THE NAVY

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THE JOURNAL OF THE NAVY LEAGUE OF AUSTRALIA

AUSTRALIA'S PIVOTAL ROLE IN REGIONAL MARITIME SECURITY

THREE SHIPS THAT CAUGHT US NAPPING

REAL-TIME MILITARY GESTURE RECOGNITION

THE VIRGINIA CLASS SSN

125 YEARS ANNIVERSARY
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Front cover:

HMCS CHARLOTTETOWN sails past HMAS TOOWOOMBA patrolling the South China Sea, May 2026. (Image LSIS Zac Dingle)

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USS OMAHA MH-60R Seahawk conducts fly past of HMAS SYDNEY RPD 25-2. (Image LSIS David Cox)

MAY YOU LIVE IN INTERESTING TIMES

May you live in interesting times is the old Chinese (actually English) curse. It would appear (from what is happening today), that we certainly live in interesting times! As reflected in our four papers, the *President's Page, Flash Traffic*, *Red Duster* and *Directed Telescope.* "Interestingly", both Red Duster and Directed Telescope apply emerging Execution Economics (incorporating *Decision Economics* and *Decision Sovereignty*) and 21st Century *Human-Machine System* logic to examine two critical Defence and Security issues – namely, the generation of a commercially viable Merchant Fleet and the announced $11Billion *Collins-class* Life of Type Extension (LOTE). Seeking to cover the gap between AUKUS 1 (the 3 *Virginia-class* (ex-USN) submarines) and the five AUKUS (2) SSN submarine builds, also discussed by the President. *Flash Traffic* continues its assessment of Indo-Pacific navies, AUKUS & LOTE, China and the PLAN, and European naval development before providing a devastating and tragic critique of the UK and its Royal Navy.

Responding to these new developments and with years of technical experience in Defence, including working on Test and Evaluation for the excellent (as it turns out) *Collins-class* submarine, the President of the NLA, Mr Mark Schweikert, opens this issue with a Paper 1, entitled appropriately enough: *The Virgina-class* SSN.

Schweikert notes that: "today, the *Virginia-class* is not only the USN's principal attack submarine, but also the centrepiece of AUKUS Pillar I and the future of Australia's sovereign nuclear powered submarine capability. Its story is one of adaptation, industrial resilience, and the quiet confidence of a platform that has repeatedly proven itself in the world's most demanding undersea environments". He concludes (while also including appropriate analysis of the *Virginia-class* and comparison with the SSN(X)):

> As Australia embarks on its own nuclear powered submarine journey under AUKUS, the *Virginia-class* stands not only as a proven platform but as a symbol of the deepening strategic partnership between the US, UK, and Australia. It is a submarine born of post Cold War uncertainty, matured through two decades of operational experience and now poised to shape the future of allied undersea power.

Readers may wish to be warned – formulas to substantiate logic are applied in one of the papers, *Red Duster* and *Directed Telescope.* The formulas support the written argument. If you do not like math then ignore and read the text! Longstanding readers will recall that every so often, *THE NAVY* presents a more technical and scientific paper. Please do not be overly concerned, you will not be examined on completion of the read and normal service will be resumed. Notwithstanding, the logic, science and technologies presented are cutting edge.

Paper 2 by Commander Walter Burroughs RAN (Ret) – *Three Ships that Caught us Napping* (third prize, essay non-professional entry) is highly pertinent – addressing the three ships that came into or near Australian waters between 1940 and 1943 namely ORION, PINGUIN and KOMET. Including the battle between HMAS SYDNEY and HSK KORMORAN, the actions of the other ships have largely been excluded. Overall, these operations which were carefully orchestrated – causing disruption to shipping schedules and leading to the reallocation of naval resources which awoke Australian naval authorities from their slumber. These remain very pertinent to Australia today, as articulated in paper 4 and Red Duster. Walter concludes, inter alia:

Regardless of our allegiances there was much to admire in the way these operations were planned and executed. The ships were handled by skilful navigators who added a touch of brilliance in the conduct of their operations. We had much to learn then, and still today, on the need for control of our own coastal waters.

The passage and operations of the German raiders into the Indian and Pacific Oceans was meticulously planned and well executed. They ranged from the Arctic to the Antarctic and approaching the Antipodes from both east and west caused great confusion:

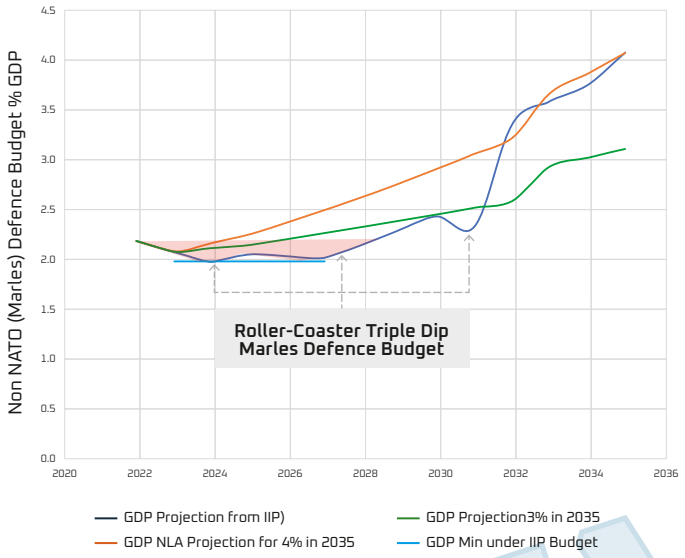
> *Our coasts seemed devoid of meaningful patrols either from the air or sea allowing enemy minelaying to be conducted with impunity.*

The third paper – *Australia's Pivotal role in Regional Maritime Security needs an "Inside-Out" Approach* (third prize, essay competition, professional entry) is by longstanding contributor Captain George Galdorosi USN (Ret). In many ways, George echoes aspect of Commander Burroughs paper:

> As the only country comprising a continent surrounded by water, Australians are living what Kaplan writes about, and they recognise that the 21st Century represents a decided shift "from Mackinder to Mahan." Said another way, perhaps the most profound difference between the 20th and 21st centuries is this: Europe is a landscape, East Asia is a seascape. The nexus of world power is shifting dramatically to the Asia-Pacific region and Indo-Pacific Ocean. As the only country-continent fronting both the Indian and Pacific Oceans, Australia is a critically important player in this region. This paper explores an "Inside Out" approach to Australian Maritime Security.

Galdorosi believes that, as for regional maritime security, uncrewed surface vessels can be employed further afield, aside crewed ships to perform the missions listed immediately above. He notes the

DPM and Minister for Defence Richard Marles and Minister of Defense for Japan Koizumi Shinjiro on board Japanese Ship KUMANO signing Mogami Memorandum. (LS James McDougall)



United Kingdom's First Sea Lord recently announced that the United Kingdom's next Pacific carrier deployment (see *Flash traffic*) will feature uncrewed ships in the strike group. In like manner, the U.S. Navy has plans to deploy uncrewed surface vessels with its carrier strike groups by 2027.

And now for something completely different. Professor Saied Nahavandi AO – a long-standing supporter of Defence and the RAN – offers a paper entitled *Real Time Military Gesture Recognition for Uncrewed Vehicle Operations,* examining the emerging field of *Human Machine Systems* (the new HMS?) and *HM Interface* (HMI). Saied contends that:

> Military forces are deploying autonomous vehicles faster than they can train operators or upgrade control infrastructure. The bottleneck isn't the vehicles but human-machine interface (HMI). Current interfaces including joysticks, keyboards, touchscreens, assume operators have free hands, quiet environments, and one-vehicle focus. Reality is that operators in protective gear, managing multiple assets, operating under tactical constraints.

Professor Nahavadi's / Swinburne University's work eliminates training bottleneck via gesture-based control that runs on ordinary computers, trains on limited data, and works immediately across different operators. It also, for Navy, opens two opportunities. The first for the handling and recovery of HMI assisted aviation assets to small (postage stamp) moving decks. The second, for HMI (EW quiet line of sight) assisted semaphore relays between ships and ship to shore in all conditions and the potential relaying or rebroadcasting of messages from airborne assets, including UAV. He concludes that:

- the demonstrated gesture recognition system meets the practical constraints of USV operations: 91% accuracy, real-time performance and standard hardware compatibility.
- Training requires minutes, not days.
- Future development focuses on expanded gesture vocabularies, integration with Navy control systems, and validation in full maritime conditions including protective equipment, deck motion, and multi-operator scenarios.

CUTS AND MORE CUTS

An authoritative source commented recently that the "Honourable Richard Marles [DPM and part-time Minister for Defence] is not interested in Defence but votes – he will never resign" (unlike his UK counterpart). It shows. In a devastating campaign being led by a "another party", the Government is being called out for being "economical with the truth". Earlier in the year, Marles sought to claim Defence spending was 2.8% GDP by including pensions and other civil infrastructure investments. This along with "NATO accountancy measures" has been called out by US Secretary of State Marco Rubio as "being creative accounting" when figures "inappropriately include items like military pensions". He argued "that pension payments do not reflect true operational readiness, procurement, or direct defence capabilities". Expressing that "Allies need to take on more actual capability to share the burden of global security". Quite so. Instead, as the NLA President outlines, Minister Marles announced $10 billion in "reprioritisation" or further cuts.

Under the old Defence accounting measures, this means Defence will encounter not a double dip recession but a triple dip, assuming of course the additional funding in the Forward Estimates kick in, 2027- 2032 – under a potential new Government. The impact on Defence is immeasurable. Even if this funding kicks in, $10B cuts over the next few years will impact the budget in 2031/32. AUKUS plus conventional defence (necessary to sustain deterrence and AUKUS) only kicks in at 3% old-money GDP (3.8% Marle's accounting). The steep recovery in 2032 projected by the 2023 budget to 3.5% (real GDP) is now a miracle. The Marles' projected real-3.0% by 2033 is also most unlikely. Yet, other than in *THE NAVY,* this story is not being told. It is our country, men and women who will suffer from these sleights of hands. The Pollies will be long gone… ■

ANNUAL GENERAL MEETING

THE NAVY LEAGUE OF AUSTRALIA

BY ORDER OF THE FEDERAL COUNCIL,
MARK SCHWEIKERT, PRESIDENT

Notice is hereby given that the Annual General Meeting of the League will be held on Friday 30th October 2026 at the Navy League of Australia, WA Division headquarters, Lot 7773 Riverside Road, East Fremantle WA 6158 at 09:00.

BUSINESS

1. To confirm the Minutes of the previous meeting, held on 25th November 2025.
2. To receive the Annual Report of the Federal Council.
3. To receive the financial statements for the year ended 30 June 2026.
4. To elect Office Bearers for the year 2026-27, as follows:
   a. Federal President
   b. Two Federal Vice Presidents
5. To appoint Office Bearers, as follows:
   a. Honorary Federal Secretary
   b. Honorary Federal Treasurer
6. Nominations for these positions can be lodged with the Honorary Secretary Brad Barrett at bradbarrett68@gmail.com by 16th October 2026.
7. To appoint the Company Auditor
8. General Business
   a. To deal with any matter notified in writing to the Honorary Secretary by 16th October 2026.

All members of the League are welcome to attend; please register your attendance with the Honorary Secretary at the above address by 16th October 2026.

THE NAVY LEAGUE OF AUSTRALIA
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NLA STATEMENT OF POLICY

CURRENT AS AT 1 APRIL 2026

For the maintenance of the Maritime wellbeing of the nation. The Navy League is intent upon keeping before the Australian people the fact that we are a maritime nation and that a strong Navy and capable maritime industry are elements of our national wellbeing and vital to the freedom of Australia. The League seeks to promote Defence self-reliance by actively supporting defence manufacturing, research, cyberspace, shipping, transport, and other relevant industries.

Through geographical necessity Australia's prosperity, strength, and safety depend to a great extent upon the security of the surrounding seas and island areas, and on unrestricted seaborne trade.

The strategic background to Australia's security is changing and, in many respects, has become much less certain following increasing tensions, particularly in East Asia involving major powers, and in Europe and the Middle East. The League believes that Australia should rapidly increase the capability to defend itself, paying particular attention to maritime defence.

The Navy League:

- Believes Australia can be defended against attack and that the prime requirement of our defence is an evident ability to control the sea and air space around us and to contribute to defending essential lines of sea, undersea and air communication with our Allies and trading partners.
- Supports a continuing strong alliance with Five Eyes, AUKUS and QUAD partners.
- Supports close relationships with all nations in our general area particularly PNG, Indonesia, the Philippines and the South Pacific Island States.
- Advocates the acquisition of the most capable modern armaments, surveillance systems, sensors, and decision support to ensure decisive advantage over forces in our general area.
- Advocates a strong deterrent element in the ADF.
- Believes the ADF must be capable of protecting commercial shipping both within Australian waters and beyond, in conjunction with allies.
- Endorses the development of the capability for the patrol and surveillance of all of Australia's ocean areas, its island territories and the Southern Ocean.
- Supports Government initiatives for rebuilding an Australian commercial fleet capable of supporting the ADF and the carriage of essential cargoes to and from Australia including in times of conflict.
- Supports Government intention to increase maritime preparedness and increase defence expenditure to 4.0% of GDP.
- Urges the strength and capabilities of the Army (including particularly the Army Reserve) and Air Force be enhanced, and the weaponry, intelligence, surveillance, reconnaissance, cyberspace and electronic capabilities of the ADF be increased, including an expansion in its UAS, UUV capability.
- The Navy League believes maritime Defence requires a joint integrated endeavour across Navy, Army and Air Force.

As to the RAN, the League, while noting vital national peacetime tasks conducted by Navy, including border protection, flag showing/diplomacy, disaster relief, maritime rescue, hydrography and aid to the civil power:

- Supports the maintenance of a Navy capable of effective action in hostilities and advocates a build-up of the fleet and its afloat support elements to ensure that, in conjunction with the Army and RAAF, this can be sustained against any force which could be deployed in our area of strategic interest.
- Considers that the level of both the offensive and defensive capabilities of the RAN should be strengthened, in particular with a further increase in the number of surface combatants noting the need to ensure indispensable fuel and other supplies, and the many other essential maritime tasks.
- Recommends bringing forward the start date of the destroyer replacement program to both strengthen the RAN and mitigate the local industry capability gap.
- Recommends the urgent replacement and increase in numbers of the current mine-countermeasure force.
- Strongly supports the acquisition of nuclear-powered submarines.
- Recommends very early action to provide a strategic submarine base on the Eastern seaboard and further development of Western Australia facilities.
- Notes the potential combat effectiveness and flexibility of the STOVL version of the Joint Strike Fighter (F-35B Lightning II) and supports further examination of its application within the ADF through the LHDs.
- Supports the development of Australia's defence industry, including strong research and design organisations capable of the construction and maintenance of all warships, submarines, and support vessels in the Navy's order of battle, and welcomes the Government decision to provide a stable and continuous shipbuilding program.
- Advocates the retention in maintained reserve of operationally capable ships that are required to be paid off for resource or other economic reasons.
- Supports a strong and identifiable Naval Reserve with consideration as to remobilising the Port Divisions in support of securing the maritime and homeland base.
- Promotes and supports the Australian Navy Cadets organisation.
- Advocates urgent Government research and action to remedy the reported serious naval recruiting and retention problem.

The League:

- Calls for a bipartisan political approach to national defence with a commitment to a steady long-term build-up in Australia's defence capability including the required industrial infrastructure.
- Believes that, given leadership by successive governments, Australia can defend itself in the longer term, within acceptable financial, economic and manpower parameters.

THE NAVY LEAGUE OF AUSTRALIA

KEEP WATCH
EDUCATE; ADVOCATE; SUPPORT

SUBMARINES

The announcement that Australia's third *Virginia-class* submarine under AUKUS will also be a used U.S. Navy boat, rather than a new build, is in fact, a positive development. Commonality across all three platforms will significantly reduce cost, complexity and risk during introduction into RAN service. Training pipelines, spare parts, maintenance regimes, tactics, techniques and procedures will now be uniform across the initial fleet, accelerating operational readiness. It is also highly likely that these submarines will be commanded by Australian officers who have already served aboard them during the transition period, with many of the future crew having done the same. This continuity gives Australia a deeper understanding of each boat's history, performance and sustainment profile before they ever arrive in RAN colours.

For the Navy League, who have advocated for nuclear-powered submarines since the 1980s, this evolution is welcome and will help smooth the path toward the future *AUKUS-class* submarine. However, emerging concerns in the United Kingdom about their ability to meet their end of the AUKUS industrial commitment must be addressed quickly. Any uncertainty carries strategic consequences and risks undermining the workforce and industrial momentum Australia is now building.

One alternative pathway that deserves serious consideration if the UK is unable to meet our expectations is a U.S.–Australia co-production model for the future USN SSN(X). At present, this is constrained by the U.S. Jones Act, a century old law requiring vessels operating between U.S. ports to be U.S.-flagged, U.S.-owned, U.S.-crewed and, critically, 100% U.S.-built. Under current interpretations, no portion of a vessel's hull or structural fabrication may occur overseas. If the United States were to amend the Act's strict 'U.S.-built' definition, say under an AUKUS Pillar I provision, allowing trusted partners to produce a defined share of hull modules, pressure hull sections or non-nuclear structural blocks, it would enable Australia to contribute directly to SSN(X) production through its Adelaide submarine building facility. Such a shift would expand total industrial capacity, relieve bottlenecks in U.S. nuclear shipyards and increase the number of submarines delivered each year. Even a modest relaxation would create a scalable, multi-national production model that accelerates output while preserving U.S. control of nuclear propulsion and final assembly and making it less costly and time consuming for Australia's submarine shipyard.

Alternatively, this co-production model could be the saviour of the Australia-UK submarine building program.

NDS / IIP

The Government's release of the 2026 National Defence Strategy (NDS) and Integrated Investment Program (IIP) should have been a moment for genuine confidence, given its stated commitment to strengthening defence and the accelerating strategic pressure posed by China's unprecedented military buildup. Instead, the fine print tells a more troubling story.

Yes, the renewed emphasis on seabed warfare and Integrated Air and Missile Defence (IAMD) is sensible, and overdue. But these gains come at a very real cost. The Minister's announcement of $10 billion in "reprioritisation" (a polite political euphemism for cuts) signals yet another round of robbing 'Peter to pay Paul'. When Defence officials were pressed in Senate Estimates recently to identify which programs would be cut, not one could provide an answer. That should alarm anyone who cares about capability continuity or strategic coherence.

Equally concerning is the Government's proposal for a new private sector financing model to fund future ADF capabilities. When questioned by Shadow Defence Minister Senator James Paterson at the same Senate Estimates Hearing, officials again could not explain how such a model would operate, who would be involved, what risks it would shift, or what it would ultimately cost taxpayers. For a reform of this scale, the absence of even basic detail is extraordinary.

One is left hoping the paper the NDS and IIP were printed on doesn't end up costing more than the commitments they contain.

CHINA PROGRESSING ON

Recent satellite imagery collected in May from Jiangnan Shipyard in China has revealed what appears to be a new Chinese sail-less, or finless, submarine, marking one of the most unconventional PLA-N undersea designs to date. Estimated at around 120 metres in length with a highly streamlined hull and X form stern, the vessel lacks the traditional sail used to house masts and periscopes, a configuration that reduces drag, improves manoeuvrability, and lowers acoustic signature. Analysts assess the design as either a high speed interceptor, a specialised seabed warfare platform, or a testbed for next generation hydrodynamics, underscoring China's willingness to pursue non-traditional submarine architectures as it accelerates its undersea modernisation program.

A Seahawk fitted with an NSM anti-ship missile as part of a ground fit check certification activity. Adding this already in service missile to the capability of the 36 SH-60 Romeo Seahawks in RAN service would provide a massive lethal, precision, standoff capability the RAN has never seen. (Kongsberg Australia).

This development lands within the context of what the then Commander of U.S. Indo Pacific Command, Admiral Philip Davidson, said in 2021 when he issued a warning that is now known as the "Davidson Window." In testimony to the U.S. Senate, he assessed that China could achieve the military capability to coerce or forcibly take Taiwan within six years, a period now widely described as the 2021–2027 window. Importantly, the concept does not predict an invasion; rather, it identifies a period of heightened strategic risk in which China's capability, confidence, and political intent may converge. For the United States and its allies, it is a warning to accelerate deterrence in order to avoid a war.

Against that backdrop, the slow pace of the ADF's force structure improvements is increasingly difficult to ignore. Despite the Government's rhetoric about "record" defence spending, the funding uplift does not meaningfully arrive until the end of the decade. In fact, the most recent budget papers show a reduction in the defence budget over the next 12–24 months, precisely when the Davidson Window is at its most acute.

It is little wonder that commentators and academics warn Australia is "sleepwalking into war." Their arguments are becoming harder to dismiss when the strategic clock is ticking faster than the capability pipeline.

One area where Australia can act quickly is maritime strike. The League has consistently argued that one of the fastest, cheapest and most practical ways to put additional lethality to sea is to arm the *MH 60R Seahawk with the Naval Strike Missile* (NSM). The NSM is a high-subsonic, sea-skimming missile that avoids detection through stealth shaping, passive sensors and agile manoeuvrability, allowing it to approach defended targets with minimal warning. With a range of more than 200 kilometres—greater still when launched from an aircraft—it carries a 120 kilogram titanium-cased penetrating blast-fragmentation warhead engineered to defeat the internal structures and vital systems of modern warships.

Its passive imaging infrared seeker, paired with autonomous target recognition, allows the NSM to classify and select targets based on thermal and shape characteristics rather than radar emissions, significantly reducing vulnerability to jamming and decoys. Supported by GPS-aided inertial navigation and terrain reference updates, the missile can approach from unpredictable vectors before executing terminal evasive manoeuvres, ensuring precision even in dense maritime environments.

Crucially, the NSM is already in service with both the RAN and USN, and ground-fit checks on the Seahawk have been completed with certification achieved. All that remains is for one of the Seahawk user nations—Australia or the United States—to conduct flight trials and live-fire testing to certify the capability. In a period defined by urgency, this is a rare example of a near-ready lethal option hiding in plain sight.

June 2026

Mark Schweikert
President, Navy League of Australia
president@navyleague.org.au

THE LIQUIDATION OF SOVEREIGN SHIPPING: A CALCULUS OF AUSTRALIA'S MARITIME DELUSION

The revival of a sovereign merchant shipping capability remains the most critical, yet systematically botched, geopolitical dilemma facing modern Australia. As an island nation dependent on maritime logistics for 99 per cent of its trade volume, our absolute reliance on foreign-flagged vessels exposes an acute vulnerability to supply chain coercion, regional conflict, and grey-zone interdiction.

By applying *Execution Economics* Logic, it is possible to expose why this protectionist framework is guaranteed to collapse, while mapping a rigorous, market-driven alternative to salvage Australian sea power.

THE STASISM TRAP: WHY THE STRATEGIC FLEET WILL NOT WORK

The traditional *Baird Maritime* critique operates on a foundation of historical realism and free-market pragmatism. When translated into core operational dynamics, the current policy trajectory exposes a classic *Fritz-Bodrova Decision Congestion* failure, governed by the formula: $(p\_t = \frac{L\_t}{K\_t})$. Here, the incoming signal load (L_t) represents highly volatile geopolitical supply chain threats in the Indo-Pacific. This load is processed through a systemic capacity denominator (K_t) that is fatally constrained by uncompetitive domestic realities.

Chief among these frictions is the rigid regulatory framework enforced by powerful maritime unions, which introduces an operating cost premium of AU$5 million to AU$8 million annually per ship.

When these protectionist inefficiencies are forced onto the matrix, the capacity variable drops significantly relative to the real-world threat environment. This causes decision congestion to spike $(p\_t > 1)$, plunging the entire state-directed enterprise into Stasism (SM_t).

Because the Government views maritime security through a defensive, risk-mitigation lens, it defaults to a restrictive-accountancy 1980s Risk-Based Model (*RBM*). In this framework, the high-leverage Atkinson-Knowles Decision Taking Window (*Dt*) applies: $Dt = \sum_{5}^{10} L\_t / R$

As the cost and regulatory risk denominator (R) explodes under union capture, the operational window approaches zero (*Dt* to 0). Strategy degrades into Nihilism (NI_t).

History confirms this mathematical model. State-directed shipping enterprises, from the colonial lines to the mid-century *Australian National Line* (ANL), routinely mutated into tax-guzzling liabilities because they tried to fight the environment rather than leverage it. Massive commercial carriers are structurally unsuited to serve as nimble, tactical state assets.

By forcing a commercial fleet into existence via artificial subsidies, the state creates a classic *Zombie Organisation* (*Z*): an entity structurally dead D_O and commercially inert yet continually reanimated by endless injections of taxpayer capital.

THE CALCULUS SHIFT: TRANSITIONING TO OPERATIONAL VITALITY

To reverse this terminal decline, Australia must completely abandon the *RBM* subsidy loop and shift to Atkinson's *Trust-Based Model* (*TBM*). The TBM dynamic replaces the division operator with multiplication: $p\_t = L\_t * T$. By treating systemic *Trust* (*T*) as a force multiplier for commercial signal processing, the operational focus pivots from rules-bound friction reduction to velocity amplification.

To achieve this, the government must reform and aggressively market the underutilised *Australian International Shipping Register* (AISR). By stripping away corporate tax liabilities, abolishing payroll tax, and introducing flexible crewing frameworks, the state slashes the fiscal risk variable. According to the AMBA Trust Metric (*T* = 1/R), minimizing risk automatically drives systemic trust upward.

Under the Red Ensign WW2 Poster (Image IWM).

This approach expands the *Decision Taking Window* exponentially. Rather than micro-managing a vulnerable token fleet of 12 ships, a deregulated, tax-exempt AISR would naturally incentivise private maritime operators to flag their vessels in Australia. This strategy could realistically scale the domestic fleet to over 50 commercially viable, blue-water hulls without requiring permanent state handouts.

This structural shift directly impacts the nation's *Adaptability* (AD_{dB}). The current bureaucratised register yields a net-zero decibel rating because its high enforcement rules stifle commercial agility.

Conversely, a reformed AISR delivers a distinct *Agility Gain* (*+3.27 dB*). This gain optimises the relationship between *Shared Awareness* (*SA*) and *Environmental Signal Strength* (*ST*), giving domestic logistics the fluid responsiveness needed to out-pace regional threat cycles.

COMMAND, LEADERSHIP, AND THE "OPTIONALLY ARMED" FLEET

The strategic error of the current policy lies in treating an active geopolitical defence requirement as a static management problem. It relies entirely on *Control & Management* (*CM*), which focuses on rigid compliance loops and narrow administrative bandwidth.

True resilience demands *Command & Leadership* (*CL*), which leverages market agility to build a distributed, highly adaptable maritime network.

This agile command structure allows the implementation of the "optionally armed" merchant ship concept. Rather than building dedicated, hyper-expensive auxiliary hulls, a reformed fleet of 50 commercially thriving AISR vessels would be engineered with standardised, modular structural mount points.

During peacetime, these ships trade globally at zero cost to the taxpayer, gathering vital *Existential* (*human*) *Knowledge* (*EXK*) and maintaining an active human capital pipeline. In a crisis, the state can rapidly step in, requisition the hulls, and outfit them with containerised point-defense weapons and drone-countermeasure payloads.

This strategy satisfies *Ashby's Variety Intercept* $(V = \int DS,\ dt)$, which states that "systemic complexity can only be overcome with adequate behavioural variety". By balancing rigid systemic rules with agile human leadership, the nation protects its true *Decision Sovereignty* (*DS*).

CONCLUSION

Australia cannot subsidise its way to maritime security. The current Strategic Fleet proposal is an obsolete, rule-bound, ALP, unionist 1970s approach that will ultimately lead to institutional stasism.

If we want a merchant fleet that can genuinely withstand geopolitical shocks, we must execute aggressive fiscal deregulation through the AISR. Rebuilding sea power requires replacing protectionist handouts with competitive market choices, unlocking true *Vitality* for our sovereign shipping industry. ■

THE VERY WORST OF ALL WORLDS – THE $11BN LOTE EXTENSION

Rather than procuring six *Taigei-class* submarines in support of the AUKUS Build and Procurement *(Virginia)* Programs, the Government is pursuing a high risk $11B *Collins* Life of Type Extension (LOTE). The result is a calculated risk of a 40% cost blowout ($147.2 Billion) on the $368 Billion AUKUS Program, which is Critically High (exceeding 85% probability) due to systemic misalignment between program lifecycles, acute gaps in *Sovereign Knowledge* (SK), and compounding scheduling friction in the critical 2032–2038 window.

The evaluation of the three strategic profiles against 2025 *Human-Machine System* (HMS) and 2012 *Research Adapt Design/Strategize Engineer/Operationalize Reflect* (RADER/RASOR) logic confirms that current reliance on the *Collins-class* LOTE program compresses operational velocity, suppresses *Decision Sovereignty*, and drives up non-linear risk factors.

COMPARATIVE EVALUATION MATRIX

The three procurement profiles exhibit starkly different performance parameters when evaluated against the *RADER/RASOR* framework:

Evaluation Metric / Profile	Profile 1: Baseline Collins LOTE ($11B, 2026–2040)	Profile 2: Japanese *Taigei-Class* Buffer ($12B, 2026–2032)	Profile 3: Integrated AUKUS Build ($368B, 2032–2040+)
S-Curve Fit & Alignment	Flatted curve; delayed production peak	Optimised midpoint	Highly compressed, steep growth
Sovereign Knowledge (SK)	Low (32.5% to 46.5%)	High (54.5% to 78.5%)	Fragile (54.5% baseline)
Sovereign Risk (SR)	Critical (53.5% to 67.5%)	Low (21.5% to 45.5%)	Severe (45.5% without expansion)
HMS Balance (Human vs Machine)	Machine-heavy maintenance drain	Human-centric Design Authority (DA)	High-risk manufacturing dependency
Decision Sovereignty Velocity	Degraded (14.09 to 20.16)	Accelerated (23.63 to 34.03)	Highly volatile or stalled
2032–2038 Vulnerability	Maximal operational friction	Minimal; serves as insulation	Maximum exposure to capability gaps

ANALYSIS OF THE THREE PROFILES

1. Profile 1: *Collins-class* LOTE Program ($11 Billion, 2026-2040)

- **System Failure Mode:** Locks the nation into an *Adapt-Design (AD) Only or AD + Maintain* configuration. This caps *Sovereign Knowledge* at a maximum of 46.5%, generating an inverse Sovereign Risk of 53.5% to 67.5%.
- **Velocity Penalty:** The derivative profile drops to its lowest peak vector velocity factor (14.0896). This calculation mathematically models a heavily disabled decision-taking architecture.
- **Sovereign Friction:** Resources are diverted entirely toward propping up aging platforms (Machine-centric support at 54% asset weight) rather than cultivating a sovereign Human Design Authority (which requires 74% human logic allocation).

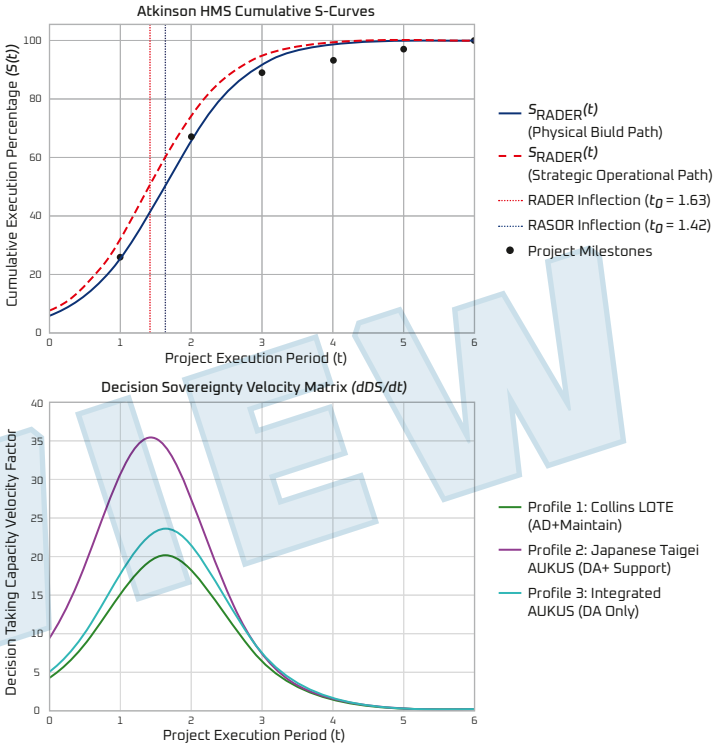
2. Profile 2: Japanese *Taigei-Class* Buffer ($12 Billion, 2026-2032)

- **System Optimisation Mode:** Transitions the ecosystem into a *Design Authority (DA) + Support* configuration. This elevates *Sovereign Knowledge* to its theoretical peak of 78.5% and drives *Sovereign Risk* down to a manageable 21.5%.
- **Velocity Multiplier:** Maximises the peak vector velocity factor to 34.0317. It acts as a structural trust multiplier, allowing rapid, self-directed engineering changes.
- **Strategic Alignment:** Shifts the midpoint inflection window forward. This provides an operational runway that absorbs design shocks before AUKUS production accelerates.

3. Profile 3: Integrated AUKUS Build ($368 Billion, 2032-2040+)

- **Systemic Stress Mode:** Features an aggressive, steep growth rate modifier. This trajectory demands an immediate transition from an un-evolved industrial base to complex manufacturing.
- **Sovereign Risk Gap:** If executed while concurrently running the *Collins* LOTE, the program operates with a baseline DA-Only risk coefficient (45.5%).
- **Resource Cannibalisation:** The system cannot simultaneously sustain a 21.5% Manufacturing (Machine-centric) load for AUKUS and a 24% Support (Fit/Maintain) load for the *Collins-class* without causing an acute human capital deficit.

Figure 1: Conflicting Programs



VISUAL ANALYSIS OF THE RADER & RASOR PROFILES

The generated plots (figure 1) visually demonstrate the mathematical friction and velocity deltas within the Human-Machine System (HMS) framework:

1. Upper Plot: Cumulative S-Curves

- **The Baseline Points:** Marked as black milestones, tracking the cumulative physical progression from 0% to 100%.
- **Build vs. Strategic Divergence:** The Blue line maps the physical execution path, showing an inflection midpoint. The Red dashed line captures the front-loaded analytical strategic layers, pulling the inflection point leftward.

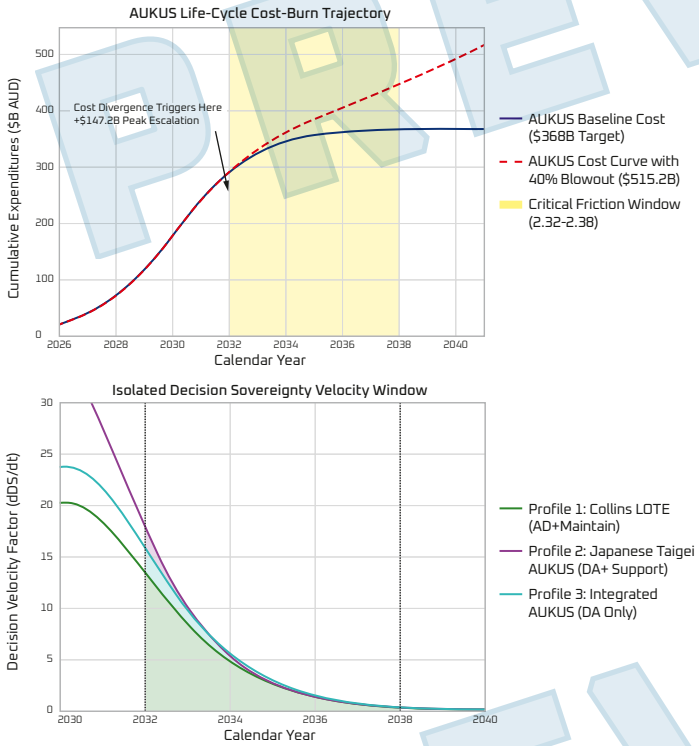
- **Strategic Friction Gap:** The horizontal distance between these curves models the structural strain when physical building lags behind strategic planning.

2. Lower Plot: Decision Sovereignty Velocity Matrix

- **Profile 1 (*Collins* LOTE – Green):** Shows the lowest and flattest trajectory. Due to high Sovereign Risk (53.5%), its peak decision-taking velocity stalls.
- **Profile 2 (Japanese Taigei Buffer – Magenta):** Reaches the highest mathematical peak. This faster, steeper curve is accelerated by its front-loaded inflection, proving how maximising Sovereign Knowledge serves as an industrial efficiency multiplier.
- **Profile 3 (AUKUS Build Baseline – Cyan):** Represents a volatile middle path peaking at a low level. Without the design authority buffer of Profile 2, its velocity remains depressed, rendering it highly vulnerable to scheduling blockages during the high-stress 2032-2038 transition phase.

COST-BURN OVERLAY AND BLOWOUT MANIFESTATION

Figure 2: Cost Burns and Blowouts



The upper plot (figure 2) visualises the structural divergence between the $368 Billion AUKUS Baseline and the projected 40% blowout ($515.2 Billion).

- **The Point of Manifestation:** The spending trajectories track closely until 2032. At this inflection mark, the dual-strategy strain becomes active.
- **Non-Linear Escalation:** Because the system is forced to run the *Collins* LOTE while trying to integrate the incoming $13.9 Billion *Virginia-class,* the resource grid locks up. The red dashed blowout curve demonstrates how cost risks do not accumulate linearly; instead, they experience a sharp geometric acceleration between 2032 and 2038 due to idle industrial capacity, schedule sliding, and premium labour costs.

Exact Integrated Area under Velocity Curves (2032–2038 Window)

The cumulative *Decision Sovereignty* (DS) generated within the critical transition gap, velocity profiles are generated across the isolated period in the window.

Structural Interpretation of the Definite Integrals

- **The LOTE Deficit:** Profile 1 generates the lowest integrated value (9.5581). This indicates that during the exact six-year window when the nation needs to make and take critical decisions regarding sovereign nuclear infrastructure, its decision-taking capacity is severely restricted. This reduced capacity is a direct mathematical outcome of an *Adapt & Design (AD) + Maintain* footprint, which yields an elevated Sovereign Risk.
- **The Buffer Cushion:** Profile 2 delivers the highest decision output within the window (11.2300). By front-loading strategic preparation via a *Design Authority (DA) + Support matrix*, it maximises the area under the curve early on. This creates an operational buffer that protects the broader AUKUS strategy from cost overruns.
- **Profile 3 Imbalance:** While Profile 3 shows a strong mathematical area (11.2025), it lacks the underlying industrial baseline to sustain it. Attempting to force this high velocity without the capacity provided by Profile 2 leads directly to the cost escalation shown in the left plot.

QUANTIFICATION OF THE 40% COST BLOWOUT RISK

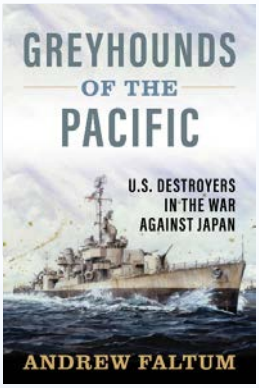
The mathematical models indicate that a *40% cost blowout ($147.2B)* is structurally built into the current dual-strategy timeline for the following reasons:

1. **Confused Build Staging:** Running the LOTE program until the late 2030s forces an overlap with the AUKUS infrastructure ramp-up. This creates a direct clash between physical execution program and the analytical strategic layers, flattening the actual S-curve and delaying asymptotic stability.
2. **The 2032-2038 Resource Chasm:** During this window, the velocity of decision-taking is severely compromised. Decisions regarding the complex integration of the 2+1 *Virginia-class* submarines ($13.9B) will degrade because the *Human Design Authority* logic (40.355% baseline weight) is starved of skilled personnel.
3. **Compounding Delay Multipliers:** In high-risk human-machine systems, when Sovereign Risk exceeds 50%, the resulting delays propagate non-linearly. A minor delay in manufacturing infrastructure triggers a cascading, multi-year delay in delivery schedules, rapidly translating to billions of dollars in idle capacity costs and inflationary adjustments.

CONCLUSION

This is before we even think about placing our sailors in an excellent 1990s submarine, fit for the 2000s and running it on 15 years beyond its design life in a 21st Century dominated by great power competition, drones, and AI. A submarine designed by the great grandparents of the 2030s crew, built by their grandparents, and first crewed by their parents. There is no technology or steel that lasts that long…

The lack of a true *Sovereign Design Authority* path—which a *Taigei-class* procurement would have anchored as argued for by then PM Tony Abbott in 2015 (before being rolled)—leaves the $368 Billion AUKUS program highly vulnerable to industrial gridlock. Without this *(Taigei-class)* buffer, the AUKUS build strategy remains conceptually fractured, exposing the Commonwealth to a catastrophic $147.2 Billion cost escalation driven by an inability to exercise timely, independent decision-making and decision-taking during the high-stress 2032-2038 transition phase. ■



GREYHOUNDS OF THE PACIFIC

U.S. Destroyers in the War Against Japan

By Andrew Faltum

USNI: 9 June 2026
ISBN-13: 9798892410113
Hardcover: $75.00

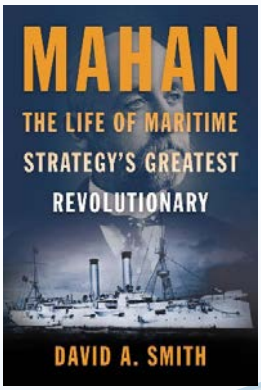
Andrew Faltum served as an air intelligence officer on board USS MIDWAY home ported in Yokosuka, Japan, before joining the Navy Reserve, where he retired as a commander. He is the author of *The Independence Light Aircraft Carriers* and *The Essex Aircraft Carriers*. His expertise and firsthand experience bring unique insights to *Greyhounds of the Pacific*, making it a valuable resource for understanding World War II destroyer operations.

This is an important counter-narrative. For too long, the history of WW2 and indeed many of the lessons learned have been derived from the European (Atlantic) rather than the Indo-Pacific-Antarctica (IPA) Theatre. Recognising this divergence, the Greyhound (Destroyers) of the Pacific were employed primarily in anti-aircraft rather than ASW duties. Noting also the film *Greyhound*, directed by Aaron Schneider and starring Tom Hanks, who also wrote the screenplay - based on the 1955 novel *The Good Shepherd* by C. S. Forester, following a US Navy Commander on his first assignment commanding a multi-national escort destroyer group, during the Battle of the Atlantic. The sequel to *Greyhound* was recently being shot in Sydney – like the first film, it will be worth seeing.

The *Fletcher-class* (the first destroyer design since World War I to be unconstrained by treaty limitations) became the Pacific mainstay. The *Fletcher-class* would meet all the U.S. Navy's requirements. These ships would become the largest class of destroyers ever built, and their balance of ruggedness, seaworthiness, speed, protection, and hard-hitting armament would make them famous and much beloved by their crews. They epitomised the fast, manoeuvrable, hard-hitting, versatile warships that destroyers had become in the gun-and-torpedo era of the twentieth century.

This is a detailed book, well worth the read covering all the major actions of WW2. Falthum ends where our current history begins. For Japan's formal surrender in Tokyo Bay, Admiral Halsey ordered that destroyers of DesRon 21 be present. TAYLOR first anchored in Sagami Wan on 27 August. On the 29th, USS TAYLOR, along with her sisters NICHOLAS and O'BANNON, screened the battleship MISSOURI and were among the first American warships to enter Tokyo Bay. Destroyers and destroyer escorts were also present in Tokyo Bay on 2 September 1945 for the surrender ceremony, conducted on board USS MISSOURI.

The war in the Pacific was finally over, and the destroyers had acquitted themselves well in the struggle for victory. Perhaps the forgotten Pacific (US and Commonwealth) Fleet may yet warrant a Hollywood blockbuster?



MAHAN

The Life of Maritime Strategy's Greatest Revolutionary

By David A. Smith

USNI: 2 June 2026
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Hardcover: $75.00

David A. Smith is a senior lecturer in American history at Baylor University. He received his undergraduate degree in U.S. history from Texas State University and his PhD from the University of Missouri. He has written books on American military, cultural, and political history. He is an avid public speaker and hosts a weekly show on art, culture, and history on KWBU-FM in Waco. He lives with his family in Woodway, Texas.

This book is an exceptional and timely reminder to all navies as to who they are, what they may become, and what they do. The notoriously poorly read Lords of the British Admiralty may find it a useful reminder.

Smith recalls Mahan's bespectacled, balding, academic appearance when, as Captain of the USS WACHUSETT, he visited the British Phoenix Club in Lima in 1884 (at the end of the Chile-Peru war) and pulled from the shelves of its library a volume on Roman history by the German classicist Theodor Mommsen. It occurred to Mahan that throughout the ages, most historians had overlooked sea power as a variable tending to contribute to a country's success on land. A vivid connection between past and present, between sea power and national power, came into his focus for a moment.

It is perhaps at this time when the US has (as will be seen in time) secured a victory against Iran (without putting troops on the ground) that on his death in December 1914 the *New York Tribune* published an interview two months earlier, but which President Wilson had insisted not be printed. The *Tribune* now saw no reason to hold it back. "The people forget that war is largely economic," Mahan had said, "and the policy of England in virtually destroying the Germans' overseas commerce, in protecting the ocean routes and in securing safe transport for her troops" would be the very best strategy her navy could follow:

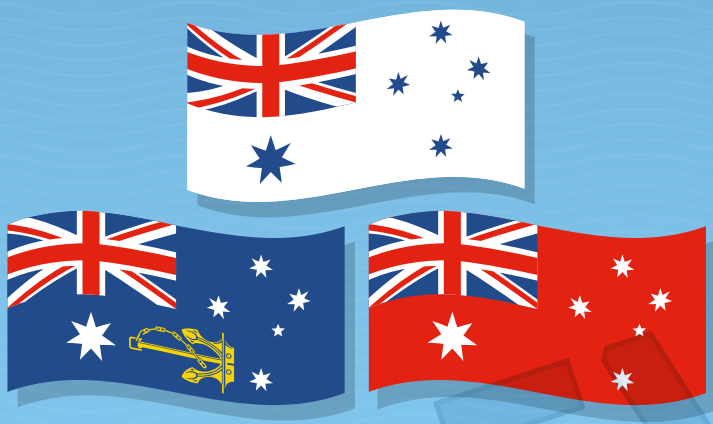
Sea power was patient

President Wilson nonetheless chose to ignore Mahan, yet all Mahan's thinking and philosophy would prove pivotal in WW2.

In his landmark book *The Soldier and the State: The Theory and Politics of Civil-Military Relations*, Samuel Huntington notes that Mahan's ideas amounted to "a philosophy of history not a philosophy of warfare." This is an exceptionally well written biography of Mahan, the sailor philosopher. Well worth a winter read as we contemplate Australia's shrinking maritime awareness. As Smith maintains:

> The notion that the world could be shaped by navies, that problems could be headed off, resources and trade routes secured and expanded, and enemies defeated. It is the legacy of Alfred Thayer Mahan. It is the vision of sea power that he wrote into existence.

THE NAVY LEAGUE OF AUSTRALIA
ANNUAL MARITIME AFFAIRS
ESSAY COMPETITION



TOPICS:

- 21st Century Naval Warfare
- Australian Naval History
- Australian Industrial and Merchant Navy Maritime Strategy
- Australian Strategic Alliances: AUKUS, QUAD, Five-Eyes, FPDA, ANZUS.

CATEGORIES:

A first, second and third prize will be awarded in each of two categories:

Professional category, which covers Journalists, Defence Officials, Academics, Naval Personnel and previous contributors to *THE NAVY*; and **Non-Professional** category.

Essays should be 2,500-3,000 words in length and will be judged on accuracy, content and structure.

PRIZES:	1ST PLACE	2ND PLACE	3RD PLACE
Professional	$1,000	$500	$250
Non-Professional	$500	$200	$150

Essays should be submitted in Microsoft Word format to;

Emailed to: editorthenavy@hotmail.com

OR (less preferably with a soft copy to be sent through on request) posted to:

Navy League Essay Competition
Box 1719 GPO, SYDNEY NSW 2001

Submissions should include the writer's name, address, telephone and email contacts, and the nominated entry category.

THE NAVY reserves the right to reprint all essays in the magazine, together with the right to edit them as considered appropriate for publication.

SUBMISSION DEADLINE: **Saturday 29 August 2026**

Prize-winners announced in the January-March 2027 Issue of *THE NAVY*.

HATCH

HMAS EYRE (P204) Commissioning Ceremony HMAS STIRLING 30 May 2026.

(Image ABIS Jayden Fahy)

MATCH

Mitsibushi Heavy Industries – JMSDF commissioned fourth *Hibiki-class* Auxiliary Ocean Survey Ship JS BINGO (AS5204)

(Credit MHI)

DESPATCH

USN plans to decommission NATO 6th Fleet USS MOUNT WITNEY (LCC 20) Command Ship potentially as part of its drawdown of forces from Western Europe following the Iran-US-Israel war.

Image US ARMY Cpl DeAndre Dawkins.