious workforce and the resources of an entire continent at her disposal. While a full economic analysis is beyond the scope of this paper, we can gain some high-level insight by the consideration of economic metrics such as economic complexity and Gross Domestic Product (GDP).

First, economic complexity is a measure of the diversity, strength, and sophistication of an economy across all sectors and is a key predictor of a nation's resilience to economic shocks. Simply put, higher complexity typically means better outcomes in the face of economic disruption.

As shown in Figure 3, based on data compiled by the Harvard University Growth Lab[9], Australia's ranking with respect to economic complexity has significantly deteriorated in recent decades, falling from 62nd to 105th out of the 145 countries measured in the study.

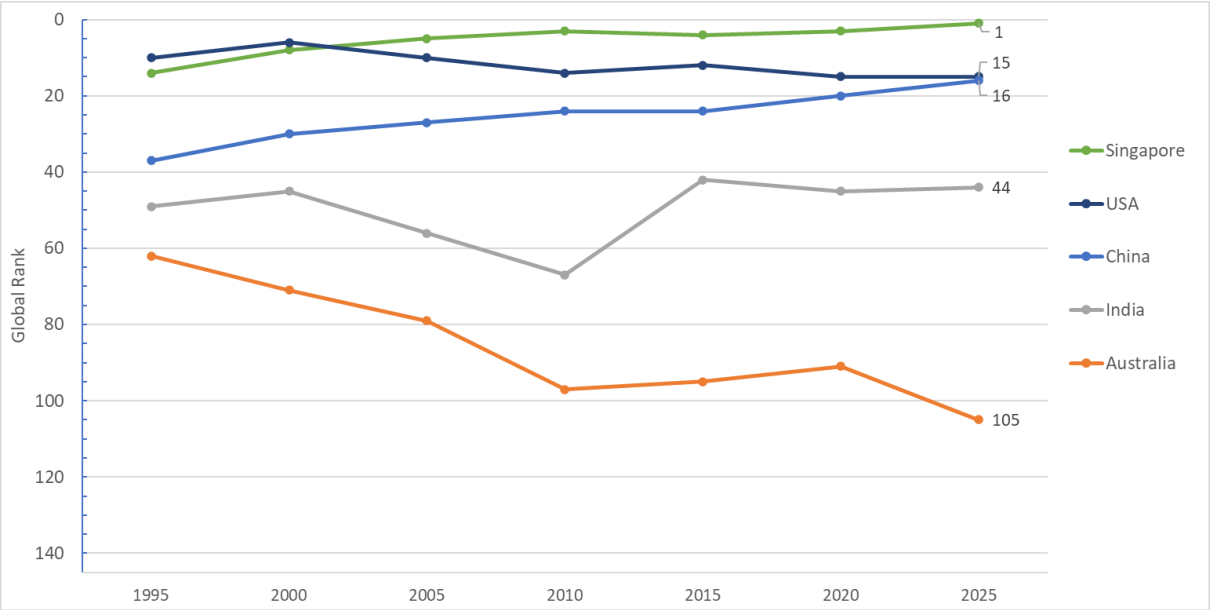


**Figure 3 The decline of Australia's economic complexity[10]**

It may seem obvious that Australia, relatively small in terms of population compared to the world's great powers, would not be expected to feature highly on this metric. However, it is noteworthy that Singapore – with less than a quarter of Australia's population[11] and almost none of its natural resources – is able to achieve a very high economic complexity, leading the world rankings.

[9] Harvard University Growth Lab, *Country & Product Complexity Rankings* (Harvard University 2025)
[10] See note 9 above
[11] Central Intelligence Agency, *The World Factbook* (Central Intelligence Agency n.d.)

Another potential indicator of Australia's resilience in the face of economic disruption is historical data on GDP growth, depicted in Figure 4[12]. Of note in this data are the periods corresponding to the 2000 dotcom bubble, the 2008 financial crisis, and the 2020 COVID-19 pandemic, during which Australia experienced sharp contractions in growth. Australia was not alone in experiencing the impacts of these global crises, and in each case, we rebounded quickly – nevertheless, these inflection points are illustrative of our coupling to the world economy and our inherent sensitivity to international demand for our exports.

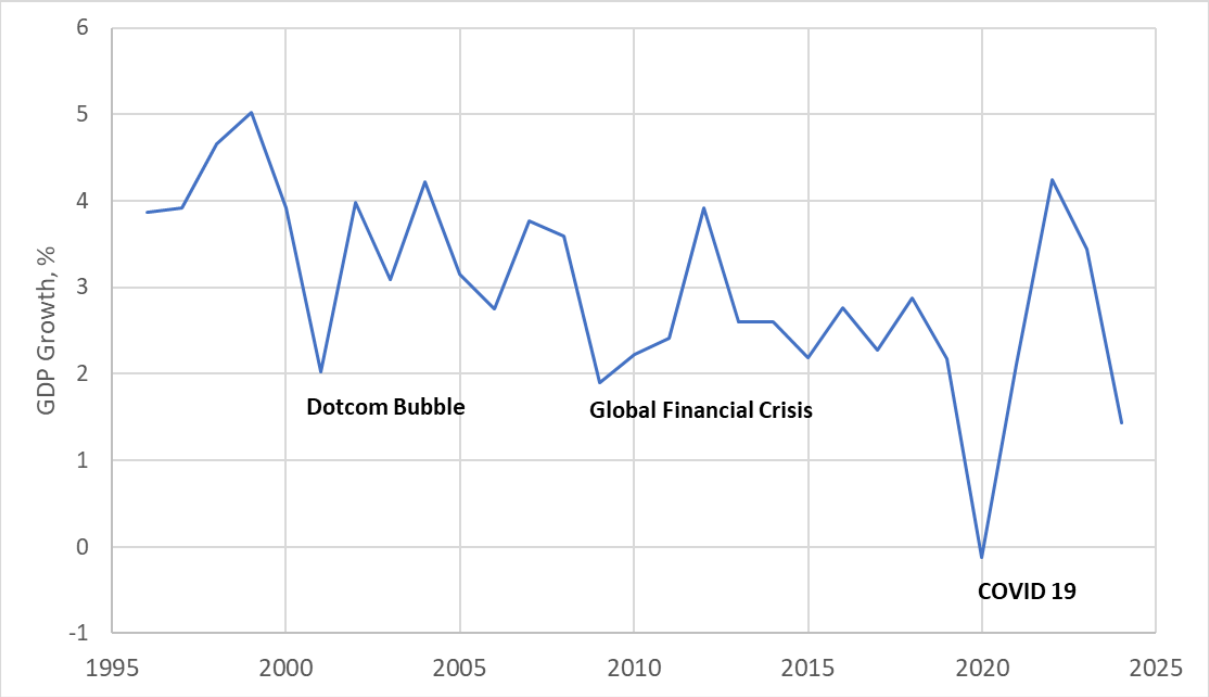


**Figure 4 Australia's GDP growth has shown susceptibility to external shocks[13]**

Of course, we should be careful not to read too much into this data; we are nevertheless a very wealthy nation thanks to our ability to obtain comparative advantage from our world-leading primary industry and service sectors. But despite our economy's outwardly robust appearance and strong peacetime performance, if we find ourselves in a situation where we cannot ship our income-generating resources overseas and receive manufactured goods in return, a hollowed-out industrial base risks leaving us without the means to mount a sustained defence of that hard-earned wealth.

> **"We have become a nation with a world-class campus but no factories: a quarry but no forge"**
>
> University of Canberra Vice Chancellor Bill Shorten, address to the Australian Institute of International Affairs, September 2025

[12] World Bank Group, *Indicators* | *Data* (World Bank Group n.d.)
[13] See note 12 above

## 2.4 Research Motivation

In the 21st century, Australia finds itself in a somewhat contradictory and potentially precarious position. Our ocean borders isolate us from immediate threats, yet we are highly dependent on maritime trade; we have long relied on the stability brought about by the dominance of our traditional ally, the US, yet American primacy is being challenged and their resolve is no longer certain; we are rich, yet our economy lacks the sophisticated structural foundation required for true resilience.

Australia's government is currently preparing the 2026 National Defence Strategy, due in early 2026[14]. This revision of the NDS will be a critical guiding document for the nation's approach to the era of uncertainty that is likely to extend into the 2030s and beyond. In this period, Australia will be investing vast amounts into expanding its defence capabilities and, if the strategic outlook in our region continues to deteriorate, we can only expect this to increase.

The world is becoming more uncertain – arguably more dangerous – and we can no longer be complacent when it comes to securing our territory, our wealth, and our way of life. This compels us to address the question of what course of action Australia's defence industry must embark on to ensure that it has the requisite capacity and resilience to support a viable and sustained defence of the nation should the need arise.

[14] Stephan Frühling, Andrew Carr *The 2026 National Defence Strategy: What would Australia be willing to go to war over?* (Australian National University 2025)

# 3 Scope and Research Methodology

## 3.1 Scope

The research group is comprised of a diverse team of defence industry professionals, each having gained vast experience across a range of disciplines including engineering, manufacturing, research and development, and project management.

Handed such a complex problem statement, we analysed the question, to gain a greater understanding of the many contributing factors that influence defence industry from our viewpoint. Cognisant of the numerous 'rabbit holes' that began emerging, the group established a firm set of constraints, assumptions, and dependencies.

Constraints:

- Limited to vulnerable supply chains with the potential to impact Australian Defence operations.
- Recommendations will be targeted at Australian defence industry.

Assumptions:

- Surveys will be sent to various diverse stakeholders including industry leaders, their responses collated and from this information interviewees will be identified.
- The participants will be open, honest, and candid while providing pertinent informed insights.
- Recommendations derived from analysis of the data collected, will be framed to be realistically implementable by defence industry.

Dependencies:

- Access to previously published findings to ensure the team can establish an accurate and cohesive understanding of the current industry landscape and how it integrates with Defence.
- Sponsor and DTC participation of survey and interview questionnaire reviews thereby guiding the team to develop clear, targeted and engaging surveys and interviews.
- Access to and endorsement by defence and industry personnel invited to participate in surveys and interviews enabling the team to collect valid insights in a timely manner.

## 3.2 Research Methodology

Our research methodology for this topic spanned two major phases: a survey of extant literature on the topic, followed by original research into the observations and opinions of members of Australian defence industry.

The initial literature survey included Federal and State Government reports and strategy documents, industry white papers, peer-reviewed publications and past DILP research papers. The results of this research and the various themes that began to emerge were discussed within the team and used to inform our research hypothesis.

This work laid the foundations for our primary research which consisted of an initial survey to industry participants, followed by a series of interviews with key respondents with the goal of eliciting an even greater insight into their knowledge of the topic.

## 3.3 Existing Literature

Supply chains are complex networks that rely on many inputs, not just physical goods, but also labour, services, capital and infrastructure.[15] A report by RAND Corporation defines **supply chain resilience** as:[16]

> ***"the ability of a supply chain to prepare for, respond to, and recover from disruption, either by resuming its previous state or moving to a more optimal configuration"***

Supply chain resilience has been described by three main behaviours:[17]

- Absorptive capacity – preparation for disruption
- Adaptive capacity – response to disruption
- Restorative capacity – recovery from disruption

For a supply chain to be resilient it needs to have risk management managing known risks and disruption management to account for unknowns that may interrupt or distort the supply chain.[18]

[15] Productivity Commission, *Vulnerable Supply Chains* (Commonwealth of Australia, 2021), 24-27.
[16] Rebecca Lucas, Thomas Ekström, Paola Fusaro, Elizabeth Hastings Roer and Lucia Retter, *Toward Defense Supply Chain Disruption Management* (RAND Corporation, 2024), v.
[17] Yang, Cuihong, Kailan Tian, and Xiang Gao, *Supply chain resilience: Measure, risk assessment and strategies* (Fundamental Research 5 (2): 433-436, 2025), 434-435.
[18] A) See note 16 above, 6-13. B) Commonwealth of Australia, *Critical Technology Supply Chain Principles* (Commonwealth of Australia, 2021), 6-11.

The Australian Industry Group[19] defined critical products as those with high economic importance and high supply risk and suggested mapping the whole supply chain to identify the location of these critical products. In order to do this, a high level of supply chain visibility is required.[20] Identifying critical technologies or products, their supply chains and increasing the transparency of these supply chains to enhance security of the overall supply chain.[21]

A framework was proposed by the Productivity Commission to identify vulnerable, essential and critical products with respect to supply chain disruption.[22] Industrial capability assessment should also be done for all stages of critical products; design, manufacturing, construction, systems integration, sustainment, upgrades, repair and replacement. [23]

Once critical products have been identified, their supply chains must be transparent and well understood to apply appropriate risk management.[24] Common mitigation strategies to decrease risk are:[25]

- no action
- stockpiling and strategic inventories
- contingent contracting
- create redundancy
- market diversification
- supplier diversification
- building logistics capabilities
- increased flexibility and agility
- friend-shoring
- on-shoring/in-housing
- form collaborative relationships
- developing domestic capability

[19] Ai Group and Perth USAsia Centre, *Securing Australia's Defence Supply Chains* (The Australian Industry Group, 2022), 11-13.
[20] See note 19 above, 24-25.
[21] See note 18 B above, 6-11.
[22] See note 15 above, 41-52.
[23] Worrall, L, H Gamble, Spoehr J, and A-L Hordacre, *Australian Sovereign Capability and Supply Chain Resilience. Perspectives and Options* (Australian Industrial Transformation Institute, Flinders University of South Australia, 2021), 28-30.
[24] See note 15 above, 119-126. See note 19 above, 18.
[25] See note 15 above, 119-126. See note 17 above, 434. See note 19 above, 18.

In 2025 the Australian Strategic Policy Institute published a report[26] outlining challenges Defence may face in achieving the NDS. The report outlined the following issues experienced by defence industry: procurement challenges, alignment with strategic priorities, intellectual property control, and Government support and partnership. Also included were criticisms of Australian defence industry not being cost competitive as well as lacking scale and surge capacity.

In 2021 the Australian Industry Group reported supply chain issues and strategies being employed by Australian private businesses following the COVID-19 market disruption.[27] With an emphasis on improving reliability and resilience of supply chains, methods being employed include building up inventories, finding new suppliers in Australia or globally, renegotiating existing supply contracts and bringing production in house.

A year later in 2022 the Australian Industry Group proposed a framework for supply chain security with four main principles, [28] summarised as (1) information gathering at project outset, (2) assessing risk, (3) determining interventions for mitigating risks and (4) collaboration between government and industry. In the same report they found that Defence and defence industry had implemented tools and capabilities to improve with supply chain management but recommended further improvements were still needed.

In a 2023 senate report on Department of Defence and defence industry, the Foreign Affairs, Defence and Trade Legislation Committee had the following view:[29]

> ***"What is important is that Australia maintains resilient supply chains that are underpinned by a sufficient development of a sovereign defence industrial base in combination with strategic sourcing from allies in way that ensures supply in times of instability or crisis."***

The Australian Strategic Policy Institute acknowledged that:[30]

> ***"A sovereign industrial base is referenced frequently but rarely explained. It doesn't mean only making things in Australia, but rather is about a trusted and reliable supply chain that can withstand crises. Some defence capabilities will always require allied support—and indeed those alliances strengthen, not weaken, our sovereignty."***

---

[26] Australian Strategic Policy Institute, *The cost of Defence* (Australian Strategic Policy Institute, 2025), 48-49.
[27] Ai Group, *Australian Supply Chains: State of Play* (The Australian Industry Group, 2021), 5-6.
[28] See note 19 above, 30-33.
[29] Foreign Affairs, Defence and Trade Legislation Committee, *Performance of the Department of Defence in supporting the capability and capacity of Australia's defence industry* (Commonwealth of Australia, 2023), 70.
[30] See note 26 above, 13.

Supply chain resilience is an ongoing challenge for many nations across the globe. Sweden is considered a small nation but they maintain domestic defence industry design and system capabilities to support national defence.[31] A review of Swedish companies supply chain management in response to global crises was published by Business Sweden in 2023.[32] The review detailed four forces shaping the future of supply chains (1) geopolitics, (2) the technology race, (3) skilled labour competition and (4) climate action and sustainability. To mitigate these forces a range of strategies were reported, including:[33]

- proactive planning and forecasting
- dual/multi sourcing
- dual design
- product unification and modularisation
- automation and smart manufacturing
- regionalisation
- improving economies of scale
- optimising logistics and distribution
- upskilling personnel

Out of these, one of the most common strategies was regionalisation, which is making use of reshoring, nearshoring and offshoring solutions based on consideration of the products criticality.[34]

This is similar to the UK approach to defence industry participation in global supply chains. An assessment of national security priority and supply chains is used to determine the appropriate level of sovereignty required for a particular industrial capability.[35] This allows the UK defence industry to be generally well connected into global supply chains and guarantee supply for UK requirements are available when needed.[36]

[31] See note 23 above, 30.
[32] Vitaliy Tsvyntarnyy, Erik Friberg, Sara Hedin, David Lidén, and Jesper Bernhardsson, *Rewiring Global Supply Chains Executive Global Insight September 2023* (Business Sweden, 2023), 3.
[33] See note 32 above, 9-16.
[34] See note 32 above, 12.
[35] See note 23 above, 29-30. See note 19 above, 28.
[36] See note 23 above, 29-30.

Even though the US defence industry is of a scale that may make autonomy possible,[37] their approach to supply chain resilience in recent years has also included:[38]

- review supply chain risks and vulnerabilities
- identifying critical products
- improving visibility of supply chains for critical products
- increasing collaboration with allies
- supporting research and innovation

There have been numerous Australian strategies and initiatives released in recent years addressing Australian, and particularly Defence, supply chain resilience. Some of the high level resources are briefly introduced below, however this is not an exhaustive list.

Strategies:

- **Defence Industrial Capability Plan** (2018)[39] outlined the Government's vision for Australian defence industry and introduced the Sovereign Industrial Capability Assessment Framework.[40]
- **Modern Manufacturing Strategy 2020**[41] sets out a four-pillar approach for Australia to be a high-quality manufacturing nation with a resilient economy.
- **National Defence: Defence Strategic Review 2023** (DSR)[42] assesses Australia's capability, posture and preparedness to defend itself in the current strategic environment.
- **2024 NDS**[43] sets out the Government's approach to Australia's most strategic risks to national defence.
- **2024 Integrated Investment Program** (IIP)[44] presents a plan for an integrated ADF to achieve the NDS.

[37] See note 23 above, 29-30.
[38] See note 19 above, 27-28.
[39] Department of Defence, *Defence Industrial Capability Plan* (Commonwealth of Australia, 2018), 11-13.
[40] See note 39 above, 29-34.
[41] Department of Industry, Science, Energy and Resources, *Make it Happen, The Australian Government's Modern Manufacturing Strategy* (Commonwealth of Australia, 2020), 3.
[42] Department of Defence, *National Defence: Defence Strategic Review* (Commonwealth of Australia, 2023), 18-21.
[43] Department of Defence, *National Defence Strategy* (Commonwealth of Australia, 2024), 5-7.
[44] Department of Defence, *Integrated Investment Program* (Commonwealth of Australia, 2024), 6-9.

- **2024 Defence Industry Development Strategy** (DIDS)[45] highlights the need for a sovereign defence industrial base and presents seven Sovereign Defence Industrial Priorities (SDIPs).[46]
- **Defence Data Strategy 2.0** (2024) (DDS)[47] outlines Defence data management practices to support the NDS.

Initiatives:

- **Australian Industry Capability Program**[48] provides opportunities and encourages Australian companies to pursue defence work in Australia and overseas.
- **Global Supply Chain Program**[49] provides funding for Australian Primes to find opportunities in the global supply chain market and work with Australian Suppliers
- **Office of Supply Chain Resilience**[50] identifies and advises the Australian Government on critical supply chain vulnerabilities, risks and resilience improvements.
- **Future Made in Australia**[51] is a government agenda to secure a stronger more resilient economy for Australia in the global environment.

These resources demonstrate progress towards a comprehensive national strategy on sovereign capability discussed in a 2023 Senate report:[52]

> ***"A comprehensive national strategy on sovereign capability necessitates a robust assessment of Australia's supply chain strengths and vulnerabilities, identifying what Australia can design, build and sustain locally and what can be sourced from trusted international partners."***

[45] Australian Government, *Defence Industry Development Strategy* (Commonwealth of Australia, 2024), 1-5.
[46] See note 45 above, 17-20.
[47] Department of Defence, *Defence Data Strategy 2.0* (Commonwealth of Australia, 2024), 2-3.
[48] Department of Defence, "Australian Industry Capability Program" (webpage, accessed November 7, 2025), https://www.defence.gov.au/business-industry/industry-capability-programs/australian-industry-capability-program.
[49] Department of Defence, "Global Supply Chain Program", (webpage, accessed November 7, 2025), https://www.defence.gov.au/business-industry/industry-capability-programs/global-supply-chain-program.
[50] Department of Industry, Science and Resources, "Office of Supply Chain Resilience" (webpage, accessed November 7, 2025), https://www.industry.gov.au/trade/office-supply-chain-resilience.
[51] The Treasury, "Future Made in Australia" (webpage, accessed November 7, 2025), https://treasury.gov.au/policy-topics/future-made-australia.
[52] See note 29 above, 70.

However, there is not one area of Defence that has overall responsibility for Australia's Defence supply chain.[53] Since the requirements for sovereignty and affordability are commonly in conflict for supply chain matters,[54] one overall point of responsibility could be beneficial.

The NDS provided recommendations to increase security of supply chains and improve Australia's capacity to recover from supply chain disruptions, generally:[55]

- diversifying and expanding supply chains
- integrate supply chains with allies
- establish strategic partnerships
- supporting mid-tier companies in defence supply chains

To mitigate the challenges of Australian industry having ADF as a sole customer, Government support for Australian defence companies to enter global supply chains was recommended to improve scale, resilience and sustainability of Australia's industrial base.[56] Diversification into other markets, increased collaboration and teaming, and enhancing business maturity are all recommended for building general resilience of SMEs.[57]

The Australian Industry Group[58] had nine recommendations for policy initiatives to increase supply chain security. Particularly, they recommended supply chain consideration including sustainment requirements at the start of projects and visibility at all levels of supply chains, more collaboration with defence industry, allies and partners to continue strengthening supply chain security.

The state of defence supply chain literature is succinctly summarised in a RAND Corporation research report:[59]

> ***"Scholars and practitioners agree that risks to defense supply chains need active management but do not agree on how to enhance supply chains' resilience vis-à-vis disruptions."***

[53] See note 19 above, 21-22.
[54] Mouton, Christopher A, Carl Rhodes, Mark V Arena, Paul DeLuca, Andrew Dowse, John P Godges, Adam R Grissom, Caleb Lucas, and Erik Silfversten, *Establishing a Sovereign Guided Weapons Enterprise for Australia* (RAND Corporation, 2022), 58.
[55] See note 43 above, 18, 56-58.
[56] See note 43 above, 58.
[57] Mitchell Beaty, Luke Hall, Jason Hunter, Emily Kitchener, Angelika Schuck, and Michal Stanek, *Maintaining a Resilient Defence Industrial Supply Base* (Defence Teaming Centre, 2024), 40-49.
[58] See note 19 above, 34-35.
[59] See note 16 above, v.

## 3.4 Primary Research

To further progress our research, we defined the following hypothesis to be tested through our survey of industry participants:

> ***Defence's supply chain would be enhanced by managing the domestic supply of components critical to ADF operational capabilities in a consolidated system controlled by the Commonwealth.***

The survey development began during the data gathering process involved through the secondary research phase. With review, mentor input and guided by the lens of our research hypothesis, the survey questions were refined. Designed to gain an understanding how industry is currently approaching supply chain management and what future enhancements are being considered. Most importantly, the team was interested to understand what enhancement initiatives would be undertaken if afforded the desired level of support.

The survey was distributed to targeted individuals as well as to a wider audience via the team's connections on the LinkedIn social network.

Further to the surveys, interviews were conducted with respondents who offered poignant and enthusiastic responses. These professionals were from entities across all levels of business and provided real-world inputs through their thoughts, insights and opinions.

# 4 Research Survey

## 4.1 Demographics

Our survey received a total of 21 responses: 12 from **SMEs**, 8 from **Large Enterprises**, and 1 from **Other (Government)** organisations. SMEs (57% of responses) and Large Enterprise (38% of responses) made up the bulk of responses and therefore represent the two most significant demographic groups.

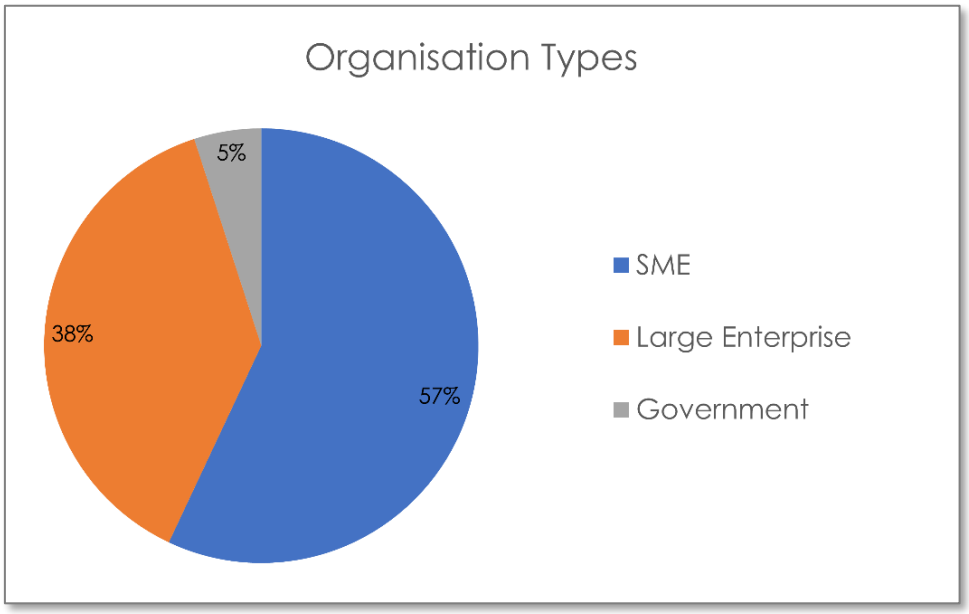


**Figure 5 Survey Response Organisation Types**

Lines of business within the survey population operated primarily from with the defence sector, with 81% of respondents indicating that Defence was their major customer. Respondents who said they did not operate primarily within the defence sector were mostly SMEs (75%), with their involvement in Defence ranging from less than 10% of business to between 10% and 25% of business.

Organisational roles of respondents were mainly classed as **Executive or upper management** (48%) and Middle Management (38%), with small proportions of **First line management** (9%) and **Business owner / operator** (5%) types.

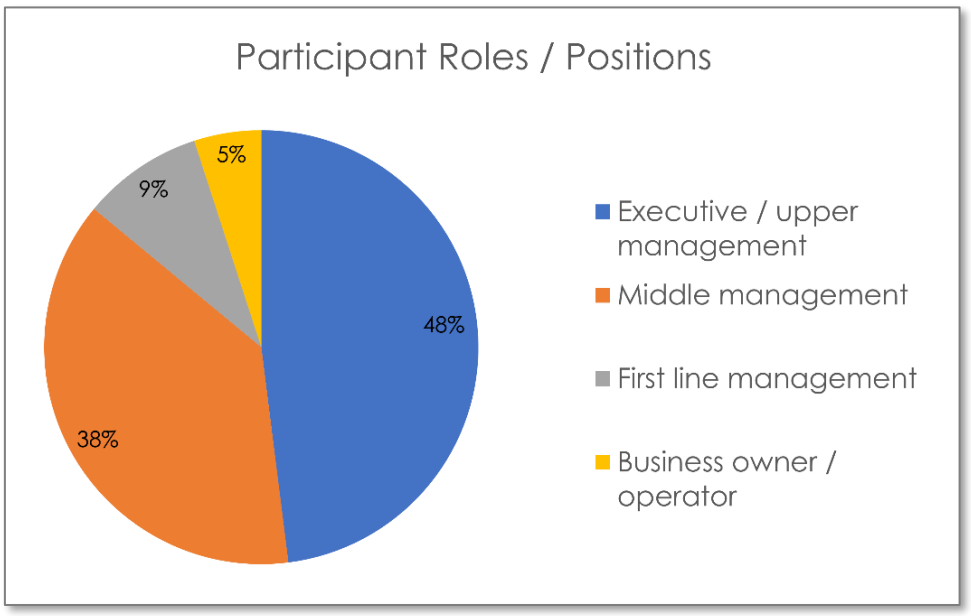


**Figure 6 Organisational Roles of Survey Respondents**

## 4.2 Results

This section summarises and discusses the survey results. Detailed results are presented in Appendix A.

### 4.2.1 Connotative Words

Our survey opened with the question *"What words would you use to describe your organisation's approach to supply chain management?"*. Respondents were asked to choose one or more descriptive words or terms from a curated list designed to provide subjective insight into how participants currently viewed their supply chain operations. Available options ranged from those with **negative** connotations (reactive, complex, bureaucratic, slow, manual), to more **neutral** in nature (conservative, just-in-time) to **positive** connotations (agile, efficient, assured, flexible, proactive, digitally enabled, collaborative, resilient). Distribution of the survey results are shown below.

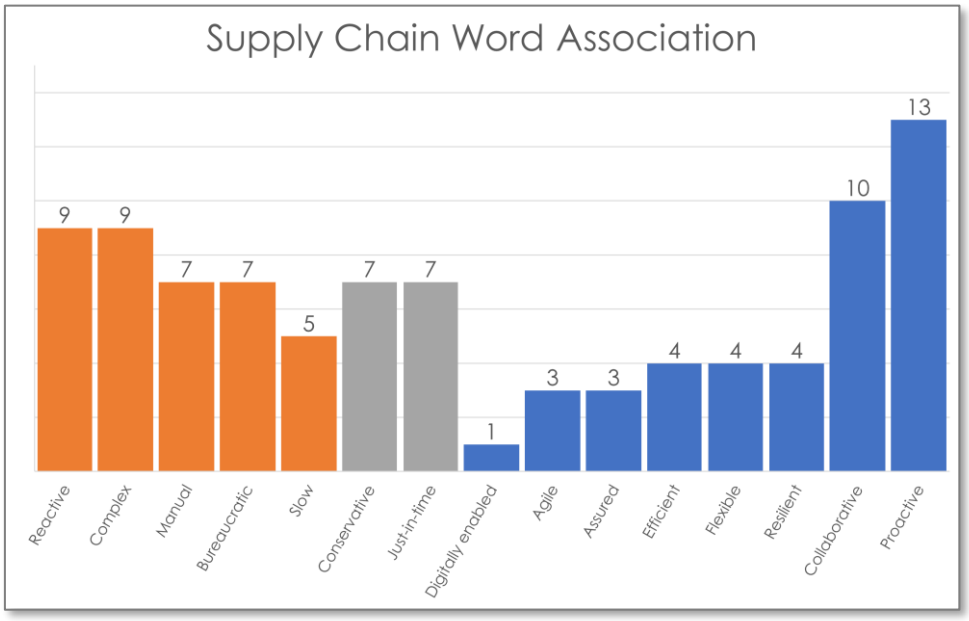


**Figure 7 Word association results**

Responses saw a total of 93 individual word/term selections received; of which 40% had negative connotations, 45% had positive connotations and 15% were neutral. Looking at the terms which were either positive or negative only, 53% of responses were found to be positive with 47% of responses negative.

When results were aggregated relative to the number of survey participants, we found 81% of respondents used at least one word or term with negative connotations to describe their supply chain versus 76% of respondents who used at least one positive term. However, while the prominence of positive words such as **Collaborative** and **Proactive** is encouraging, the key positive term in the context of our research, **Resilient**, was selected by only 19% of all survey respondents.

*Less than **1 in 5** organisations surveyed used the word* ***Resilient*** *to describe their supply chains.*

### 4.2.2 Recent Trends in Supply Chain Enhancement

Our survey revealed positive recent trends in efforts to enhance supply chain efficiency. 76% of respondents indicated that their organisations have implemented one or more enhancement initiatives within the previous five years, with representation within that group split almost equally between Large Enterprises (50%) and SMEs (44%). 19% of respondents indicated that their organisations had not implemented any initiatives in the previous five years – all of which were SMEs.

The most prevalent initiative types reported to have been implemented were **Collaborative Partnerships** (63% of respondents) and **Digital Transformation** (56% of respondents). The combination of **Collaborative Partnerships** and/or **Digital Transformation** accounted for over 81% of all respondents who indicated that their organisations had implemented enhancement initiatives in the previous five years.

***Collaborative Partnerships***
*and*
***Digital Transformation***
*have recently been the most prominent strategies.*

Distribution of the results were split relatively even between Large Enterprises (50%) and SMEs (40%) in relation to **Collaborative Partnerships**, however **Digital Transformation** saw a greater proportion of Large Enterprises (67%) compared to SMEs (33%). Of the other initiative types, **Onshoring/Nearshoring** was the anomaly with results leaning significantly towards SMEs (83%) compared to Large Enterprises (17%).

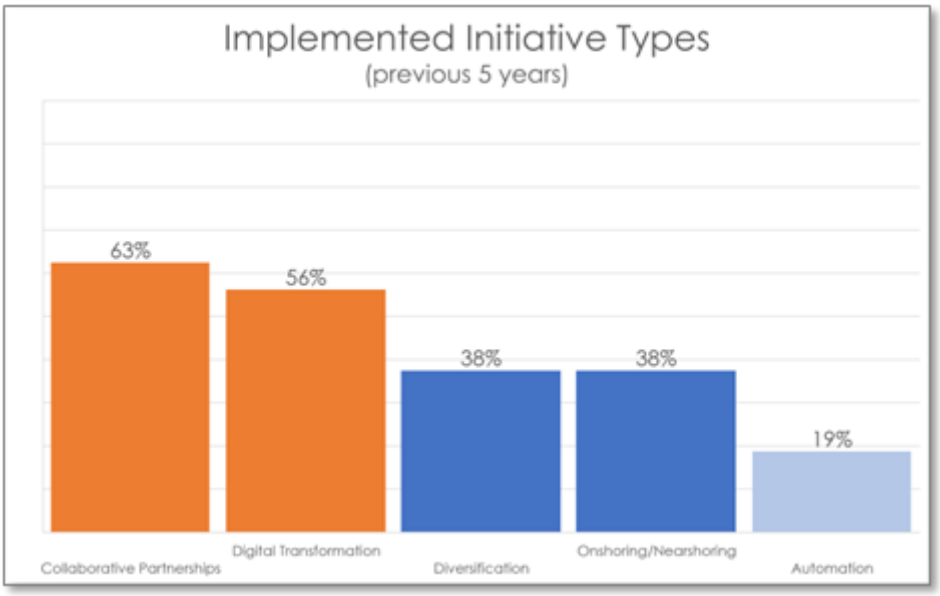


**Figure 8 Enhancement types implemented in the last 5 years**

**Supply Assurance** was the most prominent objective of recently implemented enhancement initiatives (88% or respondents), with **Reducing Lead Times** (63%), **Cost Reduction** (56%) and **Increasing Local Content** (50%) also prevalent. Of those, **Reducing Lead Times** was the only response distributed significantly in favour of one particular demographic group: SMEs (70%) vs. Large Enterprises (30%).

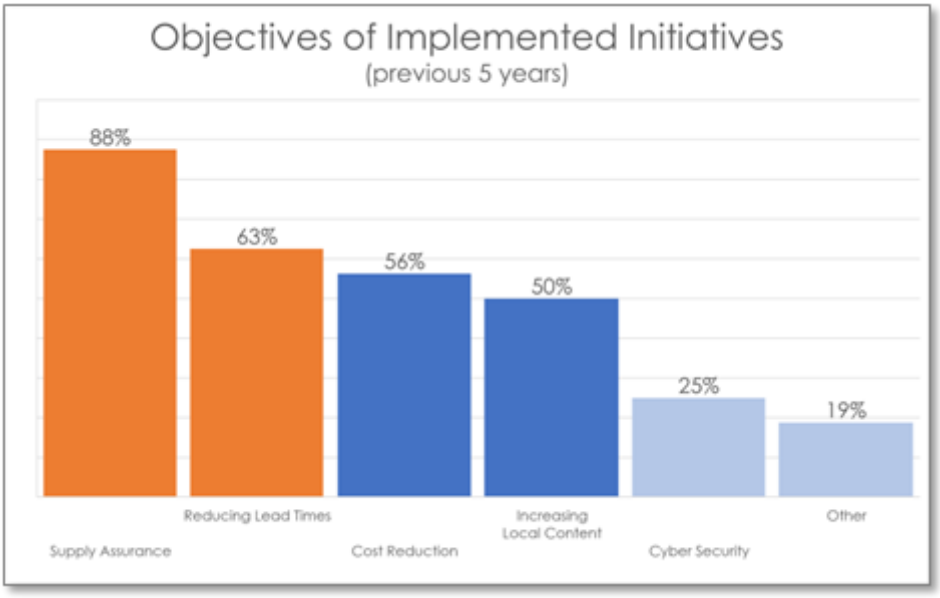


**Figure 9 Objectives of recently implemented enhancements**

When asked about scope, 56% of respondents reported that their implemented enhancement initiatives were **focused on specific critical points or products**, while 44% indicated their initiatives were **broad or generalised** in nature.

Only 50% of respondents indicated definitively that quantifiable benefits of implemented enhancement initiatives have been measured. From those responses, some notable comments:

> *By selecting suppliers for particular categories, providing indications of future demand and collaborating with them, there have been improvements in lead-time, quality and cost. This has been both with on-shore and off -shore suppliers.*

> *Significant lead time reductions have been realised as well as security of supply through onshoring manufacturing capability of critical mission components where traditional overseas supply chain lead times had become untenable and expensive.*

Looking beyond their own organisations, a small number of respondents (38%) identified recent success stories in supply chain enhancement that they believe could or should be considered best practice for the Australian defence industry. Results included:

- Implementation of the Joint Supply Chain Accreditation Register (JOSCAR)[60] that allows buyers to quickly assess and evaluate suppliers and subcontractors, while simplifying the accreditation process for the suppliers;
- A partnering arrangement between REDARC Australia and British company, Marl International, to onshore production of LED lights for the Hunter Frigate program[61];
- AUS companies that are approved to work in the US market, thanks to the AUKUS initiative opening up the US market opportunities for Australian companies; and
- The Benchmarked Supply Chain Management Self-Assessment Tool[62] by Dr Kirk Bozdogan of the MIT Centre for Technology, Policy and Industrial Development that can be used by companies to self-assess their supply chain maturity.

### 4.2.3 Future Plans in Supply Chain Enhancement

Our survey also revealed positive future intent with 76% of respondents indicating that their organisations have plans to implement new supply chain enhancement initiatives within the next two years. Representation within that group was again split almost equally; this time with SMEs (50%) and Large Enterprises (44%) reversed.

We saw continued prioritisation of **Digital Transformation** (69% of respondents) and **Collaborative Partnerships** (44% of respondents), but also a significant increase in focus on **Automation** (63% of respondents) as an avenue to supply chain enhancement. All three strategies were evenly represented by both Large Enterprises and SMEs, while **Onshoring/Nearshoring** continues to reside within the domain of SMEs (80%) compared to Large Enterprises (20%).

***Digital Transformation*** *and* ***Automation*** *are the most popular future strategies.*

[60] Hellios Information Limited, *JOSCAR* (Hellios Information Limited 2025)
[61] REDARC, *REDARC signs MOU with MARL International for future Australian naval projects* (REDARC 2025)
[62] Kirkor Bozdogan, *Supplier Management Self-Assessment Tool* (MIT 2025)

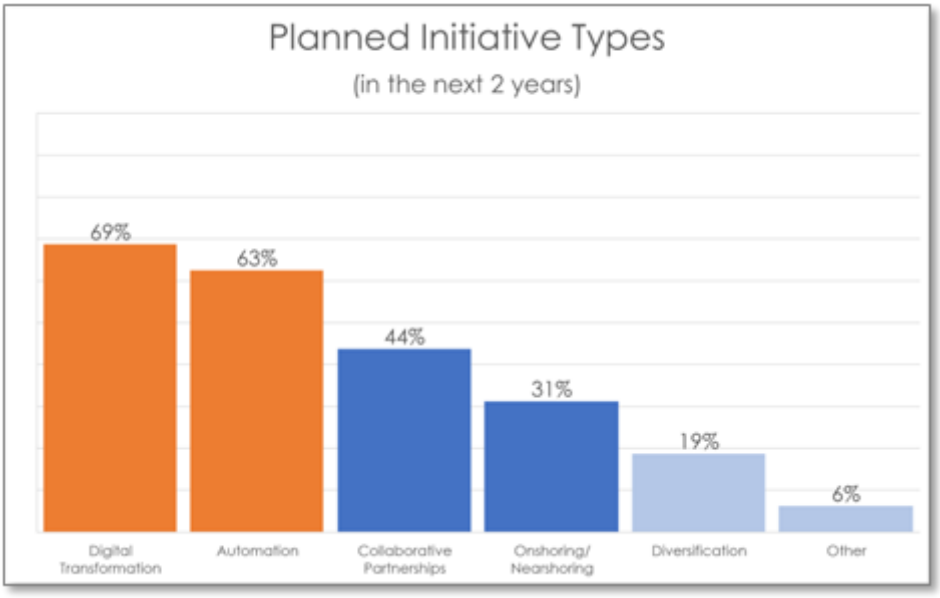


**Figure 10 Planned enhancement types**

The combination of **Digital Transformation** and/or **Automation** accounted for 94% of respondents, suggesting a high level of coupling between the two strategies.

Expected benefits from those planned initiatives included increased efficiency and productivity, reduced costs, faster delivery times, opportunities for continuous improvement and improved monitoring and control.

Artificial Intelligence (AI) was found to be an as yet untapped advantage in the context of supply chain management. Only 19% of respondents indicated that their organisations have or are considering AI-powered tools or processes; 75% of those respondents being SMEs. One notable application included the use of Microsoft Copilot to analyse supply data and predict areas of risk, provide leading indicators of potential stock shortages and allowing preventative measures to be implemented proactively.

*Adoption of* ***Artificial Intelligence*** *for supply chain management is still in its infancy.*

A significant proportion of the survey population (48%) were unsure of their organisation's intent regarding AI. This group was dominated by Large Enterprises (70%), perhaps symptomatic of large organisational policies that are still grappling with the realities of AI in today's world.

**Cost vs. Benefit** was found to be by far the most prevalent barrier organisations face preventing or inhibiting implementation of supply chain enhancement initiatives, reported by 86% or respondents. This included a significantly higher proportion of SMEs (63%) compared to Large Enterprises (32%).

***Cost vs Benefit*** *is by far the biggest barrier to supply chain enhancement.*

**Resource** constraints were also a significant factor, reported by 57% of respondents. Again, this was disproportionately represented by SMEs (67%) compared to Large Enterprises (33%), suggesting SMEs on their own have neither the time nor money to adequately invest in supply chain management.

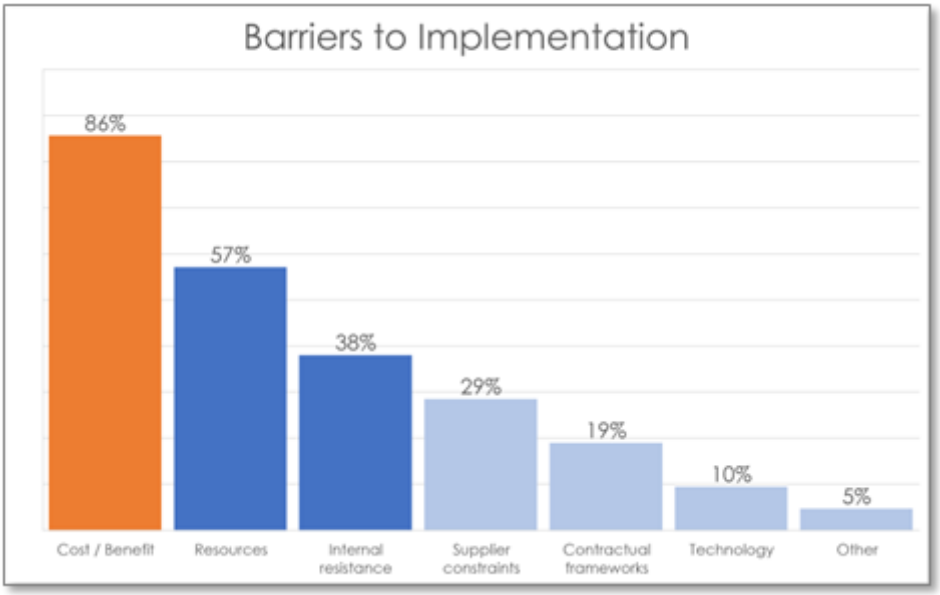


**Figure 11 Barriers to enhancement implementation**

Actions to alleviate barriers to supply chain enhancement saw three clear recommended approaches.

**Standardisation of Processes and/or Technology** was the top ranked recommendation, reported by 57% of participants. Sentiments within the survey results suggest that adoption of common tools and methods of operation would facilitate business-to-business integration and sharing of data, driving up efficiency in supply chains.

***Standardisation, Government Assistance*** *and* ***Continuity of Contracts*** *can all help alleviate the barriers to supply chain enhancement.*

**Continuity of Contracts** and **Government Assistance** were the equal second-ranked recommendation, both reported by 52% of participants. Comments suggested that providing a level of stability in order pipelines, particularly for SMEs, would in turn provide the confidence for business to invest in internal improvements, while government incentives or direct funding would stimulate private investment in those improvement initiatives.

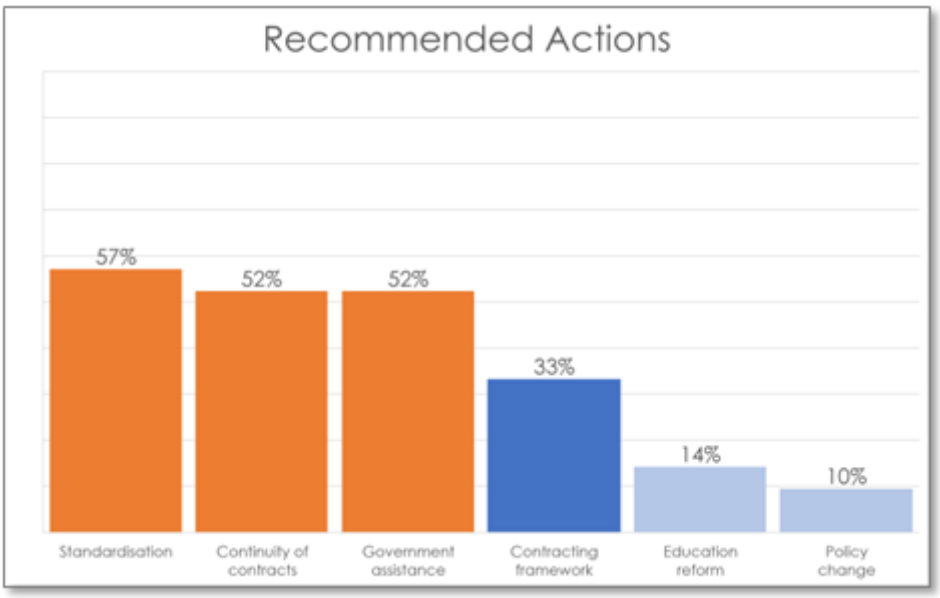


**Figure 12 Recommend actions to remove barriers**

The top three recommendations were all clear preferences of SMEs, with representation of SMEs in those results out-numbering Large Enterprises with a ratio of more than 2:1 in all cases. The clear preference for Large Enterprises was **Contracting Framework Reform**, where that result is reversed with Large Enterprise out-numbering SMEs at a ratio of 2.5:1.

We posed the hypothetical question to participants: *"If resources were not constrained what types of supply chain enhancement initiatives would or should your organisation prioritise?"*

Results showed that **Digital Transformation** (62% of response) and **Automation** (57% of responses) were still the preferred strategies, but with representation of SMEs within those result sets increasing marginally to put SMEs in the majority in both cases. Common themes echoed throughout the associated comments: initiatives of these types will drive up efficiency, reduce errors and result in more proactive and reliable supply chains…but they are time consuming and costly to implement.

***Digital Transformation***
*and*
***Automation***
*would be the top priorities if barriers were alleviated.*

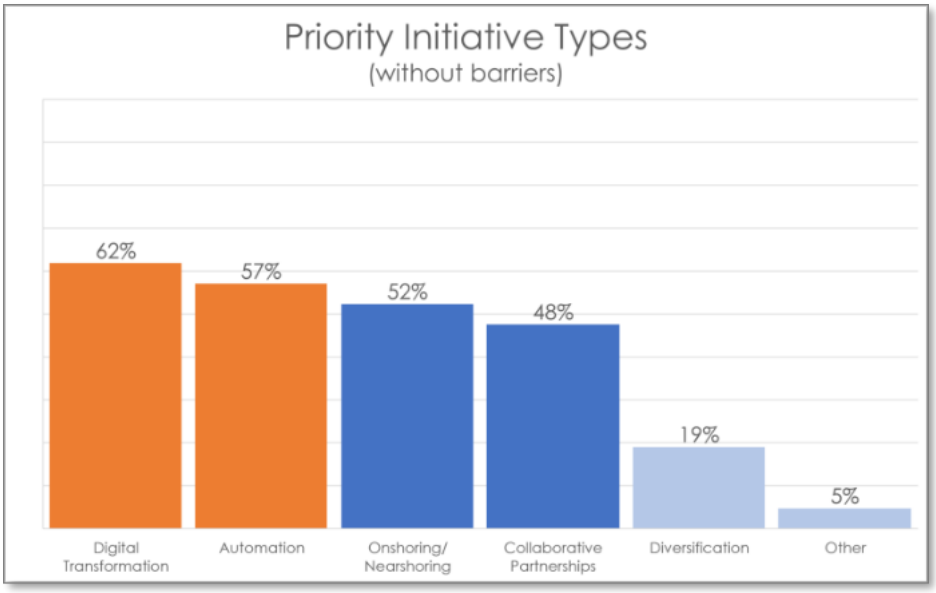


**Figure 13 Enhancement priorities with barriers removed**

Desire to implement **Onshoring/Nearshoring** and **Collaborative Partnership** type initiatives increased to 52% and 48% of respondents, respectively. While preference for **Collaborative Partnerships** was still evenly distributed between the main demographic groups, **Onshoring/Nearshoring** was still dominated by SMEs (73%) compared to Large Enterprises (27%).

### 4.2.4 Criticality of Supplies

Our survey results showed that 81% of all respondents make some concerted effort to assess criticality of the supplies that contribute to their end products or services. These results were most applicable to SMEs, with 100% of the SME survey population indicating that they determine criticality of their supplies, while the same could only be said for 50% of Large Enterprises.

When asked what factors were considered when determining criticality of supplies, various responses were received, including Cost, Safety and Complexity. However, **Lead Time** and **Diversity of Suppliers** were the most prominent factors.

Only 24% of respondents who determine criticality of their supplies indicated that the Commonwealth of Australia (hereafter 'Commonwealth') provides any input into that assessment process. Methods of Commonwealth engagement included contractual Australian Industry Content (AIC) targets, through the SDIPs[63], through technical requirements and the design and certification processes.

[63] Department of Defence, *Sovereign Defence Industrial Priorities* (Department of Defence n.d.)

76% of respondents who determine criticality of their supplies indicated that their organisations apply specialised risk mitigation strategies to those supplies deemed critical to the end products or services. This was particularly prominent amongst SMEs who accounted for 77% of these responses. **Diversification of Suppliers** and **Stockpiling** were the most common strategies mentioned to minimise risk to critical supplies.

*Many organisations already adopt a* ***Risk Based Approach*** *for critical supplies.*

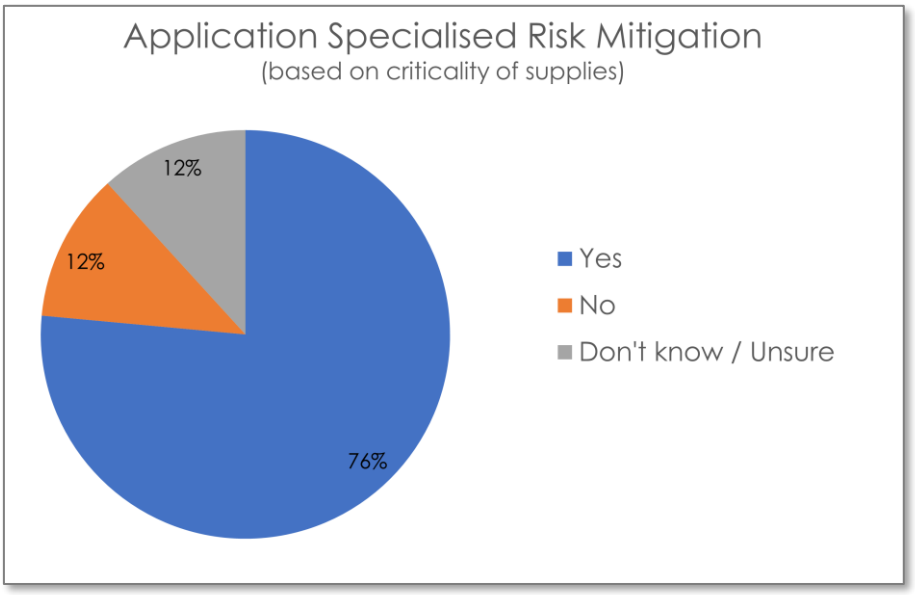


**Figure 14 Adoption of risk based management for critical supplies**

We found indifference within the survey population in relation to support for a "*Commonwealth managed Critical Components List for Defence related technology*", with 62% of respondents unsure of the concept. Support for the idea received only 19% of responses, with comments from those suggesting it is viewed as a necessary step for Defence to plan and develop its supply base to maintain capability.

*Support for a Commonwealth Managed* ***Critical Component List*** *for Defence related technology is* ***Uncertain****.*

An action suggested by one respondent to support a Critical Components List is the development of a Commonwealth managed AI-enabled digital platform that can analyse Defence supply chain data, identify commonality with critical components and determine potential suppliers. Government assistance could then be provided to one or more of those suppliers to onshore and uplift their capabilities where necessary.

Detractors of the concept (also 19% of respondents) argue that the difficulty defining those critical components without clear demand signals would make implementation prohibitive. One also argues that increased Commonwealth focus on specific components leads to a spiral of increasing regulation and compliance, deterring investment and compounding the original supply issues.

### 4.2.5 Domestic Supply and Manufacturing

Our survey revealed that few organisations mandate 100% domestic supply of any of their constituent products or services. Only 19% indicating that they do so in some capacity, with a large proportion (62%) indicating definitively that they do not. Of those who do, the majority (75%) were SMEs. The main factor that influenced those mandates were **AIC targets** (75% of respondents), followed **Criticality**, **Security** and other **Contractual** requirements (each 18% of respondents). **Lead Time**, which was one of the predominant factors in determining criticality of supplies, was reported by only 25% of respondents as a reason for mandating 100% domestic supply.

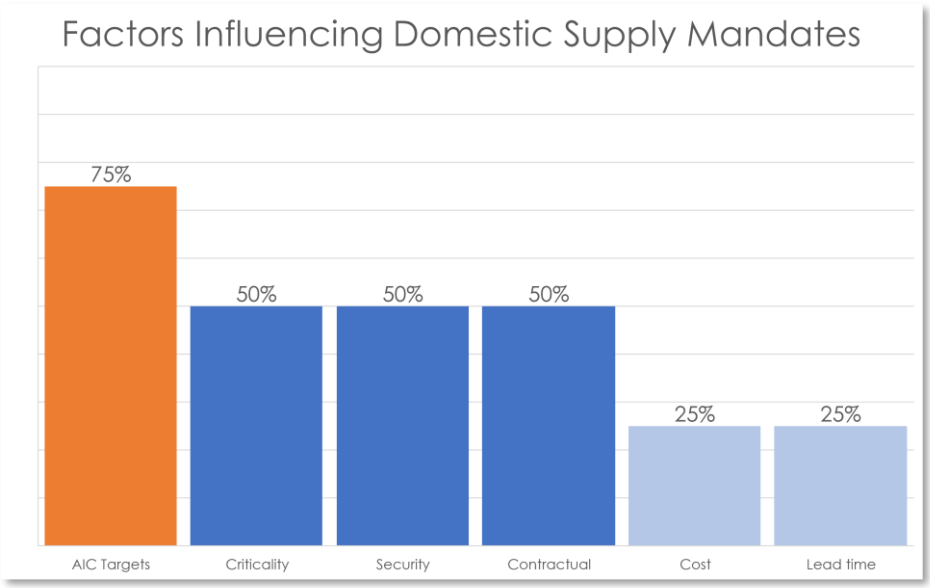


**Figure 15 Factors influencing 100% domestic supply mandates**

The majority (81%) of the survey population were aware of the **Future Made In Australia**[64] program, in some capacity. However, few believe that the program will provide any significant benefit specifically to the Australian Defence industry, with the majority (41%) of respondents undecided.

[64] Department of Treasury, *Future Made In Australia* (Department of Treasury n.d.)

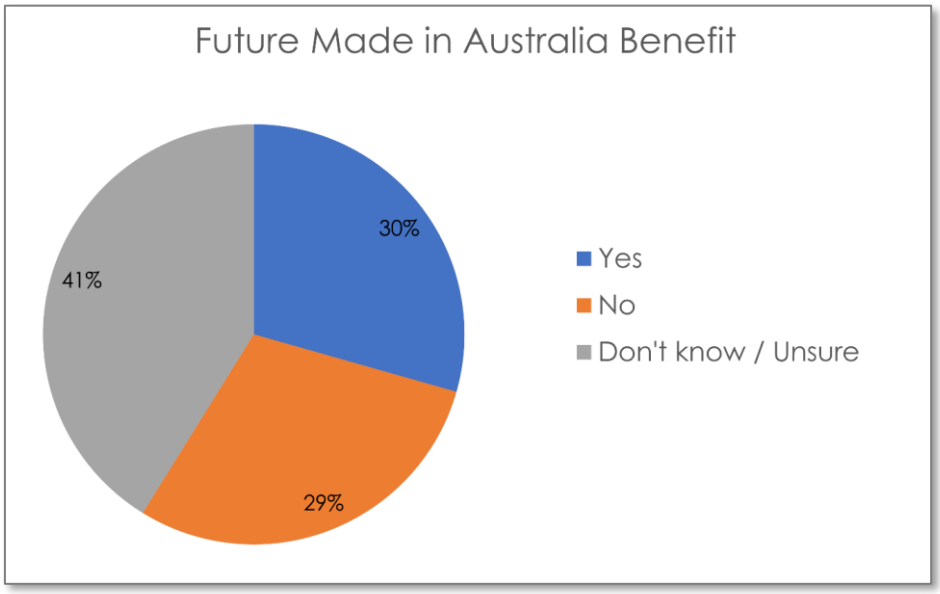


**Figure 16 Perceived benefits of the Future Made In Australia program**

Positive sentiments suggest that the program may remove barriers for SMEs to enter into the Defence manufacturing sector, allow suppliers to diversify and upgrade technology making them more efficient and attractive to Defence, and foster innovation within the industry to develop capabilities to suit unique Australian needs.

*Industry is* ***Sceptical*** *of the benefits of the* ***Future Made In Australia*** *program to Defence.*

On the other hand, negative sentiments suggest that the current Defence culture of "Speed to Capability" encourages purchasing of capability from offshore Primes and naturally distances Defence from the program; that the cost of establishing manufacturing at the breadth and depth necessary to support Defence would be prohibitive; and that the program is purely focussed on renewable energy technology. Some notable comments from those respondents:

*While grant funding and pilot programs sound positive on paper, they are seen by many in the industry as token gestures rather than structural solutions. The lack of long-term visibility, shifting government priorities, and poor coordination between Defence and industry have led to growing scepticism that the program is more about political branding than a genuine industrial strategy.*

*I feel this Program is very focussed on Net Zero and less on supply chain resilience*

### 4.2.6 Other Comments

To conclude, survey participants were given the opportunity to provide any further comments or opinions that had on the topic. Some of the more pertinent responses are highlighted below.

> *Australian Supply Chains are fragile with too many SMEs - there needs to be a **focus on ensuring that some SMEs grow large enough to manage their own supply chain** i.e. Primes can then buy systems from larger suppliers rather than components from SMEs.*

> *Being a small company we only receive production orders when the larger companies supply an orders to us, as such we are very limited in being able to proactively respond. It is quite normal to quote on something, re-quote on same a month or a year later, to have the quantity for quoting change multiple times and then after hearing nothing for months after quoting, receive an order. A lot of this is due to changes by the federal government but **as long as there is no continuation or stability of production it will be hard to implement any changes that will improve supply of anything critical or not**.*

> *There is and will be risk in any supply chain, but y**ou must be proactive and aware of what is happening around the world and plan accordingly** - well in advance.*

> ***The criticality and value of supply chain will only be fully understood when you are depending on it**. The western world have slowly reduced their ability to manufacture and we are now slowly starting to understand the impact, though it is driven by the corporations that are looking for larger profit margins and not necessarily the uneducated leaders of our countries*

> ***To solve the problem will require significant planning and investment, with clear priorities from government that do not just focus on "manufacturing of piece parts etc**. This would include in depth industrial analysis to determine where supply chains are exposed (eg avionics, guidance systems, etc) or compromised (electronics) due to concentration in foreign production. This analysis also should examine the opportunity to develop mass or alternative production (eg Germany using vehicle production plants from BMW to build tank parts and assemblies. Clear paths to demand / market support investment in local capability.*

# 5 Research Findings

Our initial hypothesis posited the need for a Commonwealth-managed critical components list. While our research supports that such a list would be beneficial, it also suggests that having the Commonwealth as the day-to-day coordinator may not be the most efficient implementation: a bureaucratic, top-down approach has the potential to stifle innovation and thereby limit the 'speed of resilience' it is trying to achieve.

Instead, there is a strong case that the Commonwealth's involvement should be limited to acting as its key customer by setting the rules for inclusion on the list, defining a transparent set of standards, providing incentives, and monitoring outcomes.

Inclusion on the list would be through an agreed risk-based approach, governed by Commonwealth-defined rules but with industry input. Industry would be incentivised to choose resilience not because it is the mandated solution, but because it is cheaper, faster, and lower risk than the alternatives.

We therefore propose an alternative to our initial hypothesis:

***Defence's supply chain would be enhanced by managing the domestic supply of components critical to ADF operational capabilities in a consolidated system overseen by the Commonwealth.***

Through our consideration of this revised hypothesis, backed by the results of our primary and secondary research, we have established six key findings:

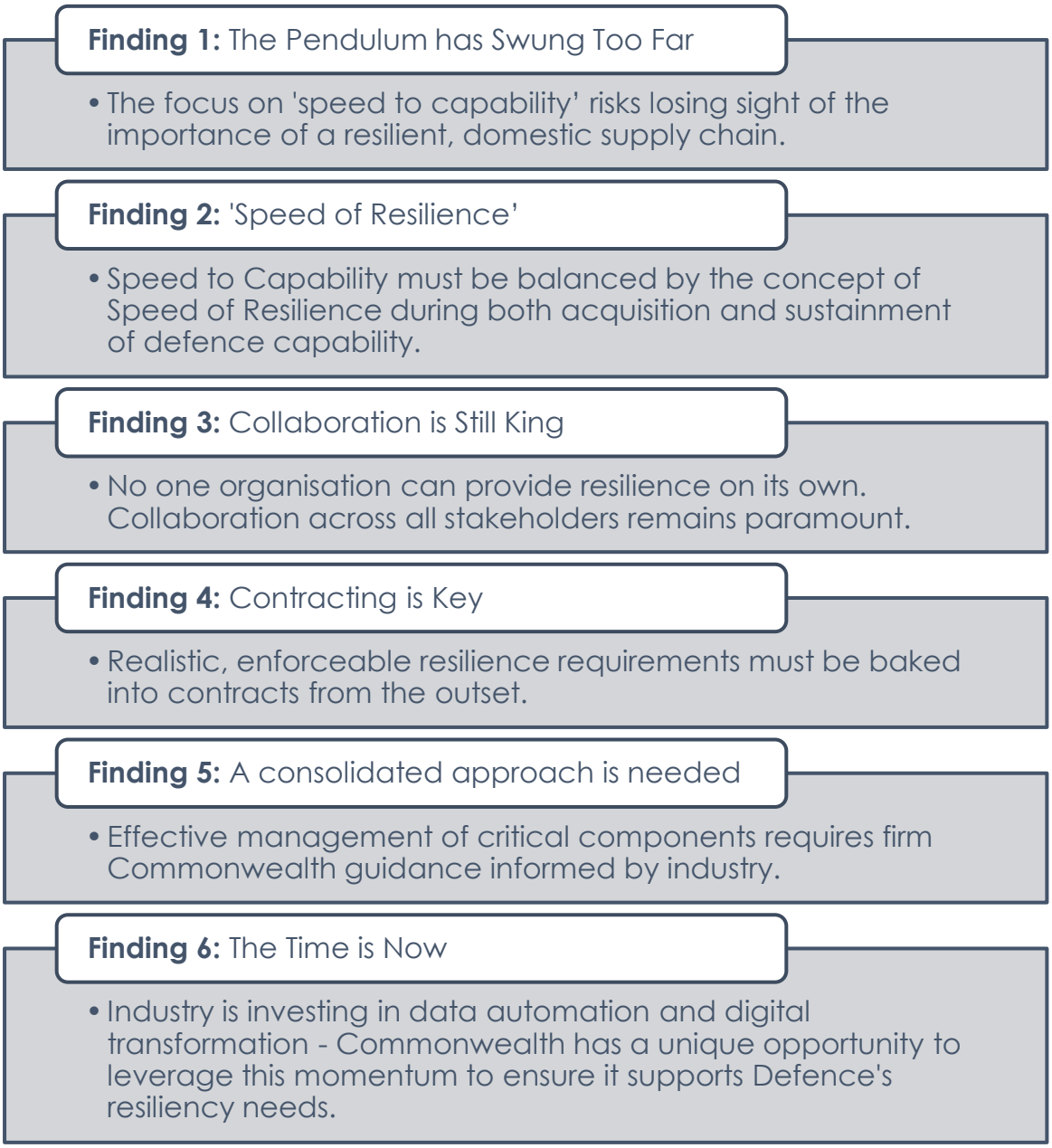


**Figure 17 Key findings**

## 5.1 Finding 1 – The Pendulum Has Swung Too Far

A consistent tension exists between the need for rapid acquisition of capability versus the desire to obtain economic benefits for industry as part of the acquisition process.

Our research indicates that, in the context of an increasingly uncertain security environment, the recent focus of defence acquisition has shifted from AIC to the mantra of 'Speed to Capability'. This focus is deliberate; a minimum viable capability that is in the hands of the warfighter is far more effective than capabilities that are stuck iterating in an effort to achieve a 100% compliant solution.

However, focussing only on 'speed to capability' during peacetime acquisition does not necessarily translate into an ability to maintain that capability at pace in the event of disrupted supply chains. As we have seen in Ukraine it is exactly in these scenarios that equipment is most likely to require repair, replacement, or rapid evolution.

The presence of a strong, domestic industrial base is therefore critical to ensuring an enduring defence capability beyond initial acquisition. In a market economy such as Australia, this can only be achieved if the economic viability of companies participating in the defence supply chain is ensured. This has been the stated goal of government policies such as AIC and Future Made in Australia, which have both sought to inject economic incentives into Australia's manufacturing sector.

While the intent behind these policies is laudable, we question their effectiveness. In the case of AIC, the results have been mixed due to a lack of contractually enforceable targets along with a general vagueness (words like 'maximise' are frequently used by both government and contractors without further elaboration). Naval Group's Australian Industry Program for the Future Submarine Program (FSP), for example, stated that they would '*maximise opportunities for the involvement of the Australian industry through all phases of the FSP, without unduly compromising the Commonwealth's requirements relating to capability, cost and schedule*'[65]. It is unclear how much industrial benefit this would actually guarantee, given the potential for conflict with the stated programmatic priorities (i.e., capability, cost, and schedule).

A contrasting example is Canada's Industrial and Technological Benefits (ITB) defence offset policy, which mandates that companies must undertake business activity in Canada equal to the value of the contracts that they have won. While this might be seen as a somewhat heavy-handed approach, it nonetheless defines a clearly quantifiable threshold and has arguably resulted in a substantial economic activity supporting the long-term viability of Canada's defence industry.

The 'Future made in Australia' program has the stated goal of 'maximis[ing] the economic and industrial benefits of the international move to net zero'[66], a statement that we feel calls into question whether the program truly prioritises industrial development or is ultimately subordinate to wider net zero ambitions. This was echoed by our survey respondents, most of whom were aware of the program but did not believe it was delivering tangible benefits for the defence industry. In either case, the goals of these programs have not explicitly been aligned to the sustainment of defence capability.

[65] Naval Group, *Public AIC Strategy* (Naval Group 2020)
[66] See note 64 above

The lack of any defence policy building Australia's supply chain resilience through local industrial bases, coupled with the fact that the mandate that AIC is no longer the focus, means that mission critical components are vulnerable to supply chain disruptions.

We therefore suggest that the pendulum of defence acquisition has swung too far in the direction of speed to capability, and a renewed focus on defence industry needs to be established – not because it is economically desirable, but because it is strategically necessary.

# Case Study

## P-8A Poseidon Sustainment


In 2020, the ADF entered into a cooperative program with the United States Navy (USN), which included the production, sustainment and follow-on development of the USN and RAAF P-8A Poseidon fleet.[67]

During our research, one interviewee described their experience of supply chain issues on the Poseidon program. A critical system onboard encountered a high volume of failures during operation and on each occasion, this required the return of the faulty item to the manufacturer in the US. Of the units returned, an unacceptable number were diagnosed as 'no fault found' – each having a 14-month turn-around-time.

In our experience, such anecdotes are not uncommon within the defence industry. With appropriate contracting forethought, in-country service depots would immediately mitigate issues such as this. There is a common assertion that this is unachievable, particularly for 'high end' capabilities reliant on major foreign manufacturers; however, there are indications that this need not be the case. At the recent 2025 Shangri-La dialogue, US Secretary of War Pete Hegseth reinforced the US' desire to establish Regional Support Centres in allied nations in the Pacific.

We see this as a prime opportunity for inter-governmental cooperation to drive domestic industrial capability that ensures the availability of the nation's key strategic defence assets.

[67] Boeing, *P-8A Poseidon* (Boeing n.d.)

## 5.2 Finding 2 – Speed of Resilience

'Speed to capability' is nevertheless important: accelerating regional uncertainty and militarisation mean that rapidly putting cutting edge capabilities in the hands of ADF warfighters is an imperative. However, we propose that this must be balanced with a renewed emphasis on fast, efficient, and most importantly resilient domestic supply chains: the *Speed of Resilience*.

During our research, one interviewee stated, 'Everyone knows that supply chain fragility is a problem, but nobody knows what to do about it.' We agree that this sentiment describes the current state of play but argue that there are already tools and methodologies at hand that can be applied to the problem. The same Continuous Capability Development and Delivery (C2D2) methodology used to deliver Speed to Capability[68] can be applied to ensuring that adequately robust supply chains are identified and developed in parallel with capability acquisition.

By carefully defining mission critical components, starting at the beginning of the acquisition cycle, and implementing a rapid, iterative process, robust supply chains can be developed as an integral part of the capability.

This would necessitate, early in the capability lifecycle, the identification of supply and maintenance pipelines including:

- local places of manufacture
- in-country repair paths
- in-country sparing and stockpiling
- substitution readiness
- obsolescence management with in-country equivalent items

Where these aspects of the supply chain do not exist or are inadequate, the risk that this shortfall poses needs to be assessed – not just under peacetime conditions, but also under extreme circumstances of war and economic isolation. This assessment then informs the direction of ongoing government policy and investment to ensure these gaps are addressed.

[68] Department of Defence, *Continuous Capability Development and Delivery* (Department of Defence n.d.)

## 5.3 Finding 3 – Collaboration is Still King

Industry wants to collaborate. The survey data show that along with digital transformation and automation, collaboration is still the vital ingredient that glues together technological initiatives with human relationships. The 2024 Defence Digital Strategy and Roadmap[69] does include a priority of "ensuring supply chain resilience, through a focus on strong partnerships"; however, our research has been unable to identify tangible outcomes from this roadmap at present.

Effective collaboration would span organisational boundaries at all levels. Primes and SMEs need to be able to work together to ensure they are benefitting from synergies in their supply chains and reducing inefficiencies.

Collaboration between government and industry is crucial to ensure that investment is coordinated and that continuity of work is guaranteed. During our research, one interviewee recounted an example of government-industry collaboration in the UK: when a munitions manufacturer expressed concern that they had insufficient orders on their books to ensure that they could remain in business, the UK Ministry of Defence (MoD) leant in and increased their order to a quantity that would keep the manufacturer viable. While this example required an increase in up front spending, it resulted in a win-win situation for both government and industry: the MoD obtained surety of a critical supply, and the manufacturer was able to maintain economic certainty.

At the inter-government level, there needs to be early and open consideration throughout the acquisition process to produce outcomes that align both governments' goals. We can see the value of this in the P-8A case study where an initial lack of forethought resulted in long, slow supply lines back to the US. But the US has in fact expressed a desire for a wider network of regional repair centres – collaboration with the US to meet this goal stands to provide Australia with the foundations of the robust supply chain needed for this key strategic capability.

True collaboration looks beyond *industry* policy - where governments are trying to implement barriers of protection and industry is seeking to maximise profits – and stands to deliver *industrial* policy: governments and industry working together to create a mutually beneficial industrial base geared towards supporting mission criticality.

[69] Department of Defence, *Defence Digital Strategy and Roadmap 2024* (Department of Defence 2024)

## 5.4 Finding 4 – Contracting is Key

Regardless of how successful efforts are in establishing collaborative relationships between defence and suppliers, the relationship's boundaries are ultimately governed by the contract that underpins it. Several of our interviewees noted the significant challenges they were going through trying to retrospectively set up an Australian repair paths or gain reliability through Australian-sourced Military Off the Shelf (MOTS) components: the time, effort, and expense spent drafting and negotiating significant contract amendments is often of the same order as the initial contract.

This would be greatly mitigated if 'Resilience requirements' were baked in at the outset of capability acquisition, forming an inherent part of any contractual arrangements on an equal footing with capability requirements. This would provide greater certainty to contractors as to the Commonwealth's needs and would allow them to ensure that resilience was properly priced-in to the contract.

## 5.5 Finding 5 – A Consolidated Approach is Needed

A new approach is required: mission critical components must drive sovereign resilience policy. This would require oversight from the Commonwealth, using a risk-based approach to identify critical components and establish resilience requirements across not just individual contracts, but the entire defence procurement portfolio.

While there appears to be an acknowledgement by the Commonwealth that supply chain resilience with will depend on issues such as fuel supplies, airports, logistics hubs, medicines, and health supplies, it is not evident that this translates into an appreciation of the importance of critical components to maintaining effective defence capabilities. Bringing this into focus as a consolidated approach across government and industry - with strong direction and ownership by the Commonwealth – will ensure that this vital piece of the puzzle is firmly in place.

## 5.6 Finding 6 – The Time Is Now

Finally, we argue that 'the time is now' for Government to capitalise on investment into Digital Transformation and Automation. Our industry surveys highlighted that industry is currently investing significantly into these emergent technologies, but the effort is taking place in a 'siloed' manner. One interviewee was of the opinion that the status quo, "does not aggregate to national resilience" and that the core issue is "missing common rails – shared data standards, incentives and outcomes".

Historical data suggests that digital transformation is neither cheap nor easy. The Commonwealth's attempt to modernise and unify its disparate logistics and data management in a single Enterprise Resource Planning (ERP) system based on the commercial SAP S/4HANA[70] suite has been in progress since 2015, with some estimates that the total cost would exceed $3.5 billion[71]. Imposing a 'one size fits all' solution across all tiers of government and industry would likely be needlessly complex, prohibitively expensive, and unlikely to meet all stakeholders' needs.

There should, however, be incentive for industry to adopt digital solutions that interface seamlessly with each other and the Commonwealth's ERP through adherence to a common set of standards for data exchange. In some cases, direct access to Defence's ERP may be warranted – particularly on large or complex programs – in which case the Commonwealth will need to ensure that the cost of implementation and training do not place excessive burdens on industry.

Most importantly, any mandates for integration into Defence's data environment should not impose a barrier to entry for smaller enterprises. Government guidance and financial assistance should be directed towards ensuring that compatible ERP options are available for small, defence-approved suppliers with minimal overhead, allowing these businesses to focus on their core strengths of innovation and growth.

[70] Department of Defence, *Enterprise Resource Planning Program* (Department of Defence n.d.)
[71] John Glenn, *Which bias do you like? Delayed Defence ERP has them all* (The Mandarin 2024)

# 6 Recommendations

Based on our review of prior research and our consultation with industry, we propose the following actions be undertaken to ensure that Australia's supply of mission critical components is resilient in the face of disruption:


**Figure 18 Recommended actions**

## 6.1 Action 1 – Establish Dedicated Funding

Our industry research revealed that cost versus perceived benefit is the single biggest barrier to supply chain enhancement. For industry, there is little incentive to increase up-front costs as this will decrease their competitiveness if they pass this on to the customer, and it will impact their own bottom line if they absorb the costs.

Direct government investment into supply chain resilience needs to acknowledge that this cannot simply be added to the sticker price of individual contracts. We recommend a funding stream that is decoupled from the procurement process is provided. This would target industries, organisations, and technologies critical to supporting the capabilities identified in the IIP and aligned to the Commonwealth's SDIPs.

There is, however, a moral hazard implicit in any attempt to disperse money without clear guardrails in place: we caution against policies that may introduce what one of our interviewees termed 'subsidy dependence', in which activity is propped up without any real uplift to capability.

## 6.2 Action 2 – Provide Commonwealth Leadership to a Whole-of-Industry Initiative

Directing the diverse set of public and private stakeholders within defence industry towards a goal of a resilient supply chain will require firm, clear, and collaborative leadership from the Commonwealth.

We recommend a government led steering council as a top-level goal-setting forum that would define and capture 'resilience requirements' for defence capabilities. These requirements would then set the resilience rules and standards that are reflected in both policy and contracts.

This forum would monitor progress through a resilience scorecard centred on metrics like time-to-recover, lead-time variance, supplier concentration, substitution readiness and cyber continuity. These metrics would be developed in collaboration with industry to ensure that they are clear, objective, and achievable.

## 6.3 Action 3 – Assign Accountability for Execution

The aspiration to achieve a resilient domestic supply chain requires ownership and accountability. It is critical that this accountability is owned by an agency within Defence that has visibility across not only the industrial aspects of the supply chain, but also the operational needs of the end user, current and historical data on supply chain performance, and the tools and systems used to manage that data. We recommend the Joint Capabilities Group (JCG) as the best positioned organisation within Defence to assume this responsibility.

Within JCG, the recently established National Support Division (NSD) has the remit to organise and draw upon "whole-of-government and national capabilities to improve Defence preparedness and national resilience"[72]. While there is limited public domain information available on NSD's capabilities and resources, what information is available does make this seem like a natural home for being the driving force behind this task. Furthermore, NSD's proximity to one of JCG's other key commands, Joint Logistics Command (JLC), will allow them to leverage direct access to Defence's logistics network and information systems, providing authoritative and timely supply chain information.

Of course, accountability cannot be assigned unless it is accompanied by sufficient agency and influence to accomplish the task. The accountable body must have the remit to mandate a resilience approach during major acquisitions. This would necessitate a joint approach with Capability Acquisition and Sustainment Group (CASG) to ensure that resilience is encapsulated in Defence's acquisition policies and contractually enforced through the Australian Standard for Defence Contracting (ASDEFCON) framework.

[72] Department of Defence, *Joint Capabilities Group* (Department of Defence n.d.)

Regardless of which government body takes the lead, we believe that assigning accountability – and genuine influence – for custodianship of this vital task is key to ensuring that any resilience initiative is fit for purpose.

# 7 Conclusion

As we approach the next iteration of the National Defence Strategy in 2026, we can expect to see an increase in defence investment commensurate with the growing militarisation and uncertainty in our region. If previous defence policies are any indication, this investment will emphasise acquisition and enhancement of high-end platforms and technologies. These systems will form the basis of our deterrent capability as they come into service over the course of years or even decades.

But the threat may not wait until then; *we must act now*.

Our research has shown that Australia's industry is willing and able to step up to the challenge of providing an agile and innovative defence supply chain. However, they cannot do this alone, and there is a clear need for government to take responsibility for the stewardship of an integrated defence industrial base aligned to Defence's evolving capability needs.

This can be summarised with our six key findings:

- **Finding 1: The pendulum has swung too far towards speed to capability**
- **Finding 2: A new 'Speed of Resilience' is required**
- **Finding 3: Collaboration is still king**
- **Finding 4: Contracting is key**
- **Finding 5: A consolidated approach is needed**
- **Finding 6: The time for action is now**

Foremost in this discussion, there needs to be an acknowledgement that successful acquisition is not just about getting equipment into the warfighters' hands; it is also about ensuring that equipment be reliably supported throughout its life of type, even when access to external partners is not guaranteed.

This will require deliberate action on the part of government; we therefore recommend that the Commonwealth enacts the following actions:

- **Action 1: Establish dedicated funding**
- **Action 2: Provide Commonwealth leadership to a whole-of-industry initiative**
- **Action 3: Assign accountability for execution**

We believe that the actions proposed in this paper will set up the conditions for a domestic defence industry that is fit for purpose to deliver ongoing, supportable capability. If this is undertaken with speed and resolve by government and industry working together, we will have taken the first important steps towards the goal of securing the future.

# 8 Acronyms and Abbreviations

| Abbreviation | Description |
|---|---|
| ADF | Australian Defence Force |
| AI | Artificial Intelligence |
| AIC | Australian Industry Content |
| ASCA | Advanced Strategic Capabilities Accelerator |
| ASDEFCON | Australian Standard for Defence Contracting |
| AUKUS | Australia, UK, US |
| CASG | Capability Acquisition and Sustainment Group |
| CoA | Commonwealth of Australia |
| COTS | Commercial Off The Shelf |
| DID | Data Item Description |
| DIDS | Defence Industry Development Strategy |
| DILP | Defence Industry Leadership Program |
| DSGL | Defence and Strategic Goods List |
| DSR | Defence Strategic Review |
| DTC | Defence Teaming Centre |
| EMC | Electro Magnetic Compatibility |
| EMI | Electro Magnetic Interference |
| ERP | Enterprise Resource Planning |
| FMECA | Failure Modes Effects and Criticality Analysis |
| GDP | Gross Domestic Product |
| IIP | Integrated Investment Program |
| JCG | Joint Capabilities Group |
| JLC | Joint Logistics Command |
| JOSCAR | Joint Supply Chain Accreditation Register |
| LED | Light Emitting Diode |
| MIT | Massachusetts Institute of Technology |
| MoD | Ministry of Defence |
| MOTS | Military Off-The-Shelf |
| NDS | National Defence Strategy |
| OEM | Original Equipment Manufacturer |
| PCB | Printed Circuit Board |
| RAAF | Royal Australian Airforce |
| RF | Radio Frequency |
| SAP | Security Authorisation Plan |
| SDIP | Sovereign Defence Industry Priority |
| SME | Small to Medium Enterprise |
| TO | Technical Officer |
| UAS | Unmanned Aerial System |
| UK | United Kingdom |
| US | United States |
| USA | United States of America |
| USN | Unted States Navy |

# 9 References

Ai Group and Perth USAsia Centre. 2022. *Securing Australia's Defence Supply Chains.* North Sydney: The Australian Industry Group.

Ai Group. 2021. *Australian Supply Chains: State of Play.* North Sydney: The Australian Industry Group.

Attrill, Nathan. 2025. "Trump's US can still defend Taiwan. But will it?" *The Strategist.* 28 October. Accessed November 4, 2025. https://www.aspistrategist.org.au/trumps-us-can-still-defend-taiwan-but-will-it/.

Australian Government. 2021. *Critical Technology Supply Chain Principles.* Commonwealth of Australia.

Australian Government. 2024. *Defence Industry Development Strategy.* Commonwealth of Australia.

Australian National Audit Office. 2025. *Maximising Australian Industry Participation through Defence Contracting (Auditor-General Report No.31 2024–25).* Australian National Audit Office.

Australian Strategic Policy Institute. 2025. *The cost of Defence.* Barton: Australian Strategic Policy Institute.

Beaty, M, L Hall, J Hunter, E Kitchener, A Schuck, and M Stanek. 2024. *Maintaining a Resilient Defence Industrial Supply Base.* Defence Teaming Centre.

Boeing. n.d. *P-8A Poseidon.* Accessed November 13, 2025. https://www.boeing.com.au/products-services/defence-space-security/poseidon.

Bozdogan, Kirkor. 2022. *Supplier Management Self-Assessment Tool. 5* December. Accessed November 14, 2025. https://dspace.mit.edu/handle/1721.1/81892.2.

Brookes, J. 2021. *Defence data to map manufacturing supply chain. 6* August. https://www.innovationaus.com/defence-data-to-map-manufacturing-supply-chain/.

Central Intelligence Agency. n.d. "The World Factbook." *CIA Website.* Accessed November 4, 2025. https://www.cia.gov/the-world-factbook/.

Defence Teaming Centre. n.d. *Defence Industry Leadership Program.* Accessed November 12, 2025. https://dtc.org.au/services/defence-industry-leadership-program.

Department of Defence. 2025. *Australian Industry Capability Program.* Accessed November 7, 2025. https://www.defence.gov.au/business-industry/industry-capability-programs/australian-industry-capability-program.

—. n.d. *Continuous Capability Development and Delivery.* Accessed November 03, 2025. https://www.defence.gov.au/about/reviews-inquiries/continuous-capability-development-delivery.

Department of Defence. 2024. *Defence Data Strategy 2.0.* Commonwealth of Australia. https://www.defence.gov.au/about/strategic-planning/defence-data-strategy-20-decision-advantage-data-age.

Department of Defence. 2024. *Defence Digital Strategy and Roadmap 2024.* Commonwealth of Australia.

Department of Defence. 2018. *Defence Industrial Capability Plan.* Commonwealth of Australia.

—. n.d. *Enterprise Resource Planning Program.* Accessed November 13, 2025. https://www.defence.gov.au/business-industry/industry-capability-programs/enterprise-resource-planning-program .

—. 2025. *Global Supply Chain Program.* Accessed November 7, 2025. https://www.defence.gov.au/business-industry/industry-capability-programs/global-supply-chain-program.

Department of Defence. 2024. *Integrated Investment Program.* Commonwealth of Australia.

—. n.d. *Joint Capabilities Group.* Accessed November 12, 2025. https://www.defence.gov.au/about/who-we-are/organisation-structure/joint-capabilities-group.

Department of Defence. 2024. *National Defence Strategy.* Commonwealth of Australia.

Department of Defence. 2023. *National Defence: Defence Strategic Review.* Commonwealth of Australia.

—. n.d. *Sovereign Defence Industrial Priorities.* Accessed November 14, 2025. https://www.defence.gov.au/business-industry/industry-capability-programs/sovereign-defence-industrial-priorities.

Department of Industry, Science and Resources. 2025. *Office of Supply Chain Resilience.* Accessed November 7, 2025. https://www.industry.gov.au/trade/office-supply-chain-resilience.

Department of Industry, Science, Energy and Resources. 2020. *Make it Happen, The Australian Government's Modern Manufacturing Strategy.* Commonwealth of Australia.

Department of Treasury. n.d. *Future Made In Australia.* Accessed November 14, 2025. https://treasury.gov.au/policy-topics/future-made-australia.

Foreign Affairs, Defence and Trade Legislation Committee. 2023. *Performance of the Department of Defence in supporting the capability and capacity of Australia's defence industry.* Interim report, Canberra: Commonwealth of Australia.

Frühling, Stephan, and Andrew Carr. 2025. *The 2026 National Defence Strategy: What would Australia be willing to go to war over?* 23 April. Accessed November 12, 2025. https://policybrief.anu.edu.au/the-2026-national-defence-strategy-what-would-australia-be-willing-to-go-to-war-over/.

Glenn, John. 2024. *Which bias do you like? Delayed Defence ERP has them all.* 9 October. https://www.themandarin.com.au/256707-which-bias-do-you-like-delayed-defence-erp-has-them-all/.

Harvard University. 2025. *Country & Product Complexity Rankings.* Accessed October 20, 2025. https://atlas.hks.harvard.edu/rankings.

Hellios Information Limited. 2025. *JOSCAR.* Accessed November 13, 2025. https://hellios.com/joscar.

Lucas, R, T Ekstrom, P Fusaro, E Hastings Roer, and L Retter. 2024. *Toward Defense Supply Chain Disruption Management.* Research Report, Santa Monica: RAND Corporation.

Mouton, Christopher A, Carl Rhodes, Mark V Arena, Paul DeLuca, Andrew Dowse, John P Godges, Adam R Grissom, Caleb Lucas, and Erik Silfversten. 2022. *Establishing a Sovereign Guided Weapons Enterprise for Australia.* Research Report, Santa Monica: RAND Corporation.

Naval Group. 2020. *Public AIC Strategy*. 6 January. Accessed November 13, 2025. https://www.aph.gov.au/DocumentStore.ashx?id=464b6d0f-4e0c-42fc-976a-0794cf56ba11.

Parliament of Australia. n.d. *Australia's defence strategy adjusts to an increasingly volatile regional environment.* Accessed November 4, 2025. https://www.aph.gov.au/About_Parliament/Parliamentary_departments/Parliamentary_Library/Research/Issues_and_Insights/48th_Parliament/regional-defence.

Productivity Commission. 2021. *Vulnerable Supply Chains.* Commonwealth of Australia.

REDARC. 2025. *REDARC signs MOU with MARL International for future Australian naval projects.* Accessed November 14, 2025. https://www.redarcelectronics.com/au/discover/redarc-sign-mou-with-marl/.

The Treasury. 2025. *Future Made in Australia.* Accessed November 7, 2025. https://treasury.gov.au/policy-topics/future-made-australia.

Tsvyntarnyy, Vitaliy, Erik Friberg, Sara Hedin, David Lidén, and Jesper Bernhardsson. 2023. *Rewiring Global Supply Chains.* Stockholm: Business Sweden.

Uren, David. 2024. *The Trade Routes Vital to Australia's Economic Security.* Canberra: Australian Strategic Policy Institute.

World Bank Group. n.d. "Indicators | Data." *World Bank Group.* Accessed November 4, 2025. https://data.worldbank.org/indicator/.

Worrall, L, H Gamble, Spoehr J, and A-L Hordacre. 2021. *Australian Sovereign Capability and Supply Chain Resilience.* Perspectives and Options, Adelaide: Australian Industrial Transformation Institute, Flinders University of South Australia. http://www.flinders.edu.au/aiti/.

Yang, Cuihong, Kailan Tian, and Xiang Gao. 2025. "Supply chain resilience: Measure, risk assessment and strategies." *Fundamental Research* 5 (2): 433-436.

# 11 Appendix A: Detailed Survey Results

## 11.1 Connotative Words

***Question 1:*** *What words would you use to describe your organisation's approach to supply chain management? Select all that apply.*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Proactive | 9 | 4 | 0 | 13 |
| Reactive | 5 | 3 | 1 | 9 |
| Agile | 3 | 0 | 0 | 3 |
| Efficient | 4 | 0 | 0 | 4 |
| Collaborative | 6 | 4 | 0 | 10 |
| Slow | 3 | 2 | 0 | 5 |
| Complex | 4 | 5 | 0 | 9 |
| Assured | 3 | 0 | 0 | 3 |
| Flexible | 4 | 0 | 0 | 4 |
| Digitally enabled | 1 | 0 | 0 | 1 |
| Bureaucratic | 3 | 4 | 0 | 7 |
| Manual | 5 | 2 | 0 | 7 |
| Conservative | 3 | 3 | 1 | 7 |
| Just-in-time | 4 | 2 | 1 | 7 |
| Resilient | 2 | 2 | 0 | 4 |
| Other | 0 | 0 | 0 | 0 |
| | | | | **93** |

## *11.2 Recent Trends in Supply Change Enhancement*

***Question 2:*** *Has your organisation implemented any major enhancement initiatives to supply chains or supply chain management in the last 5 years?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 7 | 8 | 1 | 16 |
| No | 4 | 0 | 0 | 4 |
| Don't know / Unsure | 1 | 0 | 0 | 1 |
| | | | | **21** |

***Question 3:*** *What types of initiatives have been implemented?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Collaborative Partnerships | 4 | 5 | 1 | 10 |
| Digital Transformation | 3 | 6 | 0 | 9 |
| Diversification | 3 | 3 | 0 | 6 |
| Onshoring/Nearshoring | 5 | 1 | 0 | 6 |
| Automation | 1 | 2 | 0 | 3 |
| Other | 0 | 0 | 0 | 0 |
| | | | | **34** |

***Question 4:*** *What were the primary objectives of those initiatives?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Supply Assurance | 7 | 7 | 0 | 14 |
| Reducing Lead Times | 7 | 3 | 0 | 10 |
| Cost Reduction | 5 | 4 | 0 | 9 |
| Increasing Local Content | 3 | 4 | 1 | 8 |
| Cyber Security | 3 | 1 | 0 | 4 |
| Other | 0 | 3 | 0 | 3 |
| | | | | **48** |

***Question 5:*** *Were those initiatives Broad or generalised in scope OR Focused on specific critical points or products?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Broad or generalised | 2 | 4 | 1 | 7 |
| Focused on specific critical points or products | 5 | 4 | 0 | 9 |
| | | | | **16** |

***Question 6:*** *Have quantifiable benefits of those initiatives been measured?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 4 | 4 | 0 | 8 |
| No | 1 | 1 | 1 | 3 |
| Don't know / Unsure | 2 | 3 | 0 | 5 |
| | | | | **16** |

***Question 7:*** *Please provide further details of the benefits that have been achieved, if possible:*

| Comments | Demographic Group |
|---|---|
| 5 years ago we implemented a new ERP, Oracle Netsuite. This is an ERP that helps and supports us in many departments, including Purchasing/Supply Chain. | SME |
| Adopting this ERP, we noticed that all our processes are now better managed and more efficient." | SME |
| One onshoring activity saved $180k per annum. | SME |
| By selecting suppliers for particular categories, providing indications of future demand and collaborating with them, there have been improvements in lead-time, quality and cost. This has been both with on-shore and off-shore suppliers. | SME |
| Supply Chain de-risking exercise -Supplier diversification in order to maintain parts supply. | Large enterprise |
| Supply Chain Lead Time measured from time of ARO to delivery. Measurements in terms of DIFOT. | Large enterprise |
| Local versus External sourcing measured (3 Alternate Supply Rule per part)" | Large enterprise |

***Question 8:*** *Do you know of any recent success stories outside of your organisation that could or should be considered best practice in supply chain enhancement initiatives within the Defence industry?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 3 | 5 | 0 | 8 |
| No | 9 | 3 | 1 | 13 |
| | | | | **21** |

***Question 9:*** *Please provide details, if possible::*

| Comments | Demographic Group |
|---|---|
| JOSCAR | Large enterprise |
| Redarc partnering with UK Company (Marl) to onshore production of LED lights for Hunter program. | Large enterprise |
| It's strictly not related to the Australian environment, I've seen recently some news about AUS companies that are approved to work in US market, thanks to the AUKUS initiative. | SME |
| "Benchmarked Supply Chain Management Self-Assessment Tool Version 1.0 by Dr Kirk Bozdogan ( MIT) Centre for Technology, Policy and Industrial Development.<br>Massachusetts Institute of Technology. Cambridge, Massachusetts. USA.<br>USED BY PRIME COMPANIES AS A GUIDE TO ASSESSING THE SUPPLY CHAIN MATURITY" | SME |
| As recognised by the DTC awards, numerous organisations have teamed together to create sovereign outcomes.<br>This is an area that Australia needs to lean into more to answer the call of the Defence Industry Development Strategy (DIDs) and the associated Sovereign Defence Industry Priorities (SDIPs).<br>The success of this relies on Commonwealth committment to those priorities and creating the environment for it to thrive. This can not be the entire responsibility of the Primes. | Large enterprise |

| Comments | Demographic Group |
|---|---|
| Yes and No on this one team. There is a great opportunity for ASCA in particular and Defence innovation units to proactively establish/ enhance the Australian supply chain for critical components. TZ have been attempting to influence Defence for a while in this area in particular supply of UAS components ie motors, batteries, propellers etc. all of these are currently sourced from China and are particularly poor quality but cheap and can be supplied within 3-10 days. When under pressure it is completely understandable SMEs source from these suppliers but I have seen test programs come completely undone through below quality props at a cost of the entire asset $20-30k.<br>Now by complete chance due to an underspend, RAAF Jericho invested in a small Australian company to build a sovereign electric motor and now I believe a turboprop. These products are hitting the market in Sep 25 and, as long as they meet the expected quality, will see many Australian Defence UAS manufacturers switch to this local supplier. We have a local Propeller manufacturer we are now encouraging Jericho to do the same with.<br>The motor company would have had no ability to do this without Defence sponsorship, due to start-up/ capital equipment costs with such a competitive offshore environment. Defence will in the future encourage all UAS suppliers who source their motors from overseas to utilise this company as an alternate. TZ has drafted a list of similar UAS components that they propose Defence look to develop/ sponsor local suppliers for.<br>I believe however that this should be the role of ASCA. | SME |
| The implementation of JOSCAR in Australia as a compliance system is providing buyers with a range of information to quickly assess a suppliers/subcontractors ability to deliver, beyond the technical capability, while at the same time lower the bar of entry and ongoing efforts for the suppliers. This is only one of the many advancements I've seen in the last few years. Another worth mentioning is the alliances created within the industry to better deliver on larger opportunities. | Large enterprise |

## *11.3 Future Plans in Supply Change Enhancement*

***Question 10:*** *Does your organisation plan to implement any enhancement initiatives to supply chains or supply chain management in the next 2 years?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 8 | 7 | 1 | 16 |
| No | 2 | 0 | 0 | 2 |
| Don't know / Unsure | 2 | 1 | 0 | 3 |
| | | | | **21** |

***Question 11:** What types of initiatives do you plan to implement?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Collaborative Partnerships | 3 | 3 | 1 | 7 |
| Digital Transformation | 5 | 6 | 0 | 11 |
| Diversification | 2 | 0 | 1 | 3 |
| Onshoring/Nearshoring | 4 | 1 | 0 | 5 |
| Automation | 5 | 4 | 1 | 10 |
| Other | 1 | 0 | 0 | 1 |
| | | | | **37** |

***Question 12:** What benefits does your organisation expect to see from the implementation of these initiatives?*

| Comments | Demographic Group |
|---|---|
| Streamlining of processes, modernisation, cost efficiencies, business intelligence sharing (i.e. supplier information) | Large enterprise |
| 1) Increased efficiency via digital transformation<br>2) Sovereign capability re-established for certain domains in Australia e.g. specialist Ammunition<br>3) Continuation of Global Supply Chain work to increase Australian Exports. | Large enterprise |
| increased speed when dealing with suppliers, decreased internal labour costs. | Large enterprise |
| Over the next 3 years we are planning on reducing our FTE headcount by 5% by automating and consolidating some processes. | SME |
| Access to Defence markets by Onshoring the supplier base. Digital Transformation and Automation to process quotations quicker. | SME |
| Digital Transformation will provide many benefits to our current way of working, the benefits we expect to see are; Enhanced Visibility and Transparency, Improved Efficiency and Productivity, Cost Optimisation, Data-Driven Insights and Continuous Improvement and Sustainability and Compliance. | Large enterprise |
| better data, supplier performance management | Large enterprise |
| Security of supplies | SME |
| Faster delivery to end customer (Time to market goal) | SME |
| Quicker engagement, routes to contract and payment.<br>Partnering with key sector capability companies to drive increase technology transfer initiatives and create industry uplift opportunities to Australian industry. This will also inform CoA investment. | Large enterprise |
| Keep manufacturing operations inhouse and reduce supplier base. | SME |
| As described in the previous answer, our intent, should we be positioned correctly within Defence as an above-the-line contractor (waiting out now), is to drive sovereign supply chain resilience as described previously. Not only that, as part of this project that Defence has approached us on we want to start building cross sector mass manufacture ie UAS components being manufactured in car workshops etc etc. | SME |
| more streamlined procurement system, just in time stock control. Reduction in amount of materials held on the shelves. | SME |

| Comments | Demographic Group |
|---|---|
| Better value for money delivered by supply chain in the form of faster engagement, lower cost and reduced risk. | Large enterprise |
| Reduction in supply lead / turn around time, increased visibility and priority of supply. | SME |

***Question 13:*** *Has your organisation considered any tools or processes powered by Artificial Intelligence to improve supply chain management?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 3 | 1 | 0 | 4 |
| No | 6 | 0 | 1 | 7 |
| Don't know / Unsure | 3 | 7 | 0 | 10 |
| | | | | **21** |

***Question 14:*** *How have or will those tools or processes enhanced your organisation's supply chain?*

| Comments | Demographic Group |
|---|---|
| Still early days. AI tools have been assisting with supply chain analysis, market analysis. | Large enterprise |
| We are looking to use CoPilot to analyze data and predict risk areas as lead indicators to prevent stock shortages. | SME |
| To provide faster access to costings and supply chain pipelines. | SME |
| Improve production efficiency, look to utilise AI or ML where production is repetitive and relying on accuracy of the human in the loop | SME |

***Question 15:*** *What barriers does your organisation face, both internal and external, to implementing enhancement initiatives to supply chains or supply chain management?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Cost / Benefit | 11 | 6 | 1 | 18 |
| Resources | 8 | 4 | 0 | 12 |
| Internal resistance | 3 | 5 | 0 | 8 |
| Supplier constraints | 6 | 0 | 0 | 6 |
| Contractual frameworks | 1 | 3 | 0 | 4 |
| Technology | 1 | 1 | 0 | 2 |
| Other | 1 | 0 | 0 | 1 |
| None | 0 | 1 | 0 | 1 |
| | | | | **52** |

***Question 16:*** *What factors do you think could alleviate barriers to implementing enhancement initiatives to supply chains or supply chain management?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Standardisation of processes and/or technology | 8 | 4 | 0 | 12 |
| Continuity of contracts | 8 | 3 | 0 | 11 |
| Government assistance | 7 | 3 | 1 | 11 |
| Contracting framework | 2 | 5 | 0 | 7 |
| Education reform | 1 | 2 | 0 | 3 |
| Policy change | 1 | 1 | 0 | 2 |
| Other | 0 | 0 | 0 | 0 |
| | | | | **46** |

***Question 17:*** *Please provide details, if possible:*

| Comments | Demographic Group |
|---|---|
| high barriers to entry, lots of certifications/qualifications required for suppliers within defence sector. | Large enterprise |
| In a defence environment there is a risk adverse approach to change. Customers want what they have received before and the change process is very cumbersome and bureaucratic. | SME |
| Contracting Framework Reform<br>Reform of Defence contracting frameworks can help alleviate barriers to implementing supply chain enhancement initiatives by reducing complexity, increasing transparency, and providing greater flexibility in delivery arrangements. Streamlined and standardised contractual mechanisms allow industry partners to direct resources toward capability improvements rather than navigating administrative overheads.<br>Continuity of Contracts<br>Continuity of contracts is essential to providing Defence industry partners with the confidence to invest in long-term supply chain improvements. Short contract cycles or frequent retendering can discourage industry from committing resources to capability uplift, workforce development, or infrastructure upgrades. Longer-term and stable contractual arrangements give suppliers the predictability required to plan and invest, ultimately strengthening sovereign capability, improving supply chain assurance, and supporting Defence's strategic objectives. | SME |
| Cash | Other Government |
| In Defence, demand is often Project-based, and so has a limited duration / volume.<br>Many projects use materials which have unique specifications. eg German based Primes will use different specs to UK or North American Primes. | SME |
| Supply chain management for a given production contract/order is relatively straightforward, problems occur when the next repeat production contract/order is unknown date in the future or when a repeat production contract/order is received 2 or 3 years after the first. Reasons - obsolete parts and changes to design from origin order and the later subsequent production orders along with changing build forecast quantities and build dates. Result is its not possible to preempt and account for supply issues when there is no set build schedule. | SME |

| Comments | Demographic Group |
|---|---|
| Suppliers prefer continuous orders or volume - which sometimes cannot be provided by SMEs if the orders aren't placed on them by the Primes or the Defence. That would mean the SMEs cannot enjoy the better terms. | SME |
| The supporting industry for OEM companies from SME to large Primes, are lacking in Australia. Companies would need to source for parts/goods offshore as we need high end technology parts to support high end designs.<br>Australia lacks that. Good example is for high end raw blank Printed Circuit Boards with high RF materials. No such manufacturing company exist in Australia to support many defence companies that deals in high frequency products. | SME |
| Many of the barries detailed are derived from estimating and contracting. Typically improvement initiatives are not factored into bids, so when improvements are considered and costed, this is usually met with resistance, internally and with the customer. | Large enterprise |
| Government grants could assist towards the feasibility of onshoring and make localisation opportunities more attractive to senior management. | SME |
| Government assistance I've covered in previous answer.<br>Continuity of Contracts is by far the most challenging area for us to gain momentum. Thanks to the Labour Government's war on consultants, which we as a small business get roped into the same bucket as PwC and KPMG! The above line contracts that we are involved in in the Innovation field are severely constrained. All our contracts do not exceed 12 months and some, by the time they are enacted after funding has been established for the FY only commence in September, leaving only 9 months to enact. There's uncertainty in May/ June and momentum dies July-Sep. This is no way to accelerate the initiatives we are driving.<br>Defence of course agrees but all out funding comes from the Minors Budget which is very much discretionary each year. We are now working with the 2*s to get an innovation line established in the IIP. | SME |
| As an example current ASDEFCON contracts are overly complex where rather than been tailored to improve efficiency, the habit is to use all the suite to potentially not miss anything. This makes managing supply chains difficult. It is worth noting the current AIC DID also assumes you start from a position of no AIC and must demonstrate what you are doing to improve the Australianisation of your supply chain. If you already have 65 to 80% Australian content, then the DID is somewhat difficult to manage as it almost wants you to introduce new supplier rather than continuing to grow current suppliers | SME |
| Key barrier is the understanding of the issues at executive level, which is needed to drive change from the top. Beyond that education needs to follow to drive change across the company with all key stakeholders. | Large enterprise |
| Support to digitisation from government as industry aligns (shared common models etc). Common technology baselines would support ordering and supply visibility. | SME |

***Question 18:*** *If resources were not constrained what types of supply chain enhancement initiatives would or should your organisation prioritise?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Collaborative Partnerships | 5 | 5 | 0 | 10 |
| Digital Transformation | 7 | 5 | 1 | 13 |
| Diversification | 2 | 2 | 0 | 4 |
| Onshoring/Nearshoring | 8 | 3 | 0 | 11 |
| Automation | 7 | 5 | 0 | 12 |
| Other | 0 | 1 | 0 | 1 |
| | | | | **51** |

***Question 19:*** *Why?*

| Comments | Demographic Group |
|---|---|
| Modernisation and streamlining of supply chain tools allows the procurement professionals and contract managers more scope to think outside of their pillars. A more diverse and resilient Industry Capability is a likely outcome. Collaborative Partnerships then supports the relationship (human) element to supply chain. Collaborative Partnership programs like BAE Systems' Partnering4Success sit at the forefront of supply chain enhancement. Also initiatives such as our First Nations Supply Chain Strategy enhance supply chain diversity and AIC through collaborative partnerships with the Indigenous business sector. | Large enterprise |
| Partnering seen as best solution for many defence products due to lack of competition / small amount of players in the market | Large enterprise |
| it is crucial to reduce the distance from supply to fabrication in times of war | Large enterprise |
| Regarding Digital Transformation and Automation, AI can help us to improve our processes.<br>Regarding onshoring, now we are forced to utilise electronic components that are only manufactured overseas. | SME |
| Onshoring/Nearshoring removes the potential impacts of potential freight disruption.<br>Collaborative partnerships are also a means to ensure adequate stockholdings are available in uncertain times | SME |
| Changes from manual to automated and digitised process are time consuming and labour intensive. The resources we have are focused on what we have to do today, not what we should be doing in the future. | SME |
| Automation<br>Automation reduces errors, increases efficiency, and frees skilled staff for higher-value work. Applied to inventory, procurement, and quality assurance, it lowers costs and boosts throughput while maintaining compliance. Automation also improves scalability, reliability, and responsiveness, supporting a resilient and sovereign Defence industrial base. | SME |
| Int AI | Other Government |
| Nearshoring reduces lead time and enhances flexibility. Because demand is limited, it is often difficult to justify investment in automation. Providing continuity and working with suppliers on process and quality is advantageous for all. | SME |

| Comments | Demographic Group |
|---|---|
| Production require multiple specialist areas to be coordinated for supply chain to work efficiently - PCB assembly at one SME, Metal fabrication at another, custom wiring at a third for example. Collaborative partnerships are required as no single SME can have the equipment/resources to do all in house. Digital automation across multiple SMEs would be more efficient than current systems which rely on manual input and checking. | SME |
| Digital Transformation - Enables real-time visibility, faster decision-making, and improved responsiveness to disruptions.<br>Automation - Drives efficiency, reduces human error, and improves safety in high-risk environments.<br>These initiatives would not only enhance efficiency and resilience but also improve collaborative partnerships, performance, building sovereign capability, and positioning the organisation as a trusted leader in the industry. | Large enterprise |
| Australia's industrial sector has endured significant challenges over the years, with many companies struggling to survive or adapt to a rapidly changing landscape. In a high-cost manufacturing environment like Australia, adopting more efficient practices is essential to remain competitive in an increasingly globalised market. | Large enterprise |
| To improve ROI, reduce working capital and increase EBIT for the company. | SME |
| Help grow local industries in terms of ESI (Early Supplier Involvement) and teach them Lean Six Sigma Process if the company wants to learn such method for continuous improvement. | SME |
| Digital transformation and Automation purely for efficiency.<br>Onshoring should be a key initiative across most programs. This is met with considerable challenge, not the least of which being Commonwealth Platform procurement decision.<br>Each time the CoA makes a procurement decision to buy an overseas design and platform, it comes with an incumbent overseas supply chain often with little to no compatibility across programs. | Large enterprise |
| To sustain the supply and sustainment of capability to Defence and industry. Developing long-term trusted industry partnerships will help support this. | Large enterprise |
| Improve productivity and efficiency. Shorten manufacturing time. More output. | SME |
| As you guys identified, speed to capability is the key right now and into the future. This can only be achieved through Digital Transformation with a particular focus on AI. I'm not experienced enough in this field to provide a credible answer however being able to find alternative suppliers rapidly can be achieved through the tailoring of an AI engine. More than that, to then be able to identify key components across the Defence military inventory that would be best to develop an onshore supplier for would be extremely powerful.<br>This is achievable through the funding that ASCA has. They have the budget to invest in this kind of digital product and I believe it should be one of their core activities as they regularly scan the market for key capabilities. I just don't think they're looking at that yet. There too focussed on just developing a product. | SME |
| Improve efficiency, reduce risk from long shipping times. | SME |
| Step one would be a complete review and analyses of the supplier base, to identify key supplier to align with future strategy of the company. Secondly, identification of tools and supporting process would be the focus with the goal to continue to reduce cost and risk. | Large enterprise |

| Comments | Demographic Group |
|---|---|
| These would enable efficiency increases and reduction in supply source concentration / identification of alternative sources of supply. | SME |

## 11.4 Criticality of Supplies

***Question 20:*** *Does your organisation determine criticality of supply chain components for your end product or services?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 12 | 4 | 1 | 17 |
| No | 0 | 2 | 0 | 2 |
| Don't know / Unsure | 0 | 2 | 0 | 2 |
| | | | | **21** |

***Question 21:*** *On what basis is criticality determined?*

| Comments | Demographic Group |
|---|---|
| Dedicated process. Major segmentation takes place annually with input from across supply chain practitioners and project/program managers | Large enterprise |
| Lead time, not only price, is paramount. | SME |
| Lead time<br>Single sourced items | SME |
| Crtiticality is based on lead time, MOQ's and supplier quality risk. | SME |
| Criticality is determined to align with AIC objectives. | SME |
| Criticality can be based on limited number of suppliers or very long lead-times. | SME |
| Supply - if there is only one source<br>Availability - if there is long leadtime for the component<br>End of life/Obsolescence - if the component is known to be obsolete or end of life now or is likely to go end of life or obsolete before the next time it is needed. | SME |
| experience, technical requirements | Large enterprise |
| No. of suppliers (sole vs multiple). | SME |
| Critical Supplier - Sole supplier for the product part in question<br>Key Supplier - Two or more suppliers that can offer same part<br>Normal Supplier - COTS - Commercial off the Shelf. | SME |
| Lead-time<br>Complexity<br>Mission criticality<br>Geography and logistics<br>Availability (competition in the market)<br>Sustainment requirements<br>Maintenance requirements | Large enterprise |
| Availability of components for production against our schedule. | SME |

| Comments | Demographic Group |
|---|---|
| Speed of Supply and Quality - Primarily<br>Certification - Secondary | SME |
| Our products are safety critical so a majority of the supply chain is considered critical. Given the nature of our products and the global decline in their type, it has become harder to ensure we have dual source suppliers and where possible maintain suppliers in Australia. | SME |
| Yes, somewhat, however there is not always a sound approach to ensuring redundancy for critical parts and components (in my opinion). | Large enterprise |
| Lead time, cost and system design (eg FMECA). | SME |

***Question 22:*** *Does the Commonwealth contribute or assist in the determination of criticality?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 3 | 1 | 0 | 4 |
| No | 7 | 0 | 0 | 7 |
| Don't know / Unsure | 2 | 3 | 1 | 6 |
| | | | | **17** |

***Question 23:*** *In what way?*

| Comments | Demographic Group |
|---|---|
| To identify AIC goals | SME |
| Through the Sovereign Defence Industry Priorities. Although these can often be too broad to focus real program requirements on and is disjointed across programs and domains/<br>The CA also engage with the end customer, Navy, Army, Airforce to determine critical capabilities. This is often not clear to primes or industry | Large enterprise |
| Yes and No. The CoA set the benchmark through their requirements largely driven by their Safety Case justification to the Regulators. That said, there are Engineers within CASG who unknowingly artificially drive up these requirements by over specifying, especially in the small UAS field. Here, these Engineers are used to working on manned aircraft with (rightly) a much higher safety expectation and when posted into a UAS field, unwittingly apply that low risk tolerance to these platforms. Example EMI/EMC, Vibration testing etc to MIL-STDs. | SME |
| Through the Design and certification process. | SME |

***Question 24:*** *Please elaborate on those risk mitigation strategies, if possible:*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 10 | 3 | 0 | 13 |
| No | 2 | 0 | 0 | 2 |
| Don't know / Unsure | 0 | 1 | 1 | 2 |
| | | | | **17** |

***Question 23:*** *In what way?*

| Comments | Demographic Group |
|---|---|
| Supply Chain Quality Assurance teams have ownership. Collaborative partnerships such as Partnering4Success program work toward risk reduction | Large enterprise |
| Trying to find always a second supplier for any parts we are ordering. | SME |
| We ensure that we have secured access to enough product to satisfy our forward predictions. | SME |
| We may order and store larger quantities of critical components or ensure they are ordered and arrive weeks in advance of consumption. We also scrutinise high risk components with a higher level of incoming inspection. | SME |
| Ensuring supplier capability is maintained via supplier engagement and vendor assessment. | SME |
| For critical materials we would build buffer stock in house. | SME |
| Where possible hold stock for future orders - price dependent for if we can do this or we require customer to purchase component from us to hold for future builds.<br>To have customer supply order for stock of long lead-time components to enable such components to be available when required.<br>Monitor critical components availability on an ad hoc basis to check if they are becoming an issue - referring back to one of the previous questions this is where a more automated system would help. | SME |
| Continuous orders, financial viability check, regular audits, supplier scorecards, regular comms. | SME |
| De risking exercise in place to move the critical supplier status to key supplier by initiating sourcing activities locally before moving to overseas. | SME |
| In advance ordering where demand is known or can be forecast and funded<br>Stockpiling<br>Dual sourcing<br>On-shoring<br>Relationship management | Large enterprise |
| We place our orders on critical components at least 12 months in advance, to arrive at our facility at least 3 months prior to when it is required for production. | SME |
| Where possible dual qualified suppliers, onsite Quality Audits and inspections. | SME |
| When identification is shared with supply chain team early, an effort is applied to ensure that suppliers are assessed on their overall ability to deliver and that supplier options/alternatives are in place to mitigate single points of failures, even if that increases cost somewhat in the short run. The ability to deliver trumps cost for critical supplies and the strategy applied is the key. It all starts with proper planning. | Large enterprise |

***Question 25:*** *Would your organisation be supportive of a Commonwealth managed Critical Components List for Defence related technology?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 2 | 2 | 0 | 4 |
| No | 3 | 1 | 0 | 4 |
| Don't know / Unsure | 7 | 5 | 1 | 13 |
| | | | | **21** |

***Question 26:*** *Why?*

| Comments | Demographic Group |
|---|---|
| To ensure the supply base is defence ready and capability is maintained. | SME |
| To help develop trusted supply chains for Defence products, this step could be necessary.<br>For example, we did a recent desktop review of humanoid robot companies across the world. The majority are being made in (by size and number): China, USA and Europe. For those humanoid robot companies not located in China, a significant part of their supply chain is from companies located in China.<br>Useful report about this at: https://advisor.morganstanley.com/john.howard/documents/field/j/jo/john-howard/The_Humanoid_100_-_Mapping_the_Humanoid_Robot_Value_Chain.pdf | Large enterprise |
| Ha! I don't think I need to speak to this any further as I've covered it in previous. | SME |
| If the customer doesn't understand what supplies that are critical to them, who can they plan and send the right message to and invest correctly in industry. | Large enterprise |

***Question 27:*** *What actions do you believe the Commonwealth could take to make such an initiative a success?*

| Comments | Demographic Group |
|---|---|
| To conduct a survey of the supply base and identify approved suppliers who are able to meet defence requirements. | SME |
| I think the adoption of this process over time would be necessary to garner support. | Large enterprise |

| Comments | Demographic Group |
|---|---|
| Covered in previous. Short version:<br>- For new/ emerging/ disruptive technologies - ASCA (note who also have CASG embedded) take on the responsibility of building the Ecosystems.<br>- ASCA sponsor the development of a digital platform that can scan these technologies, identify critical component commonalities, scan the market to determine suppliers and provide ASCA a list of those that require onshore sponsorship.<br>- ASCA then conducts a market scan of suppliers/ potential suppliers and supports their uplift through the purchase of capital equipment and encourages industry to source from these onshore suppliers.<br>I fully acknowledge my response is purely focused on my specialised field - rapid capability development and may not be applicable in other areas of Defence! | SME |
| It is happening already through certain channels as the customer is engaging with industry to understand critical supplies to help building a strategy, however I am not sure that enough focus and effort is applied to this very critical activity. | Large enterprise |

***Question 28:*** *Why not?*

| Comments | Demographic Group |
|---|---|
| Not sure what this means - does this make these components GFE (Government Furnished Equipment)? | Large enterprise |
| Some of items are for over seas exported products, the commonwealth is only a small portion of our customer base. | SME |
| It would be difficult to determine at what level Critical Components would be determined without a very clear demand definition.<br>For instance, bare Printed Circuit Boards (PCBs) would be (finished) product specific. Carrying Laminate (substrate for PCBs) needs to consider many variants and would then need suppliers to process this to PCBs. | SME |
| Experience shows that the focus of the commonwealth on certain items or technology (DSGL, DIDS, rare earths) that regulation increases which compounds supply issues or investment focus, to the detriment of other critical or near critical items or items relevant to other industries leading to market distortions. | SME |

## *11.5 Domestic Supply and Manufacturing*

***Question 29:*** *Does your organisation mandate 100% domestic supply chains for any products or services that are part of your supply chain?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 3 | 1 | 0 | 4 |
| No | 9 | 4 | 0 | 13 |
| Don't know / Unsure | 0 | 3 | 1 | 4 |
| | | | | **21** |

***Question 30:** On what basis has that mandate been made?*

| Comments | Demographic Group |
|---|---|
| AIC targets | SME |
| Criticality<br>Cost<br>Lead time<br>AIC targets<br>Security | SME |
| Security<br>Contractual / Mandated | SME |
| Criticality<br>AIC targets<br>Contractual / Mandated | Large enterprise |

***Question 31:** Are you aware of the 'Future Made in Australia' program?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 10 | 7 | 0 | 17 |
| No | 2 | 1 | 1 | 4 |
| | | | | **21** |

***Question 32:** Do you believe the 'Future Made in Australia' program will provide any significant benefit to Australia's Defence industry capability?*

| | SME | Large Enterprise | Other Government | Total |
|---|---|---|---|---|
| Yes | 3 | 2 | 0 | 5 |
| No | 4 | 1 | 0 | 5 |
| Don't know / Unsure | 3 | 4 | 0 | 7 |
| | | | | **17** |

***Question 33:** Why?*

| Comments | Demographic Group |
|---|---|
| increase SME's abilities to enter the defence/manufacturing sector by aid of government funding in support of the program | Large enterprise |
| To ensure the supply base conforms to the needs of Defence in terms of capability and capacity. | SME |
| Covid19 led to major distributions to supply chains - a clear indication of future potential problems with external supply in the event of pandemics, wars etc. If Australia was acting against China ( say they invade Taiwan ) and critical components and parts are manufactured in China how would we be able to source these components under those circumstances. Can not eliminate risk but this program should help minimize risk. | SME |
| As it power up industry suppliers can diversify and upgrade technically their process and procedures. Making more efficient for defence | Large enterprise |

| Comments | Demographic Group |
|---|---|
| Then we are not reliant on other offshore suppliers, who will prioritise their own country's needs, not ours. Local development will give us an edge to develop our own unique capabilities, different from an off the shelf solution available to others. | SME |

***Question 34:*** *Why not?*

| Comments | Demographic Group |
|---|---|
| In our industry (electronics) it would be difficult to support the range of materials and processes required, and the cost would be prohibitive. | SME |
| It's difficult to see the 'Future Made in Australia' program will provide any significant benefit to Australia's Defence industry in the short or long term, because the current political culture is to purchase capability from overseas prime contractors.<br>While there is some common sense adoption of using overseas prime contractors due to the ongoing downgrading of our strategic circumstances, there isn't any political force to create an Australian Prime Contractor (except arguably for Austal, and that was recent) or to push for more Australian content.<br>Over the medium term the percentage of Australian content needs to increase and for these components to be made in Australia were sensible to do so. | Large enterprise |
| I am not overly familiar with what this program has delivered in the Defence sector...never a good sign.<br>I feel this Program is very focussed on Net Zero and less on supply chain resilience | SME |
| While the Future Made in Australia agenda has made some notable investments in sovereign missile manufacturing and defence innovation, much of the Australian defence industry remains deeply concerned about its actual impact. Despite promises of jobs and local capability, a significant portion of major defence contracts—particularly in naval shipbuilding and aerospace—continue to be offshored or delayed. Local SMEs report uncertainty over the project pipeline, with many struggling to find consistent work or secure meaningful roles in large programs dominated by foreign primes. While grant funding and pilot programs sound positive on paper, they are seen by many in the industry as token gestures rather than structural solutions. The lack of long-term visibility, shifting government priorities, and poor coordination between Defence and industry have led to growing scepticism that the program is more about political branding than a genuine industrial strategy. | SME |
| The program priorities only indirectly contribute to areas relevant to Defence. | SME |

## *11.6 Other Comments*

***Question 35:*** *Please feel free to share any further comments, thoughts or ideas on this topic below:*

| Comments | Demographic Group |
|---|---|
| Australian Supply Chains are fragile with too many SMEs - there needs to be a focus on ensuring that some SMEs grow large enough to manage their own supply chain i.e. Primes can then buy systems from larger suppliers rather than components from SMEs. | Large enterprise |
| A large portion of our products are not manufactured or available in Australia, we have to import large quantities of materials from overseas to meet the product requirements. | SME |
| Being a small company we only receive production orders when the larger companies supply an orders to us , as such we are very limited in being able to proactively respond. It is quite normal to quote on something, re-quote on same a month or a year later, to have the quantity for quoting change multiple times and then after hearing nothing for months after quoting, receive an order . A lot of this is due to changes by the federal government but as long as there is no continuation or stability of production it will be hard to implement any changes that will improve supply of anything critical or not. | SME |
| I don't quite agree with your statement at the start of the survey: "Australia's competitive advantage lies in its skilled workforce and capacity for designing complex systems". I agree with the sentiment, but when you compare the technologies being developed in countries such as: Japan, South Korea, China, Germany and France, then you know we have an urgent education and capability uplift of our workforce to be undertaken.<br>Further, you may have the false belief that the key reason for trading with China is due to the cost savings for labour input. TO a great extent that is true, however, they have also invested heavily in the development of manufacturing technology, and some of their factories are close to completely automated. Meaning, their competitive advantage is no longer cheaper labour, but also technology advantage.<br>Rhetorical question: How does Australia compare with the uptake and delivery of manufacturing capability to support Defence? | Large enterprise |
| There is and will be risk in any supply chain, but you must be proactive and aware of what is happening around the world and plan accordingly - well in advance. | SME |
| The criticality and value of supply chain will only be fully understood when you are depending on it. The western world have slowly reduced their ability to manufacture and we are now slowly starting to understand the impact, though it is driven by the corporations that are looking for larger profit margins and not necessarily the uneducated leaders of our countries. | Large enterprise |
| To solve the problem will require significant planning and investment, with clear priorities from government that do not just focus on "manufacturing of piece parts etc. This would include in depth industrial analysis to determine where supply chains are exposed (eg avionics, guidance systems, etc) or compromised (electronics) due to concentration in foreign production. This analysis also should examine the opportunity to develop mass or alternative production (eg Germany using vehicle production plants from BMW to build tank /CRV parts and assemblies. Clear paths to demand / market support investment in local capability. | SME |