The Changing Maritime Landscape

Two technology drivers, three consequences, and the questions they pose for the defence of Australia

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Between 2022 and 2026, three conflicts (Ukraine, the Red Sea, and Iran-Gulf) showed marked changes in how long-range strike and maritime operations are conducted. This brief describes what has already been observed, not what is forecast: every claim below is anchored to a documented event or an official assessment. The evidence is organised as two technology drivers, their consequences and a timeline. The brief does not argue for or against any particular acquisition.

DRIVER 1

The ocean surface is becoming transparent

Surface forces have traditionally benefited from the difficulty of finding and continuously tracking them across large ocean areas. Proliferated low-earth-orbit sensing (synthetic-aperture radar that sees through cloud and darkness, radio-frequency geolocation that fixes any emitter, and electro-optical imaging) now revisits any patch of ocean every few minutes to tens of minutes. The three methods are independent, none requires the target's cooperation, and all are becoming cheaper along commercial cost curves. A large surface warship is becoming a continuously findable, trackable object. Satellite constellations paired with long-range fires are beginning to pose the kind of problem for surface vessels that cheap drones posed for armour in Ukraine.

Observed: Ukraine's transparent battlefield denied mobility to expensive platforms on land, 2022–26 · In the 2026 Gulf conflict the world's premier navy kept its major surface combatants out of the sensor-saturated littoral, striking from standoff instead[1] · Commercial radar-imaging constellations now revisit the Indo-Pacific many times a day.

DRIVER 2

Precision strike at long range has become affordable, at mass

For fifty years, a guided weapon with 1,000+ km reach was largely the preserve of the major powers and priced in the millions. It is now a commodity manufacturing problem: commercial imaging seekers, additively-manufactured engines, and shipping-container launchers. The United States has institutionalised the lesson: the Air Force's affordable-mass programme plans some 28,000 cruise missiles over five years, with deliveries from 2027, and parallel Pentagon and Navy programmes field containerised and maritime-strike rounds[2]. Taiwan's NCSIST targets under US$216,500 a round for locally built Barracuda-500s[2]. Iran, and even a non-state actor in the Houthis, have demonstrated precision weapons at range. The attacker's rounds can now cost less than the interceptors used against them, and attackers can use numbers to exceed the defender's interceptor inventory and engagement capacity.

Observed: US affordable-mass, containerised-missile and allied maritime-strike programmes announced 2026, deliveries from 2027; Barracuda-500M production agreements in the US and Poland[2] · Houthi missiles and drones rerouted a double-digit share of world shipping, 2023–25, without winning a single naval battle[1] · Ukraine, with no navy to speak of, sank the cruiser *Moskva* and drove the Black Sea Fleet from Sevastopol with missiles and uncrewed boats · In July 2026 Ukraine's ~US$55,000 FP-1 strike drones interdicted shipping across the Sea of Azov, flown low against bridges and machinery spaces to disable rather than sink: 116 vessels claimed struck in nine days, and the Kerch Strait anchorages emptied on satellite imagery[1].

Both drivers are already observable, and neither is likely to reverse: both follow commercial technology curves (satellite launch costs, imaging sensors, additive manufacturing) that no defence programme controls.

Three consequences of the same conditions

Together the two drivers mean that **ships and bases that can be located can also be engaged at long range, by weapons that cost much less than their targets.** This applies to every side, and it bears on force structure in three ways that need to be considered together.

AGAINST SURFACE FLEETS

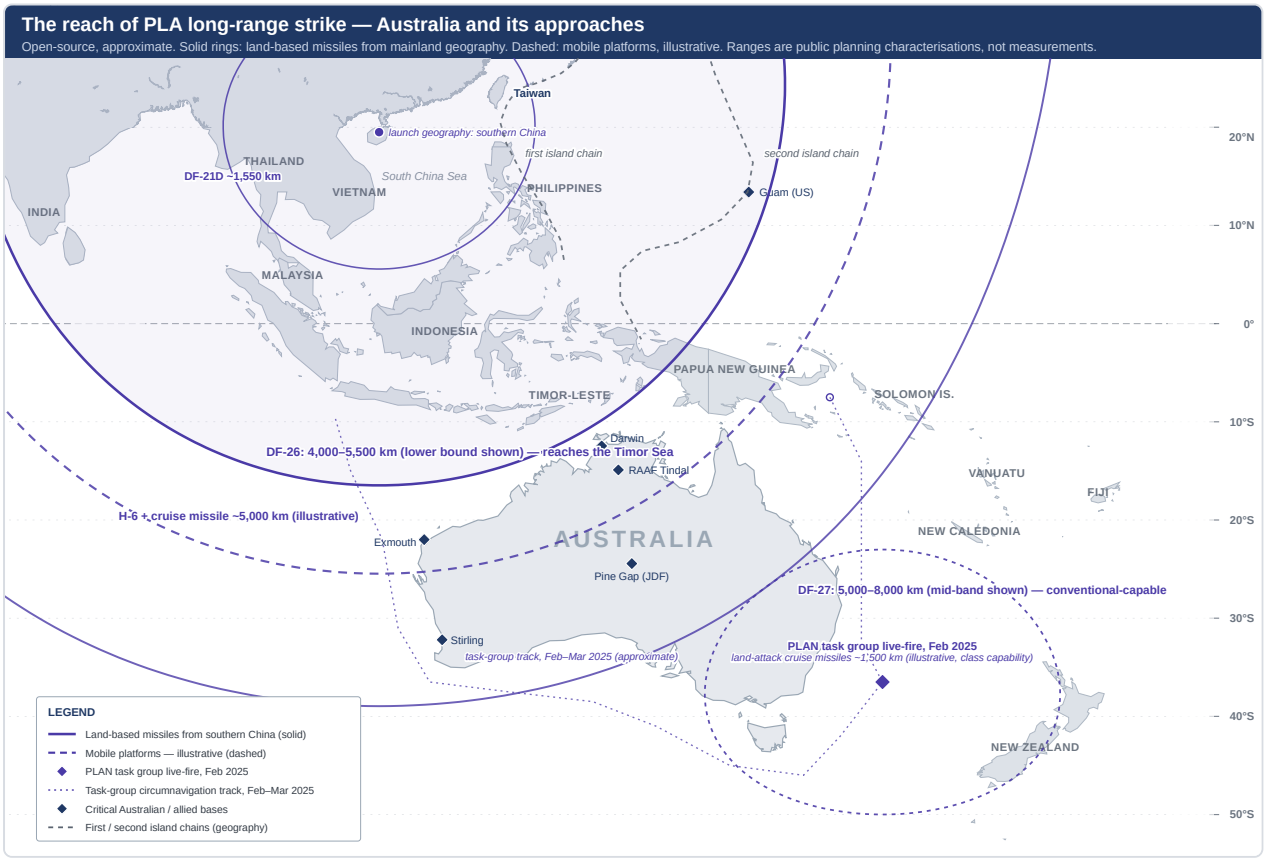
Large warships' survivability is becoming highly challenged in contested waters. A fleet that is continuously findable and can be out-shot at long range has a structural problem even with high-quality defences: its interceptor magazine is finite, salvos can arrive in numbers from multiple axes, and the ships at risk are worth far more than the salvos fired at them. Hypersonic weapons compress the defender's reaction time from minutes toward seconds. This applies to every navy's surface fleet, including China's.

AS AN OPTION FOR MIDDLE POWERS

Maritime denial, once a superpower monopoly, is now becoming available to middle powers that pair satellite sensing with affordable long-range fires. The reconnaissance-strike complex China spent two decades building to hold American carriers at risk can be applied defensively by others, at commodity prices. The United States Marine Corps has rebuilt itself around this idea: land-based anti-ship fires from distributed positions along the first island chain[3]. Australia's geography makes the option unusually strong: fires of ~2,400 km reach from northern Australian territory, cued by sovereign space-based sensing, would cover the maritime approaches through which any projecting force must come.

AGAINST FIXED BASES

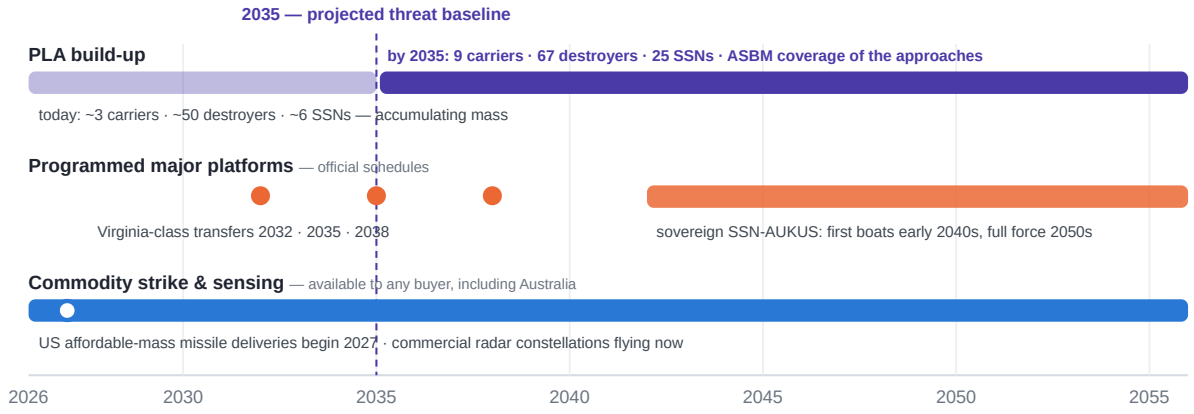
The same conditions expose bases in northern Australia. Airfields, fuel storage, ports and headquarters in northern Australia are findable by satellite and reachable by ballistic, hypersonic and cruise missiles, with flight times measured in minutes, not hours; independent analysis projects PLA anti-ship ballistic missile coverage extending across the Indonesian archipelago into the Timor and Arafura Seas by 2035[4]. Defending fixed infrastructure with interceptors alone faces the same unfavourable cost exchange as defending a warship. Dispersal, hardening and deception therefore need to carry more of the load than the missile-defence magazine, and they are a precondition for operating from the north.



Solid: sourced land-based ranges · dashed violet: mobile platforms, illustrative · dotted: PLAN task-group track, Feb–Mar 2025[5] · dashed grey: the first and second island chains: geography, not capability.

The clock: capability windows against the threat

Australia's 2026 National Defence Strategy states when the risk peaks; procurement schedules state when capabilities arrive. Placing the threat assessments and the major acquisition schedules on the same timeline highlights a potential capability gap. Every date below is from an official schedule or an independent open-source assessment.



The threat assessments converge on the mid-2030s. The programmed platforms arrive in force from the 2040s. The commodity technologies of Drivers 1 and 2 can be bought now, which leaves the intervening decade as the main planning issue.

The threat picture — sourced facts and assessments

- By 2035 the PLA is projected to field 9 carriers, 67 large surface combatants and 25 nuclear attack submarines, with anti-ship ballistic missiles holding surface vessels at risk across the Indonesian archipelago and into the Timor and Arafura Seas. — Lowy Institute, June 2026
- “China has the world's leading hypersonic missile arsenal.” — US Department of Defense report on Chinese military power, December 2025
- February 2025: a PLAN task group conducted unannounced live-fire exercises in the Tasman Sea. First notice came from a commercial airline pilot; 49 flights were diverted; holding custody of three ships consumed a national surge of ships and aircraft. — Airservices Australia, Senate estimates, February 2025
- The USINDOPACOM commander told Congress in March 2026 that long-range anti-ship munitions are among the binding gaps in the theatre, with production needing to “triple or quadruple”. — Adm. S. Paparo, Senate Armed Services Committee testimony
- Undersea: China's disclosed seabed observation network in the northern South China Sea (1,725 km of cable), survey-glider recoveries in Indonesian and Philippine waters 2019–26, a growing ASW corvette and maritime-patrol fleet, and a peer-reviewed assessment that the oceans are “at least likely” effectively transparent to submarine detection by the 2050s. — PRC MEE 2024; USCC 2024–26; ANU National Security College, 2020

If Taiwan is reunified, the contested zone moves toward Australia

Every line on the map on page 2 is drawn from today's geography, with Taiwan at the centre of the first island chain standing between the PLA and the open Pacific. Beijing has not renounced the use of force; the PLA's declared 2027 milestone is the capability to prevail in a Taiwan conflict, on the official US record; and its exercises now rehearse blockade and interdiction at scale, most recently in December 2025. Should reunification occur in the coming decade, bases on Taiwan's east coast would open direct deep-water access to the Philippine Sea, outflank the chokepoints on which allied surveillance rests, and move the contested zone toward the second island chain: closer to Guam, to the archipelago, and to Australia's approaches. The scenario falls inside the window shown on this page, and it would change the geographic assumptions on which current Australian and allied force postures are based.

— US Department of Defense report on Chinese military power, December 2025 (2027 milestone; blockade and interdiction scenario); PLA “Justice Mission” exercise, December 2025. US intelligence assesses no decision to act has been taken (March 2026).

Two horizon items

HORIZON 1 · THE 2040S

The undersea domain follows — and near-China waters go first

The ocean depths remain the hardest domain to search, and nothing here suggests submarines are obsolete today. The undersea trend has three strands, and only one is a forecast: **uncrewed surface and undersea craft in numbers, with AI-fused wide-area processing** turning scattered sensors into a searching network. It is the fastest-moving strand and the one navies worry about most. The other two are on the public record. China is **instrumenting its own waters**, with a seabed observation network and sensor chains laid across the chokepoints a submarine must transit[6]. Its **anti-submarine forces are growing** in number and capability[7]. The waters likely to become contested first are therefore near-China littorals and chokepoints. How far and how fast the trend runs is uncertain, so a balanced force should hold capabilities whose value does not all depend on the same waters staying opaque.

HORIZON 2 · ALREADY UNDERWAY

The sensing layer is critical

If persistent sensing underpins every side's kill chain, counter-space operations, electronic attack and deception are likely to feature early in any future conflict, as each side tries to degrade the other's ability to see. Sovereign, resilient access to the sensing layer is therefore a strategic capability in its own right. A deterrent that depends on surveillance a foreign company could withdraw, or an adversary could jam, is not fully under Australian control. That resilience depends on distribution.

Five tests for any force-structure investment

This brief does not argue for a particular acquisition. The conditions it describes do raise five questions that every major investment should now face, and that were not routinely asked a decade ago:

1. **Does it exist inside the window?** The threat assessments peak in the mid-2030s. Where a capability arrives later than that, what holds the line in the years between?
2. **Can it survive being found?** Assume it is seen, persistently, in all weather. What is its survivability then: armour, speed, depth, dispersal, or numbers?
3. **Does it win or lose the cost exchange?** Compare the cost of what it delivers or defends against the cost of what defeats it, per engagement, not per platform.
4. **Is it sovereign at the moment it matters?** Production, resupply, targeting and release: which of these does it hold in its own right, which does it share with allies, and is each reliance a considered choice?
5. **Can it adapt faster than the countermeasure?** Ukraine's adaptation cycle is measured in weeks. A design fixed at contract for twenty years needs a planned path for upgrades.

> **The one-sentence summary:** more persistent maritime surveillance and lower-cost precision fires are making maritime denial increasingly accessible to middle powers, and for a middle power with Australia's geography it is now the highest-leverage military capability available.

Sources. All open-source; full citations in the companion paper *Joint Architecture for Forward Denial* (M. Edgar, July 2026).

1. Ukraine 2022–26; the Red Sea campaign 2023–25; the 2026 Gulf conflict; RUSI and subsequent open-source analysis.
2. USAF FAMM (~28,000 rounds over five years, deliveries 2027); DoD LCCM; USN CHAOS, announced 2026. Barracuda-500: NCSIST local-production target below NT$6.5m, about US$216,500 (Reuters, Sep 2025); Anduril SLB-500M production agreement, 3,000+ rounds (May 2026); PGZ and Anduril production in Poland (Jul 2026).
3. USMC Force Design / Marine Littoral Regiment; US Army MDTF, 2020–26.
4. S. Roggeveen & D. Vallance, 'Understanding the Chinese Military Threat to Australia', Lowy Institute, June 2026.
5. Missile ranges: US DoD and open-source; approximate. Mobile arcs illustrative; Feb 2025 Tasman position documented.
6. PRC MEE approval, Mar 2024 (1,725 km SCS seabed observation network); sensor chains Hainan to the Paracels; survey-glider recoveries in Indonesian and Philippine waters 2019–26; ASW corvette and maritime-patrol production; AMTI/CSIS; USCC 2024–26.
7. RADM M. Brookes, Commander, Office of Naval Intelligence, testimony to the US–China Economic and Security Review Commission, 2 Mar 2026 (anti-submarine investment for 'high-end naval war'; up to 80 submarines, about half nuclear-powered, by 2035); IISS, 'Boomtime at Bohai: China ramps up submarine production', Feb 2026 (nuclear submarine launches 2021–25 exceeding those of the US).