SUBMISSION TO SENATE INQUIRY ON SUPPORTING THE DEVELOPMENT OF SOVEREIGN CAPABILITY IN THE AUSTRALIAN TECH SECTOR

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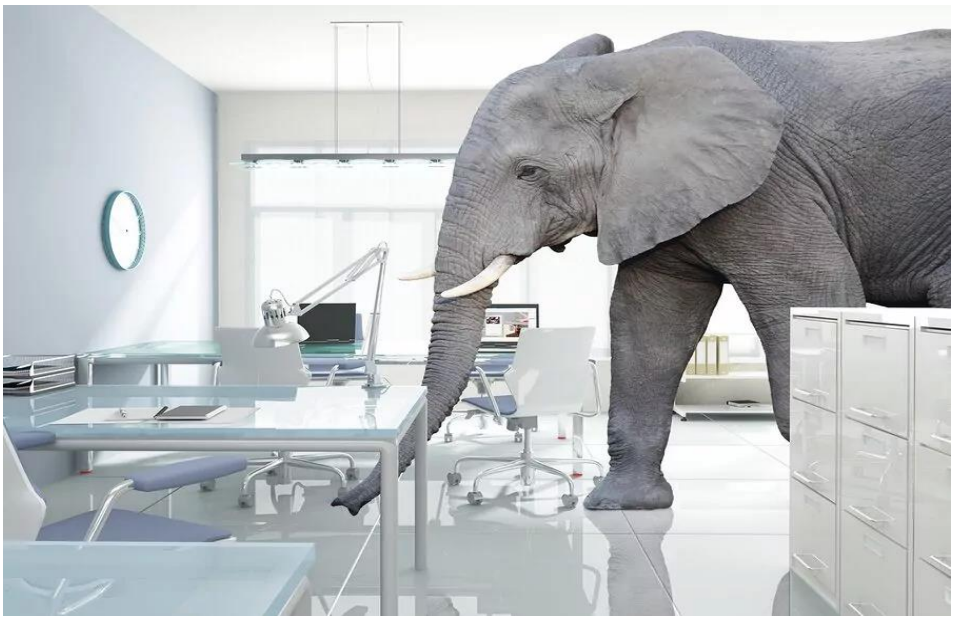


TERMS OF REFERENCE

On 6 December 2023 the Commonwealth Senate referred the following inquiry to the Finance and Public Administration References Committee for inquiry and report by 30 June 2024.

The terms of reference include supporting the development of sovereign capability in the Australian technology (tech) sector, with particular reference to:

(a) the adequacy of current Commonwealth procurement policy settings across the Australian Government for supporting Australian tech companies, including but not limited to policies in the Digital Sourcing Framework;

(b) the challenges faced by smaller Australian tech companies in accessing public sector procurement opportunities, including but not limited to through procurement panels;

(c) opportunities for reform of government procurement policy settings to encourage the emergence and growth of more Australian tech companies;

(d) the use of non-sovereign-Australian tech across the Australian Public Service and the consequences of that usage on the strength of Australia's tech sector;

(e) the effectiveness of the Buy Australia Plan in supporting Australian tech companies;

(f) the level of engagement and consultation between the Australian Government and Australian tech companies, including, but not limited to, through the Future Made in Australia Office;

(g) the existence and effectiveness of processes for tracking the performance of suppliers, measuring and reporting on the full and timely delivery of outcomes, and sharing information regarding supplier performance across different government departments and agencies; and

(h) any other related matters.

SUBMISSION EXECUTIVE SUMMARY

We thank the Committee for affording us additional time to make our submission to this critical inquiry.

This submission is made in our personal capacities, and is based on our decades of experience, which has included:

- Working directly with SMEs and policymakers in both the defence and civilian industry sectors in Australia and abroad (Bradshaw and McLean).

- Scholarly expertise and research-based advocacy centred on the strategic role of governments in promoting national techno-industrial transformation (Thurbon and Hynd), including (but not limited to) the use of strategic public procurement to promote transformative national ambitions and objectives in Australia and globally (Thurbon).

We understand sovereign capability in the Australian technology sector to mean:

- The existence of **world-class local research, development and commercialisation (RD&C) capabilities** in those technology-intensive industries deemed nationally strategic by the government. These include, but are not limited to, the defence, green energy, minerals processing, biotech / medical industries and enabling technologies and manufacturing services industries (e.g. the software, AI and intelligent robotics industries).

- The existence of **strong local manufacturing capabilities** in those technology-intensive industries deemed nationally strategic (and therefore necessarily sovereign) by the government.

- The existence of **strong and secure local capabilities to participate in international supply chains** for those technology-intensive industries deemed nationally strategic by the government.

On the challenge of building sovereign capability in the Australian tech sector, in this submission we will limit ourselves to making five key points. Should the Committee deem it helpful, we would be happy to provide further information in writing or in-person:

I. To have a productive and effective national conversation on the imperatives of sovereign capability in the Australian tech sector (or any other sector of strategic national importance) **we must include discussion of AUKUS Pillar 2 (AP2)**, and the strategic responsibilities, opportunities and risks it presents to us **(Terms of Reference H).**

II. To develop sovereign capability in the Australian tech sector **we must address the uneven playing field on which Australian SMEs are operating**, and proactively **learn lessons from our foreign allies and partners** (including the UK, US, Japan and South Korea) about how governments can better support the development of sovereign techno-industrial capabilities **(Terms of Reference C).**

III. To develop sovereign capability in the Australian tech sector **we must address the longstanding limitations of national government procurement policies and system** (both defence and civilian), which continues to act more as an obstacle to than an enabler of local techno-industrial capability building. We note that, for more than a decade, these limitations have been communicated to government by large industry players (including defence industry primes and Tier 1 Suppliers), and both defence and civilian manufacturing and tech sector SMEs and academic experts. Yet, to date, they remain unaddressed **(Terms of Reference A-G)**.

IV. In addition to procurement challenges, there exist at least three further issues to address if we are to make Commonwealth government efforts to bolster sovereign capabilities in the tech sector more effective **(Terms of Reference H)**:
(a) The problem of tokenism in existing local industry support schemes.
(b) The potentially constraining impact of International Trade in Arms Regulations (ITAR)/defence export controls.
(c) Weaknesses in our existing defence supply chain processes.

V. There are at least five ways in which we could create a more forward-looking approach to establishing sovereign capability in the tech sector across both the defence and civilian domains (**Terms of Reference H**):
(a) Embracing the mindset, ambitions and actions of statecraft rather than 'industrial policy'.
(b) To enable such statecraft, consider the creation of a 'Sovereign Capability Superministry' responsible for overseeing and coordinating economy-wide sovereign capability building initiatives in nationally strategic industries that straddle the defence-civilian divide (**Terms of Reference H**).
(c) To meet the specific procurement needs of the Australian Defence Forces and the Defence Forces of our allies, consider creating a Defence Industry Supply Chain Authority (that would dovetail and coordinate with the Sovereign Capability Superministry) (**Terms of Reference H**).
(d) Make changes to Commonwealth procurement guidelines and processes to explicitly recognise and support a more strategic, sovereign capability-informed approach to government purchasing and contracting (**Terms of Reference A-G**).
(e) Establish a Tech Bridge Initiative to match the initiatives of our strategic and AUKUS partners and allies (**Terms of Reference H**).

In the remainder of this submission we briefly address, in turn, each of these five key points.

(I) AUKUS PILLAR 2: A SOVEREIGN CAPABILITY GAME CHANGER

To have a productive and effective national conversation on the imperatives of sovereign capability in the Australian tech sector **we must include discussion of AUKUS Pillar 2 (AP2)**. Without this much-needed dialogue, AP2 will remain the 'elephant in the room': enormously powerful, and full of latent positive potential – but also involving risks that would be costly to to ignore.

In terms of positive potential, AP2 offers huge opportunities when it comes to focusing and expediting our sovereign capability-building efforts in technology-intensive sectors.

At the very least, AUKUS provides us with solid foundations and impetus – if not a template – for step-change improvement in Australia-UK-US collaboration in both known and yet to be defined new sectors, industries, and fields of research. This includes two- and three-way collaboration on industry innovation and benchmarked university and TAFE research for both defence and commercial translation.

But thinking more strategically and expansively, AUKUS presents us with the opportunity to completely overhaul Australia's highly fragmented, uncoordinated, and ineffective approach to national techno-industrial governance. In this current approach, the nation's defence and civilian innovation and production ecosystems – and its sovereign capability-building challenges – are both viewed and governed separately. This approach has never worked for Australia, and it now stands as a major obstacle to sovereign capability-building ambitions and imperatives. The reality is, Australia is simply not big enough to sustain two separate ecosystems and related governance structures. Moreover, the potential synergies between our defence and civilian innovation and production eco-systems are immense. These synergies can and should be nurtured and exploited by the government to maximise our sovereign technological and production capabilities, which after all are the essential foundations of our national military and economic security, agility and prosperity.

In this context, the opportunity exists to use AUKUS imperatives to completely restructure and re-orient our national system of innovation and techno-industrial governance. Australia's new governance system would straddle and seek to integrate the nation's defence and civilian innovation and production eco-systems and enable a highly strategic and coordinated approach to building sovereign capabilities across the nation's integrated defence-civilian techno-industrial base.[1]

Yet while AUKUS provides an excellent justification and impetus for these kinds of sovereign capability building initiatives, it also involves some risks to which policymakers must remain attentive. For example, as we explain below, in the absence of significant organisational and policy change in Australia, there is a risk that deeper collaboration with the US and UK under AUKUS could lead to the further hollowing-out of Australia's techno-industrial base and the weakening of our sovereign capabilities in the tech sector, especially when it comes to dual-use technologies. At the same time, an over-emphasis on AUKUS could lead us to neglect opportunities for closer techno-industrial collaboration and integration

[1] Refer ISO 37000:2021 guidance on the governance of organizations.

with our other important regional allies and partners, not least New Zealand, ASEAN Member Nations meeting in Melbourne March 2024, South Korea and Japan. For these reasons, it is imperative that we remain attentive to and manage these risks when developing and executing sovereign tech capability initiatives (while also seizing the opportunities for collaborative government and inter-industrial collaborations based upon AP2 identified herein.)[2]

In sum, AP2 is a potential game changer in sovereign capability terms and should be front and centre of any discussion of the pursuit of such capabilities in the Australian tech sector.

What is AUKUS Pillar 2 (AP2) and how does it relate to Australia's tech sector?

According to the official September 2021 AUKUS announcement, **the purpose of AP2 is to 'enhance our [Australia, UK, and US] joint capabilities** and interoperability' (emphasis added).[3] The initial scope of this original AP2 agreement was huge, covering 'cyber capabilities, artificial intelligence, quantum technologies, and additional undersea capabilities'. In April 2022, four more areas were added under the label 'advanced capabilities': hypersonic and counter-hypersonic capabilities, electronic warfare, innovation, and information sharing.[4] More recently still, there have been suggestions that other strategic partners, particularly Japan, could be invited to collaborate in AP2 projects on a case-by-case basis.[5]

Fundamentally, AP2 is aimed at addressing the growing technological challenge from China, which is believed to pose a major threat to both the economic and military primacy of the United States – considered by far the most important of Australia's allies and partners. The Chinese government aims to surpass the US to become the world's leading technology and scientific superpower by 2050.[6] As each day passes, this time frame appears less and less ambitious. A 2023 ASPI report found that China already leads the US and its allies in 19 of the 23 technologies relevant to AP2 – spanning AI, 5G, semiconductors, biotech, green energy and quantum information science.[7] In this context, **the aim of AP2 is to harness the collective**

[2] Refer ISO 44001:2017 guidance on collaborative business relationships.

[3] The White House, 'Joint Leaders Statement on AUKUS', *White House*, 15 September, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/15/joint-leaders-statement-on-aukus/ > (3 March, 2024).

[4] The White House, 'FACT SHEET: Implementation of the Australia – United Kingdom – United States Partnership (AUKUS)', *White House*, 5 April, 2022, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/05/fact-sheet-implementation-of-the-australia-united-kingdom-united-states-partnership-aukus/ > (3 March, 2024).

[5] Ryo, Nakamura, 'AUKUS weighs Japan's participation in defense tech development', *Nikkei Asia*, 2 March 2024, <https://asia.nikkei.com/Politics/Defense/AUKUS-weighs-Japan-s-participation-in-defense-tech-development > (3 March, 2024).

[6] Hedley, Mark, 'Why China will become a tech superpower by 2050', *China-Britain Business Focus*, 22 January, 2021, <https://focus.cbbc.org/chinas-tech-landscape/ > (3 March, 2024).

[7] ASPI, 'AUKUS Relevant Technologies: Top 10 country snapshot', *ASPI Critical Technology Tracker*, <https://ad-aspi.s3.ap-southeast-2.amazonaws.com/2023-06/PB69-CriticalTechTracker-AUKUS%20relevant% 20technologies%20top%2010%20country%20snapshot.pdf > (3 March 2024).

capabilities of the US and its allies to meet the growing techno-economic and related geo-strategic challenge from China, through both **military and economic deterrence.**[8]

Crucially, **AP2 requires that Australia rapidly expand its sovereign innovation, technological and industrial production capabilities (which are deeply interrelated) to meet our new tech-focussed alliance commitments.** Without a world-class national innovation system and techno-industrial capabilities, Australia will be unable to meet the growing needs and demands of its strategic partners and allies, which include – but are not limited to – the UK and US. For example, our regional partners South Korea and Japan are also cognizant of the strategic advantage to them of the geographically 'near but far' Australia possessing a world-class national innovation system and advanced technological and manufacturing capabilities – particularly in the event of naval trade route contested sea lanes and/or wider regional conflict.

Potential synergies between defence and civilian sectors

The benefits of Australia developing advanced sovereign innovation and techno-industrial capabilities for defence purposes can be – and should be – economy-wide. For reasons of commercial viability and sustainability, a significant proportion of defence-oriented firms, both in Australia and abroad, operate in sectors and industries that cross the defence/civilian divide (e.g. automotive, shipbuilding and aerospace). The Australian government considers many of these dual-facing, innovation and tech-intensive sectors and industries (e.g. the green energy and intelligent robotics industries) to be strategically significant. **The potential for synergies between the innovation and tech-intensive defence and civilian sectors is high,** and the government can, and should, actively pursue these synergies – for reasons as much to do with the mutually reinforcing goals of national resilience, prosperity and well-being as economic deterrence.

This brings us to our central point: **the idea of a coordinated national project that uses AP2 to drive a completely restructured collaborative innovation system and re-industrialisation agenda that straddles both the technology-intensive defence and civilian economies should be a top priority**. Assuming a level playing field (see Section II) this approach has the potential to expand exponentially the customer base opportunities for Australia's advanced-tech defence suppliers into both the UK and US. Simultaneously, it provides opportunities and access for low Technology Readiness Level (TRL) and Manufacturing Readiness Level (MRL) technologies to be commercialised more efficiently and effectively, to the benefit of the civilian economy. And it allows scientists and researchers to collaborate with global centres of excellence for mutual defence and economic gains.

In sum, **the imperative to develop sovereign capability in the Australian technology sector cannot and should not be divorced from AUKUS-related imperatives and opportunities**. The

[8] Kuper, Stephen, 'Deterrence is about being able to win, so what does economic deterrence look like?' *Defence Connect*, 21 July, 2024, <https://www.defenceconnect.com.au/key-enablers/6489-deterrence-is-about-being -able-to-win-so-what-does-economic-deterrence-look-like > (3 March, 2024). See also Tirpak, John A., 'LaPlante on Why Weapon Production Constitutes Deterrence', *Air & Space Forces Magazine*, 26 October, 2022, <https://www.airandspaceforces.com/laplante-on-why-weapon-production-constitutes-deterrence/ > (4 March, 2024).

policy and institutional postures and mechanisms at our disposal to foster sovereign capabilities in the Australian tech sector certainly include a more strategic approach to government procurement – which is understandably the focus of the Committee's Inquiry. However, as we discuss below, these policies, postures and mechanisms go far beyond procurement, and ultimately take in the mindset of our political leaders and policymakers and the institutional arrangements through which they operate. These mindset and institutional issues are arguably two of the most important factors that will shape an effective response to Australia's pressing sovereign capability challenges. We return to this point in Section V.

(II) STRATEGIC PARTNERS AND ALLIES: LEVELING THE PLAYING FIELD, LEARNING LESSONS, AND LEVERAGING

In the Australian context, the ambition to develop strong sovereign techno-industrial capabilities necessarily involves a massive and unwavering focus on nurturing our tech-intensive small and medium sized enterprises (SMEs). This is because SMEs are widely understood to be key drivers of innovation and economic dynamism across the world.[9] Indeed, Minister for Defence Industry Pat Conroy recently acknowledged the critical need for Australia to expand its base of innovative, tech-intensive medium-sized enterprises, stating that 'Growing medium sized businesses, who are developing and delivering sovereign capabilities, will be a key marker of success for me in the long term.' [10]

However, **Australia's tech-intensive SMEs in both the defence and civilian economies have long faced major challenges in their efforts to both commercialise and scale.**

Some of these challenges relate to the depletion of the wider techno-industrial ecosystem necessary to support and sustain innovative firms – thanks in no small part to the demise of the Australian automobile industry and the related SME supply chain / ecosystem. Other challenges relate to the longstanding problem of access to adequate and appropriately structured finance. Notably, the availability of suitable finance should now improve with the establishment of the National Reconstruction Fund, charged with financially supporting Australian firms engaged in strategic industries.[11] Further such challenges relate to the backward-looking nature of our government procurement system – both defence and civilian (see also Section III).

The need to level the international playing field for our tech-intensive SMEs

The establishment of AUKUS has been accompanied by renewed emphasis among our allies and strategic partners on nurturing their own innovative firms. This has highlighted the **longstanding gulf between the enormous support on offer to SMEs in the UK and the US and those available in Australia**. These growing inequities place Australian SMEs at a significant disadvantage when compared to their UK and US counterparts, which are well poised to capitalise on the massive procurement opportunities that will flow from AUKUS.

[9] See e.g. OECD, 'Enhancing the Contributions of SMEs in a Global and Digitalised Economy', *Meeting of the OECD Council at Ministerial Level, Paris*, 7-8 June 2017, < https://www.oecd.org/mcm/documents/ C-MIN-2017-8-EN.pdf> (4 March, 2024).

[10] Conroy, Pat, 'Speech at Hunter Defence Conference Gala Dinner', *Department of Defence*, 1 September, 2022, <https://www.minister.defence.gov.au/speeches/2022-09-01/speech-hunter-defence-conference-gala-dinner > (March 3, 2024).

[11] Thurbon, Elizabeth, and Yates, Oliver, 'The immense power and importance of Australia's newest bank', *The Mandarin*, 13 December, 2023, <https://www.themandarin.com.au/236461-the-immense-power-and-importance-of-australias-newest-bank/ > (March 3, 2024).

We already see evidence of massive UK and US federal and industry investment, training and recruitment, some funded directly by our Commonwealth Government. Australia committed at least AU$3 billion to enhance the submarine industrial capacity of the US and the UK under the AUKUS deal.[12] This investment aims to bolster submarine production and sustainment capabilities. Meanwhile, our local 3000+ enterprise defence, aerospace, manufacturing and engineering service industry firms have been left facing an ever-shrinking pie of government assistance and enablement (a point we illustrate with figures in Section IV below).

Learning Lessons from allies and partners

Aspects of the UK approach to supporting its smaller firms can be instructive for the Australian government. The UK SME set-aside program legislates targets for government procurement and provides investment certainty. This sits alongside Freeport initiatives for accelerated write-offs on major capital expenditures (CapEx), along with industrial cluster development, energy and skilling concessions. A further potential model for Australia is that of the UK Catapult Network centres, which focus on research translation, productivity improvement, technology developments and automated processes. The UK government also strongly supports the development of a high skill, versatile, cross-trained workforce, that can move capably between the defence, aerospace, automotive, rail, and shipbuilding sectors depending on planned workforce needs. None of this approach is currently available or accessible to Australian firms in defence or elsewhere.

The US' approach offers another useful comparison. Washington recognises that its defence industrial base must provide the required capabilities at the speed and scale necessary for their military to engage and prevail in a near-peer conflict. The US 2023 National Defence Industrial Strategy (NDIS) explicitly identifies challenges and solutions, opportunities for success and risks of failure. This US NDIS offers a strategic vision and path that identifies four strategic priorities: resilient supply chains, workforce readiness, flexible acquisition and economic deterrence.[13]

The US' proposed pathway to modernize their defence industrial ecosystem also recognizes that any solution cannot solely be based upon US Department of Defence efforts. Instead, it repeatedly emphasises cooperation and coordination between the entire US Government, private industry, and international allies and strategic partners. Understanding America's whole of government approach – spanning the defence and civilian sectors – is an essential

[12] Hurst, Daniel, 'Australia's $3bn Aukus bill to boost US and UK industry may go even higher', *The Guardian*, 22 March, 2023, < https://www.theguardian.com/australia-news/2023/mar/21/australias-3bn-aukus-bill-to-boost-us-and-uk-industry-may-go-even-higher > (4 March, 2024)
[13] US Department of Defense, 'National Defense Industrial Strategy', *US Department of Defense*, 12 January, 2024, <https://www.businessdefense.gov/docs/ndis/2023-NDIS.pdf > (4 March, 2024).

task for Australian policymakers.[14] And, like the UK, the US also has a comprehensive and very successful SME set-aside scheme that provides industry incentives and benefits.

Ultimately, we have little chance of building sovereign capability in the Australian tech sector unless we take steps to level the playing field for our SMEs by boosting government support, leveraging collaborations, and learning critical lessons from our strategic partners and allies.

Leveraging our allies and partners in pursuit of sovereign capability

Here, **Australia must seize the opportunity to reset and recharacterize our relationship with both the US and the UK, so that we can leverage collaborative opportunities to our national benefit**. Engagement with UK and US innovation and industry capability is an absolute imperative for Australia's Defence, SME, and microbusiness communities in capital cities but importantly where there are innovative SMEs – in the regions. There must be a revised focus on updating the messaging around enablement, emphasising not only questions of 'what?' and 'when?' but also, critically, 'how?'. Additionally, Australia requires

[14] For the landmark overview of the US 'Innovation and Enterprise' system linked to the US National Security State (which takes in much more than the Department of Defense, extending to, for example, the Department of Energy and the National Institutes of Health), see Weiss, Linda, *America Inc? Innovation and Enterprise in the National Security State* (Ithica, NY: Cornell University Press, 2014). See also Weiss, Linda, and Thurbon, Elizabeth 'Developmental State or Economic Statecraft? Where, Why and How the Difference Matters', *New Political Economy* 26(3), 2020, 472-489., and Weiss, 'Re-emergence of Great Power Conflict and US Economic Statecraft' *World Trade Review* 20 (2), 2021, 152-168.

a formalised government-to-government structure for international collaboration that should cascade to respective national SMEs. This could drive sectoral R&D partnership, access to the United States' Defense Advanced Research Projects Agency (DARPA) and the UK Catapult Network's manufacturing and science centres. Further linkages could be established to the Supply Chain 21 UK and International Aerospace Quality Group for Aerospace, Space, and Defense), and the Automotive Industry Action Group (for Land Doman) for US supply chain processes.

Ultimately, the likelihood of our industries achieving **sustainable and vigorous sovereign capabilities** in the (highly interrelated) innovation, technology and industrial spheres **will increase if Australian firms are better supported and equipped and engaged to collaborate with our AUKUS partners**.

The Hunter Class frigate program is already demonstrating graphically that the UK is light years ahead of Australia in equipping its industries (including through support for tertiary institutions and technical pathways) to be technologically and globally competitive with exportable capabilities. Here, the prime contractor has consistently complained that they are between a rock and a hard place. They are expected to deliver value for money (defined in terms of functionality or minimum viable capability / price paid by the Commonwealth) and global competitiveness. But, at the same time, they are criticised for not using overly expensive and unreliable Australian suppliers who don't possess the scale of supply, or supply certainty, required to deliver the quality, productivity and competitiveness improvements essential for them to be competitive and attain life-cycle cost sustainment Defence goals.

In this context, it is currently **distressingly easy for the UK and US prime contractors to default to their home country supply chains**.

(III) GOVERNMENT PROCUREMENT AND SOVEREIGN TECH CAPABILITIES

As the terms of reference of this Inquiry indicate, **to develop sovereign capability in the Australian tech sector we must address the longstanding limitations of our government procurement system** (both defence and civilian). This is because the existing procurement system acts more as an obstacle to than an enabler of local techno-industrial capability building.

While these limitations have been communicated to government by industry and academic experts for more than a decade, they remain unresolved. Australia's changing geo-strategic circumstances, evolving alliance responsibilities (centred on Australia's techno-industrial capabilities) and proliferating economic challenges all demand that these issues are finally addressed in a concerted and comprehensive manner.

The points we wish to emphasise here have been highlighted previously by Professor Thurbon in separate submissions to two separate Senate Inquiries on Government Procurement. These are, namely:

- The erroneous assumption that Australia's free trade agreement obligations constrain its use of public purchasing for strategic industry building initiatives.

- The fact that Australia does not need to re-invent the wheel, we can simply look to the approaches of some of our most important strategic partners (including the US and South Korea) when it comes to using public purchasing for technological innovation in both the defence and civilian spheres.

- The fact that many of the obstacles to a more strategic procurement approach in Australia are cultural, rooted in a strong sense of risk aversion and 'buy-non-Australian' bias across both Federal and State-level bureaucracies. These obstacles are particularly difficult to overcome, but Australia's changing geo-strategic landscape and pressing national defence and economic security challenges may provide a new window of opportunity.

The relevant sections of Professor Thurbon's previous submissions to Commonwealth Government procurement Inquiries are copied here for the Committee's convenience, and we attach a number of scholarly articles as appendices that clearly lay out some of the reform options available to for Australia.

- "It is widely remarked that government procurement – done well – can be a powerful instrument for promoting transformative social and economic goals, from environmental protection and clean energy transition to enhancing the innovative and export capacities of local firms.[15] For this reason, governments around the globe

[15] Quoted text here and below from Thurbon, Elizabeth, *Submission to the Commonwealth Government Joint Select Committee's Inquiry into Government Procurement*, 5 March, 2017.

– from the United States to South Korea – have approached their entry into procurement-related trade agreements in a highly strategic fashion, in order to preserve their capacities to link public purchasing decisions with the pursuit of broader national objectives.

- For example, when the United States became signatory to the WTO's Government Procurement Agreement, it secured an exemption for its longstanding Small Business Set-Asides Program, which requires US government agencies to set-aside a certain portion of their procurement contracts for small US businesses. Similarly, the US government ensured that the procurement of R&D services was exempt from WTO GPA coverage. This secured the future of the United States' world-class Small Business Innovation Research (SBIR) program – arguably the gold standard of demand-driven innovation policies, which has enjoyed bipartisan support in the US since its inception in the 1970s,[16] and which is now widely emulated in countries across Europe and East Asia.

- What makes these countries' approaches to procurement-related trade agreements so strategic is that their policymakers do not simply ask: "how will this agreement improve foreign market access for our firms?" Rather, policymakers go further and ask: "how can we use our domestic procurement policies to enhance the techno-industrial and export competitiveness of our firms, so they might actually take advantage of the market-access wins we've negotiated for them? And how can we ensure that our trade agreements don't unreasonably limit our procurement-related policy room to move?"

- It is fair to say that both historically and recently, the Australian government has adopted a far less strategic approach to procurement than its counterparts both in the West (especially the US) and East Asia (especially South Korea). I [Thurbon] have argued this point at length elsewhere, but briefly summarise here by drawing on previous statements:[17]

- "Since 2013, the government has pumped vast resources into negotiating trade deals intended to increase foreign market access for Australian firms. Yet at the same

[16] For an excellent overview of the SBIR, see Weiss, Linda, *America Inc: Innovation and Enterprise in the National Security State*, (Ithaca NY: Cornell University Press, 2014).

[17] Quoted text from Thurbon, Elizabeth, 'How Australia's Trade Policy Approach is Harming Australian Firms' 16 December 2015, <https://www.elizabeththurbon.com/news/how-australias-trade-policy-approach-is-harming-australian-firms > (3 March, 2024). http://democracyrenewal.edu.au/how-australia%E2%80%99s-trade-policy-approach-harming-australian-firms. For extended analyses see Thurbon, Elizabeth 'Trade and Industry Policy 2011-2015: The Growing Partisan Divide' in Beeson, Mark, and Hameiri, Shahar (eds.), *Navigating the New International Disorder: Australia in World Affairs*, (Oxford: Oxford University Press, 2016); Thurbon, Elizabeth, 'Trade Agreements and the Myth of Policy Constraint in Australia?' *Australian Journal of Political Science* 51(4), 2016, 636-651; Thurbon, Elizabeth, 'The Abandonment of Procurement-Linked Strategic Activism in Australia: Standing Still with Room to Move' *Australian Journal of International Affairs*, 69(5), 2015, 577-594. (Special Issue: 10 years since the Australia-US FTA).

time, it has been actively dismantling local industry development initiatives aimed at boosting the innovation and export capacity of Australian firms so that they might actually capitalize on market access wins abroad.

- The public purchasing arena provides a clear example of this trend. Many of Australia's new [trade agreements] include government procurement chapters intended to open foreign procurement markets to Australian firms. However, while negotiating these deals, the government has been dismantling Australia's own strategic public purchasing programs designed to help local firms commercialize new technologies, build local market presence, and develop an export platform that might enable them to sell to foreign governments – or commercial markets for that matter.

- Australia's "trade as industry policy" approach now contrasts starkly with that of its trade partners, many of which pursue active "trade and industry policy" agendas. South Korea, for example, has been actively expanding its network of [bilateral trade deals] over the past decade, while simultaneously boosting its local industry development programs, especially those linked to strategic public purchasing.

- If Australia wants to capitalise on the market access wins provided by its [current and future trade agreements], the government must abandon its "trade as industry policy" approach and embrace a strategic approach to trade and industry policy. I draw the committee's attention to my comprehensive analyses of the room that exists for Australian policymakers to support local firms under its trade agreements, the limited extent to which the government currently uses that room, and how Australia's approach differs significantly from our trade partners [especially South Korea], who are increasingly active in this arena.[18]

- In sum … Australia urgently needs a more focussed public debate about how government procurement might be used more strategically to support national techno-industrial transformation and export competitiveness – as our trading partners do so well. Otherwise, Australian firms will continue to be disadvantaged in government procurement markets not just locally–- but globally."

One further point that we would add to the above is that Thurbon's previous characterisation of the highly strategic procurement efforts of both the US and South Korea as a form of 'industry policy' arguably obscured the intense national (economic and military) security drivers of those impressive national approaches. The term 'statecraft' rather than 'industry

[18] For details see Thurbon, Elizabeth, 'Trade Agreements and the Myth of Policy Constraint in Australia?' *Australian Journal of Political Science* 51(4), 2016, 636-651 and Thurbon, Elizabeth (2015) 'The abandonment of procurement-linked strategic activism in Australia: standing still with room to move', *Australian Journal of International Affairs* 69(5), 2015, 577-594 (attached respectively as Appendix A and Appendix B to this submission).

policy' is arguably a more appropriate in this regard.[19] 'Statecraft' implies that US and South Korean local industry building initiatives are now squarely intended to fend-off, outflank, and/or move in step with a clearly defined foreign rival (i.e. China), rather than the more diffuse objectives of 'improving the national economy' and 'creating local jobs' (more the domain of 'industry policy').

It is these intensely felt national security imperatives that lend strategic public purchasing efforts in the US and South Korea their highly ambitious, disciplined and outcomes-oriented nature, and helps explain the very large risk appetite that we observe amongst US and South Korean policymakers when it comes to buying from the smaller local firms that they wish to nurture for national security reasons.

As elaborated in Section V, we need to distinguish between plain old 'industrial policy' (motivated largely by domestic priorities or diffuse external challenges) and 'statecraft' (motivated by and aimed at addressing acute national security concerns associated with a clearly defined foreign rival). Doing so could help Australian policymakers apprehend the massive step-up that is required if we are to rapidly and successfully boost Australia's sovereign capabilities in the tech sector and beyond.

[19] See Thurbon, Elizabeth and Weiss, Linda, 'Economic statecraft at the frontier: Korea's drive for intelligent robotics' *Review of International Political Economy* 28 (1), 2019, 103-127., and Weiss, Linda and Thurbon, Elizabeth 'Developmental State or Economic Statecraft? Where, Why and How the Difference Matters', *New Political Economy* 26 (3), 2020, 472-489, on the difference between 'industrial policy' and 'statecraft', with a focus on the cases of South Korea and the US.

(IV) NON-PROCUREMENT ISSUES AND SOVEREIGN TECH CAPABILITIES

Beyond procurement, there exist at least three further issues to address if we are to improve government efforts to bolster sovereign capabilities in the tech sector. These are, namely: tokenism, International Trade in Arms Regulations (ITAR)/defence export controls, and defence supply chain processes.

Tokenism

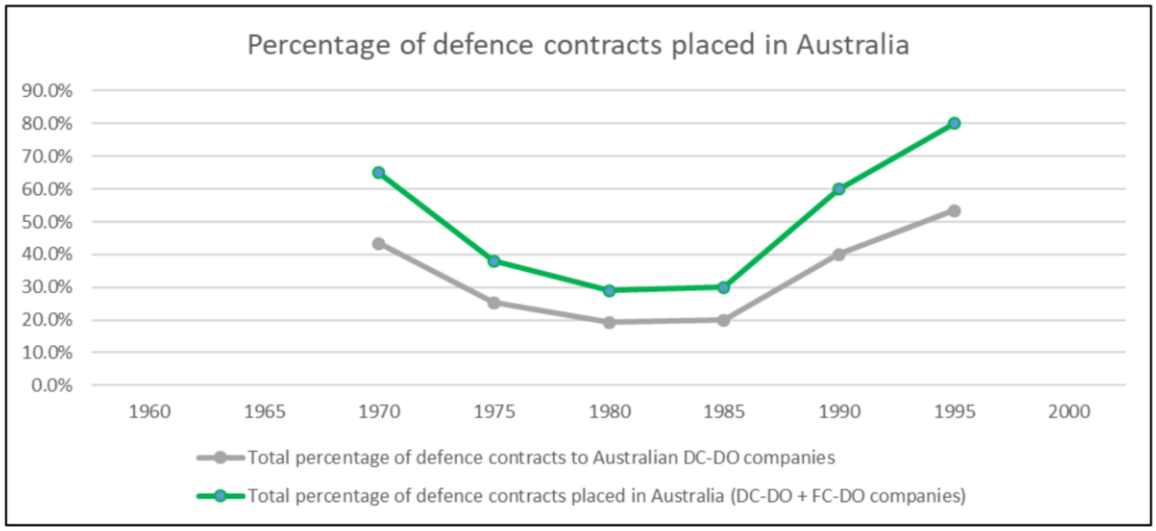
Regrettably, the history of government efforts to support tech-intensive Australian SMEs has been tokenistic at best. Moreover, the risk of tokenism remains – unless there is a shift in mindset among those responsible for implementing the sovereign capability policy agenda.

A review of the Australian defence tendering process is instructive of the tokenism that currently pervades this policy space. Prior to the commissioning of the 2023 Defense Strategic Review (DSR), end of year peaks were nearing 70 tenders per month – with 62 in November 2019, 58 in November 2020, and 67 in November of 2021. This compared to only 28 Defence tenders released in November 2022 and 34 in November 2023, effectively halving the rate of previous years.[20] To put this in perspective, there are close to 3,000 companies in Australia with defence-related capabilities.

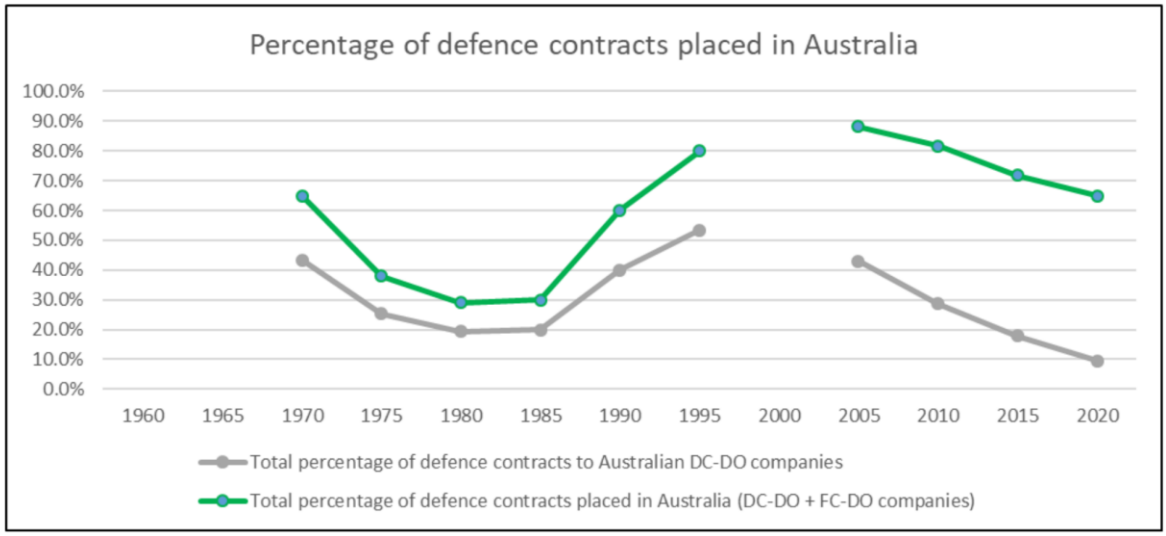
The critical issue here is that **Australian SMEs are receiving a diminishing share of available defence project opportunities and involvement**. Overall, the percentage of local SME and microbusiness involvement in Defence Industry projects has collapsed, from circa 10% in the late 1990s to around 3% today. The following figures should be alarming to anyone concerned about the future of sovereign capability in the Australian tech sector, especially in the defence sphere:

[20] Source: defence tenders released per month from 2018-2023, with data gathered from the ADM Premium Tender Bulletin.

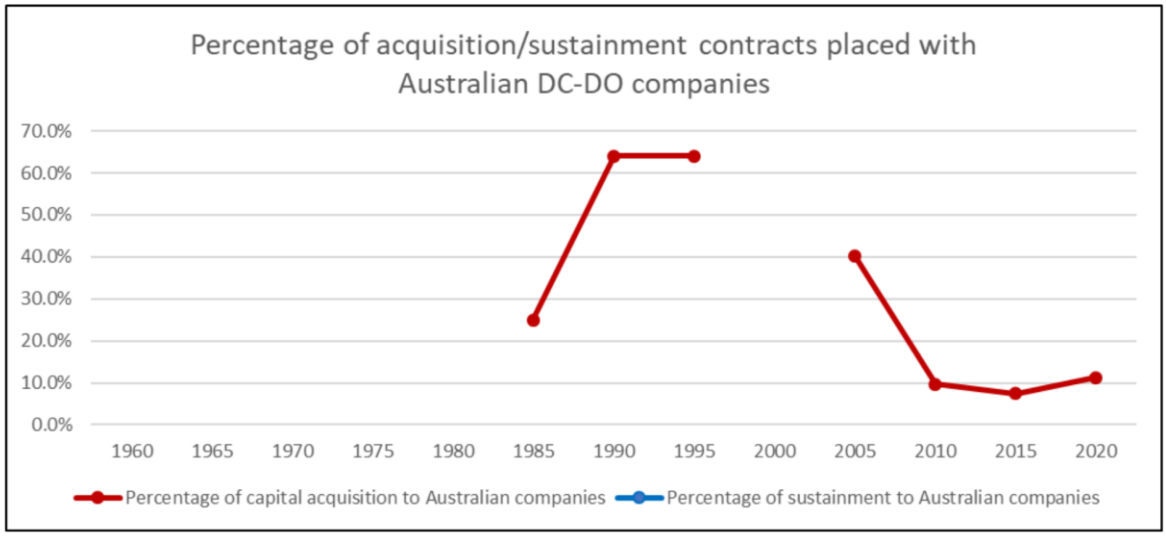
Contracts placed in Australia

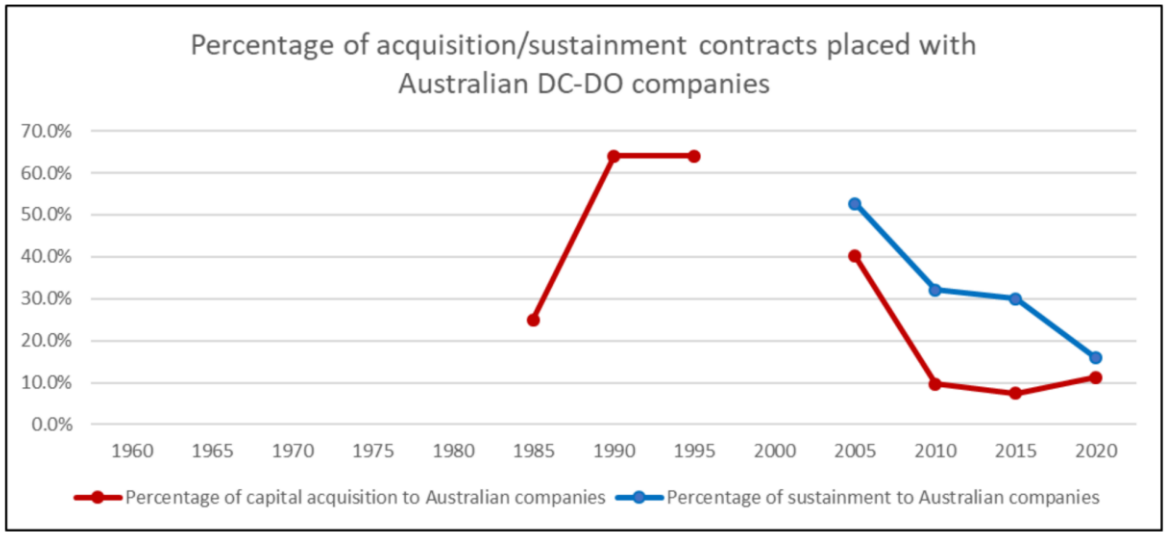


Contracts placed in Australia



Acquisition contracts





In contrast, both the UK and US SME involvement in all government procurement is legislated by 'set- asides' to between 15% and 25%. Local defence agencies appear compromised to the point of rejecting more SME project participation in response to apparent push back from some primes seeking to use their own offshore supply chains. The outcome is that the Australian Industry Capability (AIC) model appears to have been tokenised to create the illusion of SME participation – with supply chain involvement likely defaulting en masse to UK and US suppliers.

This is not solely a defence industry issue. The core of the matter has everything to do with the mindset of many of our politicians and their advisers. Feedback from the frontline

indicates that SMEs do not believe that national governments (over at least the last 20 years) have treated them in a fair and equitable manner.

The recent DSR has, however, now opened a whole new set of problems. As it states that speed to capability trumps Australian industry involvement, the DSR effectively means that – at every turn – the excuse of not using an Australian company will be viable. This is because the Government would need to demonstrate political commitment and massive financial investment to create an outcome in which Australian firms hold these capabilities.

For pre-qualified companies from overseas, speed to capability is obviously faster, a state of affairs that has come about as a result of deliberate and well-established federal government policy. Our SMEs acknowledge the government's agreed recommendation from the DSR, stating that Australian industry content and domestic production should be balanced against timely capability acquisition, and that this requires financial support. **The issue is that there isn't financial support.** To be clear, **there is absolutely no new money from the current government in the forward estimates to support pre-contract SME investment in high productivity and quality plant, robotic processes, stable basic trade / technical or an upskilled capable workforce**.

International Trade in Arms Regulations (ITAR)/defence export controls

As highlighted in Section I, while AUKUS Pillar 2 (AP2) has incredible potential as a driver of Australia's sovereign tech capability, it is also a double-edged sword. AP2 has the potential to significantly increase our capability, but the other 'edge' is our nascent defence export control legislation and realignment with ITAR.

The Defence Trade Controls Amendment Bill 2023 would make it a criminal offence to supply Defence and Strategic Goods List (DSGL)[21] technology or services to a foreign person within Australia.[22]

To take an example, a number of Australian innovators have been involved in the development and commercialisation of robotic and mapping technologies and have become involved in the defence export control (DEC) process after deciding to export the technology. Whilst this process can be confusing and complicated, these innovators are generally able to navigate the list and gain approval.

The concern with the new Bill is that it may reintroduce restrictions to intangibles for dual-use – which would include research collaboration. If this is the case, the onus of legal

[21] The current DSGL is available at Department of Home Affairs, 'Defence and Strategic Goods List 2021', *Department of Home Affairs*, 27 August, 2021, <https://www.legislation.gov.au/F2021L01198/latest/text > (3 March, 2024).
[22] See Brookes, Joseph, 'AUKUS prompts new regime for defence and dual-use exports', *Innovation Aus*, 13 November 2023, <https://www.innovationaus.com/aukus-prompts-new-regime-for-defence-and-dual-use-tech-exports/ > (4 March, 2024).

responsibility will be on those who wish to collaborate. Before any collaboration, a **firm will need to establish whether their technology is on the list** or not and, if it is, it will be the firm's responsibility to check the status of **all potential collaborators**. Currently, a firm is required to do this only where the technology is for military use.

This amendment will have a very significant impact on who firms can collaborate with (even in Australia) and who they can export to. As it stands, we will only be able to work and sell any dual-use technology to the UK and US. This could undermine the pursuit of productive partnerships with other countries – particularly Japan and South Korea.

One further major concern is that, if Australian Defence SMEs can only export to the US and UK, what is preventing these SMEs from simply packing up and moving to the US, where they can apply for US federal grants and VC; or from being acquired by one of the US or UK defence industry primes? This is not merely a hypothetical concern – look at what has already eventuated. In robotics we have at least three companies that have just secured large contracts in the US–- with nothing here in Australia. And we have at least three significant SMEs acquired by US investor groups and multinationals.

In sum, in its current form and structure, the amendment bill seem unlikely to support and promote manufacturing in Australia.

Defence Supply Chain Process

The enforced exit of the automotive manufacturing industry from Australia has inflicted incalculable damage on the economy. For every 100 jobs at the General Motors Holden (GMH), Ford, and Toyota car plants there were 300 in the supply chain and 450 induced jobs, mainly in various services, so roughly eight additional jobs in component manufacturing or engineering services for every assembly line job. This was the principal reason for multi-billion-dollar US government support given to the auto sector during the pandemic.

The loss in Australia of this vital supply chain – which was equally imperative to the defence industry – has been largely overlooked. Rebuilding it is going to cost billions in investment and take at least a decade of hard work. Without encouragement towards private investment in innovative high productivity facilities, connected machine tools, robotic process and employer upskilling, and no critical mass of project loading provided by small business set-asides, interest towards Australian SME investment participation is highly unlikely.

At the same time, if we look to the US as a guide, recent reports indicate that the US Government is providing insufficient 'demand signals' to motivate private defence industry

partners to produce what is needed, in the quantities needed, when it is needed.[23] In fact, most problems identified in the US involve private industry and its unwillingness to meet national security requirements because they are not profitable.

Many elements of the traditional Defence Industrial Base (DIB) sector have yet to adopt advanced manufacturing technologies, as they struggle to develop a business case for much-needed capital investment. In other words, while adopting advanced manufacturing technologies would fulfill the purpose of the US Department of Defence, it is not profitable for private industry to do so. However, the US Government, like the UK Government, does supply a whole raft of **technological and business support incentives to the DIB** including the massive small business set-aside cut out that is purposed to provide critical mass for investment certainty across all government procurement programs – none of which are available to the Australian defence industry.

[23] See e.g. Jones, Seth G., 'Empty Bins in a Wartime Environment: The Challenge to the U.S. Defense Industrial Base', CSIS International Security Program, Center for Strategic and International Studies (CSIS), January 2023, < https://www.csis.org/analysis/empty-bins-wartime-environment-challenge-us-defense-industrial-base >, (4 March, 2024).

(V) SOLUTION DRIVEN OUTCOMES

There are at least five ways in which the Commonwealth government could create a more forward-looking approach to establishing sovereign capability in the tech sector across both the defence and civilian domains. These include (i) embracing the mindset, ambitions and actions of statecraft; (ii) creating a Sovereign Capability Superministry; (iii) creating a Defence Industry Supply Chain Authority; (iv) reforming government procurement processes; and (v) advocating for and embracing a Tech Bridge Initiative with our strategic partners and allies.

Recommendation 1: Embrace the mindset, ambitions and actions of statecraft rather than 'industry policy'

To create a more forward-looking approach to establishing sovereign capability in the tech sector, **policymakers in both the defence and civilian spheres could benefit from embracing the mindset, ambitions and actions of 'statecraft' – rather than 'industry policy'**.

There are two reasons for this suggested shift, both of which have been detailed by Professor Thurbon, Dr Hynd, and their collaborators elsewhere. To briefly elaborate here, drawing directly from earlier collaborative work:

- First, in Australia, the language of 'industry policy' "is highly politicised and divisive.[24] Since the 1980s, "industry policy" has arguably become one of the most misused and abused terms in our nation's political discourse.[25] To even utter the words "industry policy" is often enough to spark fierce ideological objection, or to cause people's eyes to glaze over with disinterest, disillusionment or both. In this sense, the term has become the ultimate thought blocker and conversation stopper.

- Unfortunately, such reactions make it almost impossible to have a sensible national debate about what effective industry policy actually looks like. For its many detractors "industry policy" means protectionism and picking winners,[26] and should therefore be avoided at all costs.

[24] The remainder of this section adapts Thurbon, Elizabeth, Hynd, Alexander M., and Tan, Hao, 'We urgently need $100bn for renewable energy. But call it statecraft, not 'industry policy', *The Conversation*, 13 September, 2023, <https://theconversation.com/we-urgently-need-100bn-for-renewable-energy-but-call-it-statecraft-not-industry-policy-213351 > (3 March, 2024).
[25] Thurbon, Elizabeth, 'Developmentalism to Neoliberalism and Back Again? Governing the Market in Australia from the 1980s to the Present', in Chang, Kyung-Sup, Fine, Ben, and Weiss, Linda (eds.) *Developmental Politics in Transition: The Neoliberal Era and Beyond* (Basingstoke: Palgrave Macmillan, 2012), 274-279.
[26] Thurbon, Elizabeth, 'Australia must leapfrog the partisan divide for the future of freer trade and prosperity', *East Asia Forum*, 29 July 2017, < https://eastasiaforum.org/2017/07/29/australia-must -leapfrog-the-partisan-divide-for-the-future-of-freer-trade-and-prosperity/>, (4 March, 2024).

- This unsophisticated view ignores the fact that in countries that have historically practised highly effective and strategic industry policy – including our northeast Asian neighbours of Japan, South Korea and Taiwan – "protectionism" and "picking winners" was far from the norm. Indeed, because of the goal orientation of East Asian policymakers, who wanted to catch up with developed countries extremely quickly, industry policy was a highly disciplined affair tied to stringent performance incentives.[27]

- In this context, East Asian governments did not pick winners. Rather, winning firms self-selected by opting into government support programs, and by then outperforming competitors to keep earning that support. By contrast, in Australia "industry policy" has become a highly politicised and partisan affair. For this reason, calls for industry policy often fall on deaf ears, and do more to divide policymakers and business leaders than unite them.

- But there is another, even more compelling reason for advocates of [greater government support for local industry building efforts] to avoid the language of "industry policy". The term doesn't adequately capture the kinds of policies our competitors – both rivals and partners – are now enacting [in their nationally strategic sectors], or the kind of response we require.[28]

- Instead, Australia needs to embrace ["domestically-oriented economic statecraft]".[29] Such statecraft involves bold government initiatives to build, grow and dominate high-technology markets [in strategically significant sectors]… in order to fend off or outflank rival powers, be they economic, geo-strategic or both.[30]

- [As elaborated elsewhere, "domestically-oriented economic] statecraft" is different from plain old … "industry policy" [defence or otherwise]. Its focus is squarely on building new industries with the intention of ensuring success in hyper-competitive global markets and, simultaneously, bolstering national security.

- We argue that in recent years, the most significant obstacle to Australia's success in [establishing sovereign techno-industrial capability] has been the prevailing

[27] See Thurbon, Elizabeth, *Developmental Mindset: The Revival of Financial Activism in South Korea* (Ithaca N.Y.: Cornell University Press, 2016).
[28] See Thurbon, Elizabeth, Kim, Sung Young, Tan, Hao, and Mathews, John, *Developmental Environmentalism: State Ambition and Creative Destruction in East Asia's Green Energy Transition* (Oxford: Oxford University Press, 2023).
[29] On the definition of 'domestically oriented economic statecraft' and its difference from industry policy see Thurbon, Elizabeth, and Weiss, Linda, 'Economic statecraft at the frontier: Korea's drive for intelligent robotics' Review of International Political Economy 28 (1), 2019 103-127, and Weiss, Linda, and Thurbon, Elizabeth 'Developmental State or Economic Statecraft? Where, Why and How the Difference Matters', *New Political Economy* 26(3), 2020, 472-489.
[30] See Thurbon, Elizabeth, and Weiss, Linda, Economic statecraft at the frontier: Korea's drive for intelligent robotics, Review of International Political Economy 28 (1), 2019, 103-127.

policymaking mindset: viewing the [challenge as one of plain old industry policy], rather than statecraft.

- With national security motivations at play, governments that practice [domestically-oriented economic] statecraft create bold visions for new industries [in both the defence and civilian sectors]. They set clear production, export and, most importantly, technology-upgrading targets. They also mobilise all available financial incentives and policy instruments to ensure these targets are met.

- [If we really want to turbocharge our domestic sovereign capability building efforts], Australia needs to match our strategic vision with a new [economic statecraft].[31]

- Language matters. If we want policymakers to act, and if we want our calls to unite rather than divide, we need to choose our words very carefully."

We would add to this that Australia's economic statecraft can and should also include collaborative technological initiatives with our strategic partners and allies. Australia can certainly do more in terms of initiatives similar to the active collaboration between the British and Canadian Aerospace Industries to boost productivity and innovation.

As an example of the initiatives that could be replicated, UK businesses can apply for a share of £5 million to collaborate with Canadian partners on highly innovative productivity projects targeting global markets. Innovate UK, in partnership with UK Research and Innovation, offers this funding to develop innovative products, processes, or services for overseas markets. The focus areas include science and Innovation initiatives in automation, artificial intelligence, and advanced manufacturing.

The UK and Canada, with combined economies totalling £4 trillion in value have significantly strengthened their collaboration on science and innovation. These collaborative efforts aim to enhance industry capabilities, drive innovation, and benefit both countries. Australia is capable of similar initiatives.

Recommendation 2: Create A 'Sovereign Capability Superministry' responsible for economy-wide Sovereign Capability Building in industries deemed nationally strategic and that straddle the defence-civilian divide.

It is all very well to advocate for the embrace of 'statecraft' by Australian policymakers. But effective statecraft hinges on the existence of fit-for purpose governance structures that enable policymakers to plan, coordinate and execute sovereign-capability building initiatives effectively.

[31] See Thurbon, Elizabeth, Hynd, Alexander, and Tan, Hao, 'To become a Renewable Energy Superpower, Australia must match its Strategic Vision with a new Green Energy Statecraft', *Asia Society*, 14 December, 2022, <https://asiasociety.org/australia/become-renewable-energy-superpower-australia-must-match-its-strategic- vision-new-green-energy >, (4 March, 2024).

It is important to recognise that Australia's existing techno-industrial governance arrangements are a holdover from a now past era of strategic security, in which purely economic payoffs were the leading prioritised driver of policy. However, the deterioration in Australia's security environment means that, in addition to purely economic benefits, sovereign control over tech capabilities needs to also be taken into account. And, consequently, it is essential to reconsider the layout of our existing governance structures.

The creation of a Sovereign Capability Superministry responsible for establishing and maintaining sovereign tech capabilities would have four central benefits. First, it would create an institution with a clear and focused mandate centred on planning and coordinating sovereign capability building across the defence and civilian sectors. This Superministry would also be tasked with establishing the metrics through which Australia can judge the success of its sovereign capacity building efforts – whether that be expanding the number of local SMEs in targeted industries by a certain percentage, increasing the proportion of government contracts that go to local tech-intensive firms, or the localisation / import substitution of specific technologies and products, or indicators demonstrating the development of a sovereign tech ecosystem (or all of the above).

Equally importantly and secondly, the Superministry would be accountable for implementing this major policy shift across the defence and civilian industries – both in material terms and also in driving a change in mindset among public servants and industry professionals. The buck would actually stop somewhere clearly defined.

Third, the process of establishing this new Superministry would provide new opportunities to establish and agree context around the necessity of prioritising sovereignty goals in the making of tech industry policy.

Finally, the institution would also be responsible for identifying, addressing and resolving the tensions that might arise around dual use technologies under AUKUS and ensuring that we leverage strategic relationships with a wide range of partners – not least Japan, South Korea and India.

Ultimately, establishing a Superministry would go a considerable way towards addressing the limitations of our current highly fragmented and uncoordinated approach to national techno-industrial governance. It would be responsible for streamlining and ensuring synergies between the currently overlapping, competing and confusing range of institutions and initiatives involved in developing sovereign techno-industrial capabilities in the civilian and defence areas from the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the National Reconstruction Fund (NRF) to the Clean Energy Finance Corporation (CEFC), to the manufacturing growth centres and beyond.

Again, Australia does not need to reinvent the wheel here. There exist ample examples among our allies and strategic partners of such institutions coordinating and driving change via a long-term, strategic approach. Historically, South Korea's Economic Planning Board set measurable techno-industrial targets and drove resource allocation during the country's high growth era, and similar institutions have operated effectively across Northeast Asia throughout the Post-WWII era.

Recommendation 3: A Defence Industry Supply Chain Process Authority (DISCPA)

To meet the specific procurement needs of the Australian Defence Forces and the Defence Forces of our allies, the government could consider creating a Defence Industry Supply Chain Authority (that would dovetail and coordinate with the Sovereign Capability Superministry).

A focussed, connected and internationally collaborative Defence Industry Supply Chain Process Authority is currently the missing link in Australia's Defence Industry process. Neither the Capability Acquisition and Sustainment Group (CASG) nor the Industry Capability Network (ICN) are involved in this role.

Distinct from the proposed Sovereign Capability Superministry, DISCPA would be tasked with responsibility for driving sovereign capabilities as they apply to the military procurement arena.

As an internationally accredited independent specialist service provider and facilitator, the The Defence Industry Supply Chain Authority would, however, dovetail with a number of the activities and roles currently carried out by CASG and/or the MSBs and ICN.

Australia has some largely disconnected and non-collaborative cells of legacy industrial capability spread across the country. However, unlike the UK and US, we no longer have a comprehensive connected engine room of small to medium automotive, aerospace, and rail industry contractors with continuous linkages to the primes that are on the same industrial, technological and workforce planning pages, and can be redeployed to national defence imperatives in times of need. In addition, the threats and disruptions to our supply chains have become more prominent when looking at consecutive global events and crises such as COVID-19.

The Global Defence Industry Supply Chain Process is complex. And, nearly a decade on from the cessation of our auto industry involvement, skills and experience in this area is – at best – almost completely stripped of resources. The proposed DISCPA would respond to the challenges faced within the currently fragile nature of our supply chains in the Defence sector specifically.

The required learned process technologies of global connection have also moved on and become more comprehensive and complicated, particularly in the Aerospace and Defence sectors. Traceability, process capability and security, document storage and file access are all by necessity closely regulated. And, as we see from the latest US Senate deliberation on the AUKUS program, require legislative frameworks to cover national security aspects and protocols of knowledge transfer.

We also need to bring our SMEs and microbusiness community into much closer collaborative connection with our Innovation and workforce training and skilling community, our universities, and our scientific and industrial research institutes.

An autonomous DISCPA would be purposed towards providing an independent overview, a regular environmental scan of defence industry procurement opportunities for SMEs, and measurement of performance against defined objectives and strategic goals. DISCPA would also provide a secretariat and secure ITARs compliant repository of technical and technological information associated with Australia's involvement in defence industry supply chain processes.

Additionally, it would be involved in the formulation and local formatting of industrial standards and process templates that provide technological roadmaps and upskilling crossover requirements to assist SMEs. And it would also provide focus on advancing manufacturing technologies and processes, building strong supporting ecosystems, and providing advanced manufacturing education and workforce development. We must build on these efforts to reduce the timelines for producing critical items and significantly increase our ability to manufacture new technologies at speed and scale.

Involvement by the innovation sector is also required for the development of other templates covering technology and manufacturing readiness, risk assessment, circular economy process, whole of life costing and quality assurance, workforce planning, skills development, sectoral up skilling, and cross training.

Fortunately, the UK Automotive, Aerospace and Shipbuilding Industries particularly are very well served and experienced in this area. Commonality and interoperability of supply chain processes for the Hunter Class frigate and AUKUS programs will be imperatives to maximise Australian industry involvement and economic benefits.

There have been, in fact, some highly successful legacy Australian Government funded automotive sector supply chain upskilling programmes based on UK models that could be re-established / repurposed with almost immediate benefits. Our SMEs need to see and understand how they become involved, qualify and progress from here to there.

Recommendation 4: Changes to Commonwealth Procurement Guidelines

We recommend making changes to Commonwealth procurement guidelines and processes to explicitly recognise and support a more strategic, sovereign capability-informed approach to government purchasing.

We have already noted that Government procurement is often used in countries to drive the development of national capability, and the associated resilience, self-reliance and sovereignty. Commentators such as Bitzinger[32] have highlighted how a dependency on foreign suppliers creates vulnerabilities that can be avoided through local production.

Given the trends in global technology development, the capability and capacity of the domestic tech sector is therefore a driver in both national economic outcomes and the reduction of strategic risks. In times of low strategic risks, where we might have warning time within which to respond, the focus can be predominantly on the economic output as that is where the maximum benefit from investment will be derived.

In times of greater risk, where warning time may have evaporated and where the risk of conflict is more real, the focus must shift towards the realisation of strategic benefits as that is where the maximum benefit of investment will be derived.

Moreover, as the strategic risk increases, the value of sovereignty also increases. Stephen Krasner,[33] a renowned sovereignty scholar, as described sovereignty as having the major elements of control, authority, non-intervention, recognition and territoriality. In the Australian policy discussion on sovereignty, the focus tends to be solely on the territorial aspects and the generation of jobs, rather than on the one that really matters, the ability to control.

In the Australian context, there is no policy development that provides the context for sovereignty, and hence provides the basis for the development and implementation of policy tools that work towards the attainment of sovereignty goals in policy. The Australian tech sector suffers from this lack of context, and decision-making is inhibited.

As a consequence of the lack of context, the potential value to be generated by Australian tech companies is primarily judged by contribution to short term employment rather than including consideration of elements of sovereignty and the mitigation of strategic risk.

As discussed in the recent Defence Strategic Review (DSR),[34] the current geopolitical environment has deteriorated, the strategic risks have increased and, consequently, it could be expected that the Government approach to the development of the tech sector will have altered commensurately. Sadly, this is not the case.

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[32] Bitzinger, Richard A. 'Comparing Defense Industry Reforms in China and India', Asian Politics & Policy 7 (4), 2015, 531-553.
[33] Krasner, S. *Sovereignty: Organized Hypocrisy*, (Princeton, NJ: Princeton University Press, 1999).
[34] Department of Defence. 'National Defence: Defence Strategic Review 2023', Department of Defence, 2024, <https://www.defence.gov.au/about/reviews-inquiries/defence-strategic-review > (4 March 2024).

The Australian Government's current procurement policy settings, largely as articulated in the Commonwealth Procurement Rules (CPR)[35] are not consistent with the DSR and actively discourage the development of small companies in the tech sector. At a time when strategic warning time has evaporated, and when Australia requires the development of asymmetric capabilities for national security, capabilities that would typically be developed by the tech sector, decision-makers continue to focus primarily on the economic aspects of procurement.

The Value for Money (VFM) requirements of the CPR that have been developed for a more benign strategic environment have not been amended to allow for changed circumstances and inhibit decision-makers to factor in the strategic benefits that might be obtained from developments in the tech sector.

As the development of an industry sector requires investment, and as funds are finite, it will be necessary to prioritise those parts of the tech sector that are considered to have the greatest contribution to meeting national goals. As discussed above, given the current geopolitical circumstances, those goals are likely to be strategic in nature.

This will not be an easy task, and there will be elements within the economy who will complain about being "left out" or ignored. Whilst the reasons for prioritisation may be sensitive, it will be important that the Government explain as much as possible the selections that have been made.

To address the issues outlined herein, the Committee could consider the following recommendations relating to Commonwealth procurement:

4. 1 That the contextual basis for sovereignty in the tech sector (and other sectors) is developed and clearly articulated in Government policies relevant to both the defence and civilian techno-industrial arenas.

4.2 That the Commonwealth Procurement Rules be reworked to explicitly include strategic factors within Value for Money considerations.

4.3. That activities and technologies within the tech sector be prioritised so that investment can flow where it will reap the most benefit.

4.4 That the Government explain as much as possible the reasons for prioritisation.

[35] Department of Finance 'Commonwealth Procurement Rules', *Department of Finance*, 2024, <https://www.finance.gov.au/government/procurement/commonwealth-procurement-rules/value-money > (4 March, 2024).

Recommendation 5: Tech Bridge Initiative

To maximise opportunities for international cooperation, we recommend establishing a Tech Bridge Initiative to match the initiatives of our strategic partners and allies (**Terms of Reference H**).

Both the US and UK have already established "Tech Bridges" across the USA, UK and Japan.[36] These have been in place since 2020. Australia and its universities play an important role in supporting defence innovation in all its States and Territories. Therefore, if it has not already done so, the Commonwealth should propose the establishment of "Tech Bridge" partnerships and teaming together with its AUKUS partners.

[36] See e.g. Royal Navy, 'New London innovation hub will see Royal Navy and US Navy embrace technology together', *Royal Navy*, 14 June, 2022, <https://www.royalnavy.mod.uk/news-and-latest-activity/news/2022/june/14/220614-london-tech-bridge-launch > (4 Marh, 2024); Easley, Mikayla, 'U.S., Royal Navies Cut Ribbon at London Innovation Hub', *National Defense*, 20 July, 2022, <https://www.nationaldefensemagazine.org/articles/2022/7/20/us-royal-navies-cut-ribbon-at-london-innovation-hub>, (4 March, 2024).