

The Chair
Joint Standing Committee on Foreign Affairs, Defence and Trade
Parliament House
Canberra ACT 2600

Subject: Submission to the Inquiry into the Department of Defence Annual Report 2023–24 – Accelerating Autonomous Capability, Structural Reform, and Indo-Pacific Readiness

Dear Chair and Members of the Committee,

Shield AI Australia welcomes the opportunity to provide this submission to the Joint Standing Committee on Foreign Affairs, Defence and Trade, to inform its inquiry into the Department of Defence Annual Report 2023–24.

Executive Summary

As an advanced defence technology company with significant Australian operations and deep expertise in artificial intelligence, autonomy, and vertical take-off and landing (VTOL) systems, Shield AI is dedicated to supporting the Australian Defence Force (ADF) in delivering capability faster, more flexibly, and under sovereign control, while remaining fully interoperable with allies.

This submission outlines a coherent reform agenda that aligns with the National Defence Strategy, the Integrated Investment Program, the Defence Industry Development Strategy, and AUKUS Pillar II:

- Adopt Phased (Spiral) Acquisition to field early, learn in operations, and iterate rapidly evolving capability and doctrine together and reducing risk and cost.
- Separate Hardware from Autonomy, establishing autonomy as a stand-alone capability line to enable continuous software upgrades across crewed and uncrewed fleets.
- Recognise Autonomy & AI as Sovereign Capabilities, with governance, funding, and certification separate from platforms, paired with shared autonomy frameworks under AUKUS Pillar II so the U.S., U.K., and Australia can sense, decide, and act as one while each retains national control of mission logic and data, and indeed national command authority of deployed autonomous assets.
- Exploit Combat-Proven Lessons (e.g., V-BAT in Ukraine) to harden autonomy for GPS-/comms-denied and EW-stressed environments, using ADF trial series to institutionalise resilient Tactics, Techniques and Procedures (TTPs).
- Institutionalise Flexible Air Combat Operations (FACO) to deliver runway-independent, dispersed airpower, reducing the defensive burden on major northern bases and enhancing deterrence through survivability and unpredictability.
- Establish a Sovereign Indo-Pacific Readiness & Resupply Hub in northern/western Australia to provide shared, allied sustainment and surge capacity for autonomous systems and precision effects, growing Australian industry and regional resilience.

Together, these reforms move Defence from slow, platform-centric procurement to an agile, modular, and sovereign capability ecosystem anchoring Australia as a trusted allied innovation leader and logistics backbone for Indo-Pacific deterrence.

Accelerating Capability Delivery Through Phased Acquisition

In his Review of the 2023–24 Defence Annual Review (DAR), Department Secretary Greg Moriarty AO highlighted the reorientation of the Defence enterprise to deliver the National Defence Strategy, the Integrated Investment Program, and the Defence Industrial Development Strategy. Together, these frameworks drive a transformation focused on accelerating capability delivery, strengthening sovereign industry, and ensuring Australia's Defence Force maintains a technological and operational edge.

Emerging technologies particularly in autonomy, artificial intelligence, and advanced uncrewed systems, are evolving at a pace that outstrips traditional acquisition models. Under conventional approaches, by the time a program delivers capability, the underlying technology baseline has already advanced, limiting both operational relevance and return on investment.

To remain competitive in modern conflict, Australia must adopt an acquisition system that delivers capability at the speed of relevance, fielding usable systems early, learning through operational use, and continuously improving both technology and doctrine in an integrated, adaptive cycle.

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A phased or spiral acquisition model provides the mechanism to achieve this. Instead of waiting for a “perfect” design, Defence can deploy limited numbers of new systems early, evaluate their performance under operational conditions, and progressively enhance both system capability and operational concepts as experience and data accumulate.

In practice, this approach can be implemented through incremental funding tranches tied to performance milestones, or through competitive spiral models as used by the UK Ministry of Defence, where multiple industry partners are supported through early R&D phases, and successive down-selection occurs as prototypes mature. This ensures that the most capable and operationally relevant solutions are advanced while preserving flexibility, competition, and innovation throughout development.

This approach recognises that true capability emerges not only from technology itself, but from how Defence personnel adapt TTPs to exploit that technology effectively. In this model, technology and operations evolve together, creating a learning loop that accelerates innovation and strengthens operational advantage.

International experience validates this approach. Ukraine’s combat innovation cycle has demonstrated how rapid fielding and feedback can transform operational practice in real time. Similarly, the U.S. Marine Corps’ acquisition of the Stalker UAS with Australian ViDAR technology exemplifies how iterative, user-driven upgrades accelerate both capability maturity and mission effectiveness.

Benefits of Phased Acquisition

A phased acquisition approach delivers broad strategic, operational, and industrial benefits that align with Australia’s national defence priorities:

- **Accelerated Capability and Doctrine Co-Evolution:** Enables Defence to develop and refine operational procedures in parallel with technology, ensuring that new systems are fully exploited rather than retrofitted into legacy concepts of operation.
- **Operational Learning and Adaptability:** Embeds structured feedback loops between Defence, industry, and operators, allowing field experience to shape both future capability increments and next-generation design.
- **Faster Capability Delivery:** Brings usable systems into service within months, not years, maintaining relevance, strengthening deterrence, and providing real-world data to guide continuous improvement.
- **De-Risked Investment:** Validates technology maturity and user value before full-scale acquisition, reducing cost, schedule, and performance risk across the program lifecycle.
- **Sovereign Industrial Growth:** Positions Australian industry to participate in early production phases, enhancing domestic manufacturing, workforce skills, and export potential.
- **Alliance Interoperability:** Aligns Australia’s capability development tempo with key partners such as the United States and United Kingdom, promoting collaborative innovation and shared learning across AUKUS and other frameworks.

Strategic Recommendations

1. **Institutionalise Phased Acquisition:** Embed phased, spiral acquisition as a core Defence acquisition methodology for emerging technology domains, including autonomy, AI, electronic warfare, and uncrewed systems.
2. **Enable Agile Procurement Pathways:** Reform acquisition frameworks to prioritise early operational fielding, iterative development, and continuous improvement, replacing linear, front-loaded project structures.
3. **Integrate Capability and Doctrine Development:** Establish mechanisms for concurrent evolution of operational concepts and technology, ensuring Defence learns and adapts alongside industry innovation.
4. **Foster Industry Co-Investment and Export Readiness:** Support scalable contracting, co-investment models, and export facilitation for proven Australian technologies, enabling commercial success alongside strategic outcomes.
5. **Establish a Rapid Capability Acceleration Office:** Create a joint Defence–industry–research entity responsible for fast-tracking capability experimentation and transition, ensuring technology and tactics evolve together in near-real time.

Phased acquisition represents a strategic shift from static procurement to dynamic capability evolution. It positions Australia to deploy, learn, and adapt faster than potential adversaries, while strengthening sovereign industry, workforce resilience, and alliance interoperability.

By embracing this approach, the Australian Government can ensure that Defence capability, operational doctrine, and industrial capacity evolve together, delivering decisive advantage in an era defined by speed, complexity, and technological disruption.

Separating Hardware from Autonomy

The 2023–24 Defence Annual Report and the 2024 National Defence Strategy both emphasise the need for faster, more flexible acquisition systems capable of keeping pace with rapid technological change. Chapter 8 of the National

Defence Strategy commits to reforming the One Defence Capability System so that capability can be delivered “faster and in ways that are more responsive to changing priorities.”

Emerging Defence programs, such as SDIP 5 (Development and Integration of Autonomous Systems), recognise that autonomy and artificial intelligence are not merely software features within platforms, but capabilities in their own right, shaping how Australia will fight, command, and sustain future forces. To realise this potential, Defence must establish autonomy as an independent capability line, with its own acquisition, governance, and sustainment structures, separate from, but interoperable with, platform programs.

Current procurement models typically bundle autonomy software and control systems within platform acquisitions. While this approach may simplify contracting, it has significant strategic drawbacks: it slows the introduction of new autonomy technologies, constrains innovation, and embeds long-term dependence on specific hardware vendors.

The remedy is an open systems architecture approach: common interfaces and modular software/hardware stacks that let Defence swap, upgrade, and certify components independently. This cuts lifecycle cost, unlocks competition, and avoids the single-vendor dependence typical of closed proprietary models.

This structure treats autonomy as an accessory rather than a core capability, limiting Defence’s ability to exploit emerging advances in AI, machine learning, and adaptive mission systems. Autonomy is not a feature, it is a foundational capability that will define Australia’s future force structure, operational tempo, and technological sovereignty.

A structural reform is therefore needed: autonomy should be developed, procured, and sustained as a stand-alone Defence capability, designed to integrate with multiple platforms rather than owned by any single one.

Such reform would empower Defence to continuously develop, test, and integrate leading autonomy solutions, such as Shield AI’s Hivemind, across air, land, and maritime fleets, ensuring that operational advantage evolves at the pace of technological change.

Benefits of Treating Autonomy as a Separate Capability

Separating autonomy from platforms delivers transformational strategic and operational outcomes across Defence:

- **Continuous Capability Evolution:** Autonomy can be developed and iterated independently of platform life cycles, allowing Defence to introduce new levels of performance, teaming, and decision-making speed on operational timelines.
- **Doctrinal and Operational Adaptation:** Enables Defence to co-evolve tactics, techniques, and procedures with advancing autonomy capabilities, adapting how forces operate, command, and coordinate, rather than forcing new technologies into legacy constructs.
- **Platform-Agnostic Integration:** Allows Defence to deploy advanced autonomy software across diverse and legacy platforms, extending their operational relevance and accelerating the introduction of AI-enabled behaviours fleet-wide.
- **Enhanced Competition and Innovation:** Creates a competitive autonomy ecosystem, drawing on Australia’s emerging AI and robotics sector, and prevents single-vendor control over critical decision-making technologies.
- **Sovereign Control and Interoperability:** Positions autonomy as a sovereign strategic capability, ensuring Australia retains control over software, algorithms, and decision logic while maintaining interoperability with trusted partners.
- **Cost Efficiency and Risk Reduction:** Separating acquisition pathways enables modular upgrades, reduces vendor lock-in, and aligns investment with proven maturity, lowering lifecycle costs and accelerating delivery.

Strategic Recommendations

1. **Define Autonomy as a Core Capability Area:** Recognise autonomy, across uncrewed systems, mission management, and AI-enabled teaming, as a distinct capability class within the Defence capability framework.
2. **Establish Dedicated Acquisition and Sustainment Pathways:** Create separate procurement programs and funding lines for autonomy software, data infrastructure, and control systems, decoupled from platform acquisition schedules.
3. **Develop a Defence Autonomy Enterprise:** Form a cross-domain capability office responsible for integrating autonomy across platforms, domains, and operational concepts, coordinating Defence, industry, and research contributions.
4. **Enable Continuous Integration and Experimentation:** Adopt phased and spiral acquisition methods for autonomy development, allowing Defence to field, test, and evolve autonomy software in parallel with operational feedback.
5. **Embed Doctrine and Training Co-Evolution:** Institutionalise a process where operational units and autonomy developers learn and adapt together, ensuring Defence evolves its ways of operating in line with advancing capability.

Autonomy is not merely a feature; it is a foundational capability that will shape Australia's future force structure, operational tempo, and technological sovereignty.

By establishing autonomy as a distinct capability, procured and evolved separately from platforms, Defence can ensure that Australia leads in the integration of intelligent, adaptive systems across all domains. This structural reform will accelerate capability delivery, enhance operational flexibility, and reinforce Australia's strategic position as a forward-leaning, innovation-driven Defence partner.

Recognising Autonomy and Artificial Intelligence as Sovereign Capabilities within an Allied Framework

The 2023–24 Defence Annual Report identifies artificial intelligence (AI) and autonomous systems as central to building Australia's sovereign industrial capability, highlighting Defence's focus on open digital architectures and rapid innovation partnerships through the Advanced Strategic Capabilities Accelerator (ASCA).

The 2024 National Defence Strategy and the Defence Industry Development Strategy reinforce this direction by designating autonomy as a sovereign capability and calling for the continuous development of Australia's domestic robotics and AI sector. In parallel, Sovereign Defence Industrial Priority 5 (Development and Integration of Autonomous Systems) and AUKUS Pillar II emphasise allied interoperability and shared research in AI and autonomy as key to maintaining a collective capability edge across the Indo-Pacific.

Autonomy and AI are no longer niche technologies; they are foundational capabilities that define operational advantage and national independence. Like cryptography, cyber defence, and battle-management systems, they represent classified sovereign assets that determine how, when, and under what constraints military force is applied.

The decision-making logic that drives uncrewed and intelligent systems is among the most strategically sensitive software in Defence. It governs engagement thresholds, mission behaviours, and targeting parameters. Managing that autonomy stack within Australian legal, ethical, and security frameworks is essential to ensuring sovereign control, alliance trust, and credible deterrence.

True sovereignty in autonomy means owning, developing, and safeguarding the software intelligence that controls platforms and weapons, not merely licensing it. Without this capability, the Australian Defence Force (ADF) risks dependency on foreign algorithms that cannot be independently verified or modified for mission assurance, ethical compliance, or national security.

Australia's ability to generate, certify, and protect its own autonomy software is therefore a matter of strategic independence. Sovereign AI development ensures that operational logic, ethical parameters, and mission behaviours remain under Australian authority, aligned with national policy and resilient to external manipulation or compromise.

While autonomy must be managed as a sovereign capability, it also serves as the connective tissue of allied deterrence under AUKUS Pillar II. Shared autonomy frameworks enable U.S., U.K., and Australian forces to sense, decide, and act as one, integrating uncrewed systems, sensors, and command networks into a unified, adaptive force operating at machine speed.

To achieve this, partners must move beyond proprietary software architectures that restrict interoperability and delay upgrades. Establishing shared autonomy architectures will enable secure data exchange, synchronised software updates, and common mission standards across domains, allowing alliance forces to act jointly while retaining national control of mission logic and data.

This model, sovereignty through shared frameworks, preserves each nation's independent authority while unlocking the speed and scale of allied integration. It represents the technological foundation of AUKUS Pillar II: collective strength built on sovereign capability.

Shield AI's Hivemind autonomy stack exemplifies this dual approach of sovereign capability within an allied framework. Originally developed in the United States and now being advanced and localised in Australia, Hivemind provides Defence with domestic control over AI-driven decision logic while maintaining full interoperability with U.S. and U.K. systems.

This initiative represents the first truly sovereign instance of an AUKUS-aligned autonomy capability operating in Australia, enabling the development of a domestic workforce of engineers, mission planners, and operators capable of sustaining, certifying, and evolving autonomy independently. It positions Australia as a regional hub for autonomy development, certification, and sustainment under the AUKUS framework.

Strategic and Industrial Advantages

Securing sovereign control of AI and autonomy while enabling shared architectures under AUKUS Pillar II delivers transformational strategic and industrial advantages across Defence:

- **Sovereign Security and Assurance:** Autonomy software and mission logic can be developed, reviewed, and certified entirely under Australian control, ensuring security, ethics, and compliance.
- **Unified Allied Operations:** Shared architectures under AUKUS Pillar II allow U.S., U.K., and Australian forces to operate cohesively, enhancing allied deterrence and operational tempo.
- **Accelerated Capability Evolution:** Modular, shared frameworks support continuous software updates and learning, enabling alliance forces to outpace adversary adaptation.
- **Economic and Workforce Development:** Builds a sovereign, high-technology industrial ecosystem in AI, robotics, and autonomy, driving job creation and export potential.
- **Ethical and Strategic Leadership:** Embeds ethical AI standards within mission software, positioning Australia as a leader in responsible autonomy and trusted alliance technology.

Strategic Recommendations

1. **Designate Autonomy and AI Software as a Classified Sovereign Capability:** Formally recognise autonomy and AI software within the Defence capability framework as a national capability of equivalent importance to guided weapons and nuclear propulsion.
2. **Co-Develop Shared Autonomy Architectures under AUKUS Pillar II:** Collaborate with U.S. and U.K. partners to design, certify, and sustain shared autonomy frameworks that ensure interoperability while preserving sovereign control.
3. **Establish a Centre of Excellence for AI and Autonomy:** Create a national Centre of Excellence for AI and Autonomy, in partnership with industry and academia, anchored around a localised capability such as Shield AI's Hivemind capability. The centre should focus on:
 - Sovereign software development and certification,
 - Defence workforce training and ethical AI frameworks, and
 - Continuous upgrade, sustainment, and integration of autonomy across all ADF domains.
4. **Institutionalise Sovereign Control and Governance:** Embed autonomy software within Australia's classified governance systems to ensure security, ethical compliance, and mission assurance are maintained under sovereign oversight, while establishing an AUKUS Autonomy Working Group in Australia to coordinate testing, certification, and alliance integration.

Recognising autonomy and AI as sovereign capabilities, while embedding them within shared AUKUS frameworks, ensures that Australia retains control of the intelligence driving its defence systems while contributing to the collective technological edge of its allies.

This dual approach secures sovereign independence and allied strength, positioning Australia as both the custodian of its own autonomy and a trusted leader in allied innovation, delivering security, resilience, and strategic advantage across the Indo-Pacific.

V-BAT Lessons from Ukraine – Building Resilient and Deployable Autonomy for Contested Environments

The 2023–24 Defence Annual Report highlights that lessons from modern conflicts, particularly Ukraine, are directly shaping Defence experimentation and force design, especially in contested and denied environments where GPS and communications access cannot be assured.

The 2024 National Defence Strategy reinforces this imperative, emphasising the need for resilient, autonomous, and self-sufficient operations across northern Australia and the broader Indo-Pacific, where geography and adversary capabilities demand systems that can operate independently of fixed infrastructure and vulnerable communications networks.

Aligned with this, SDIP 5 (Development and Integration of Autonomous Systems) commits Defence to rapid prototyping and field experimentation of uncrewed systems capable of maintaining mission effectiveness under electronic warfare (EW) stress and degraded conditions.

Together, these strategic directions define a clear operational requirement: Defence must be able to deploy, fight, and sustain operations in environments where traditional command, control, and navigation systems are disrupted or denied.

Shield AI's V-BAT Uncrewed Aircraft System (UAS) has operated extensively in Ukraine and other allied theatres, providing critical real-world insights into the employment of uncrewed systems under conditions of GPS denial, communications disruption, and electronic attack.

Its operational record demonstrates that modern autonomy, when matured through combat-proven experience, can deliver decisive advantages in flexibility, survivability, and persistence. Key lessons from these deployments include:

- **Rapid Set-up and Redeployment:** Small teams can launch, recover, and reposition V-BAT systems quickly, allowing forces to operate fluidly and unpredictably, a critical factor in contested airspace.

- **Infrastructure Independence:** V-BAT requires no fixed runway or support infrastructure, enabling runway-free operations from austere or improvised sites, directly enhancing survivability and mobility.
- **Autonomy Under EW Stress:** The system's AI-enabled autonomy stack continues to execute missions effectively under electronic warfare and communications denial, ensuring continuity even when GPS or network links are degraded or lost.

These lessons are directly relevant to Australian operational requirements, particularly in the dispersed, expeditionary, and littoral environments of northern Australia and the Pacific, where resilience, independence, and rapid mobility are vital.

Strategic and Operational Advantages

The operational experience of V-BAT in Ukraine demonstrates how resilient, expeditionary autonomy can transform force posture, offering the following clear advantages for Australia's future operations in contested and denied environments:

- **Resilient Autonomy:** Field-proven autonomous systems can maintain mission continuity despite GPS jamming or communication loss, critical for deterrence and operations in contested domains.
- **Expeditionary Flexibility:** Rapid set-up and redeployment enable Defence units to operate from remote or temporary bases, extending reach and persistence across northern approaches.
- **Infrastructure Independence:** Eliminates reliance on fixed facilities, enabling faster force dispersion and improved survivability against precision strike threats.
- **Accelerated Learning and Experimentation:** Integrating lessons from Ukraine through structured trials ensures Defence remains at the forefront of combat-proven autonomy employment.
- **Alliance Integration:** Strengthens interoperability with U.S. and allied forces operating similar systems, ensuring seamless collaboration in joint operations and shared learning environments.

Strategic Recommendations

Establish a GPS-Denied Rapid Deployment Autonomy Trial Series across the Australian Defence Force.

This initiative should institutionalise the lessons from Ukraine and allied operations by:

1. Conducting field trials and experimentation with autonomous systems under GPS- and comms-denied conditions.
2. Training Defence personnel for runway-free, expeditionary operations using small, mobile teams; and
3. Validating resilient autonomy technologies capable of sustaining missions under EW and denied-environment stressors.

This program will accelerate Defence's ability to deploy and fight in the most demanding operational environments, ensuring the ADF can sustain capability and decision advantage even when traditional systems fail.

Modern warfare is defined by disruption, dispersion, and denial. The lessons from Ukraine demonstrate that the forces best able to adapt, deploy rapidly, and maintain autonomy under stress hold the operational advantage.

By institutionalising these lessons through a dedicated autonomy trial series and field experimentation, Australia can ensure its Defence Force is ready to operate, and prevail, when communications are cut, GPS is denied, and infrastructure is absent.

Resilient autonomy is not simply a technological capability; it is a strategic necessity for Australia's future force.

Flexible Air Combat Operations (FACO) – Runway-Independent Airpower

The 2023–24 Defence Annual Report identifies agile, resilient, and dispersed operations as critical lessons drawn from modern conflict, highlighting Defence's continued investment in forward posture and infrastructure across northern Australia to support Indo-Pacific operations.

The 2024 National Defence Strategy builds upon this by calling for an integrated and distributed force capable of operating in contested environments and leveraging crewed–uncrewed teaming as a foundation of future air combat. Similarly, SDIP 5 (Development and Integration of Autonomous Systems) emphasises experimental air vehicle trials and the integration of manned and uncrewed systems to strengthen allied interoperability and accelerate capability adaptation.

Together, these priorities point to a fundamental shift: Australia's air combat advantage will depend not on the scale or sophistication of its bases, but on the agility, resilience, and dispersion of its air operations.

Traditional reliance on large, fixed airbases creates predictable, high-value targets that are increasingly vulnerable to long-range precision strike and missile saturation. As threats evolve and access to established infrastructure becomes uncertain, the ability to generate, project, and sustain airpower without fixed runways will be essential to preserving operational freedom in the Indo-Pacific.

Flexible Air Combat Operations (FACO) provide the mechanism to achieve this. FACO enables Defence to launch, recover, and sustain air missions from ships, roads, remote islands, or austere inland sites, using small, mobile teams and minimal infrastructure. The convergence of vertical take-off and landing (VTOL), short-take-off technologies, and advanced autonomy now makes this concept both achievable and strategically essential.

FACO aligns directly with emerging crewed–uncrewed teaming, collaborative combat aircraft, and autonomous reconnaissance and strike systems. Together, these capabilities form a distributed network of agile operating nodes, each capable of generating sorties, rearming, and relocating within hours.

This distributed model delivers an adaptive, survivable force posture that can endure first-strike scenarios, sustain operations in degraded conditions, and project power across the Indo-Pacific’s vast maritime geography.

For Australia, this approach represents a step-change in strategic flexibility and survivability. While northern airbases such as Darwin, Tindal, and Curtin remain vital to national defence, their size and fixed nature make them high-priority targets in any conflict scenario. Maintaining them as primary hubs demands significant investment in air and missile defence, base hardening, and infrastructure protection.

By implementing FACO principles, Defence can reduce the dependence on defending a small number of vulnerable northern bases, instead dispersing airpower across multiple, smaller, harder-to-target locations. This decentralisation of air combat capability dramatically enhances force survivability and complicates adversary targeting, allowing Defence to reallocate resources from static base defence toward mobile, distributed combat capability.

Strategic and Operational Advantages of FACO

Flexible Air Combat Operations redefine how Australia projects and sustains airpower, delivering a dispersed, survivable, and agile force posture offers the following clear advantages:

- **Reduced Vulnerability of Northern Bases:** FACO disperses airpower across numerous smaller operating sites, reducing reliance on and the defensive burden of protecting major fixed bases such as Darwin and Tindal.
- **Runway-Independent Airpower:** Enables launch and recovery from roads, islands, ships, and forward arming and refuelling points, ensuring flexibility and survivability under strike pressure.
- **Resilience Under Attack:** Allows Defence to sustain operations even if primary airbases are degraded or denied, maintaining air presence and deterrence in contested environments.
- **Integration with Allied Concepts:** Aligns with allied distributed airpower models such as the U.S. Air Force’s Agile Combat Employment (ACE), enhancing coalition interoperability and shared deterrence posture.
- **Autonomy and Uncrewed Integration:** Incorporates autonomous and optionally crewed systems capable of independent operation, mission persistence, and rapid relocation.
- **Strategic Mobility and Deterrence:** Enhances strategic unpredictability, enabling Defence to operate across dispersed, temporary, and mobile nodes, strengthening deterrence by complicating adversary targeting and planning.

Strategic Recommendations

1. **Institutionalise Flexible Air Combat Operations (FACO):** Recognise FACO as a core element of Australia’s future Defence strategy and embed it in Air and Joint doctrine, aligning with distributed and resilient force design principles.
2. **Develop and Resource a Dedicated FACO Program:** Establish a Defence-wide initiative to formalise and operationalise FACO, including:
 - Distributed basing, shipborne, and runway-free trials across northern and maritime Australia.
 - Integration of VTOL, short-take-off, and autonomous systems; and
 - Collaboration with allies to validate AUKUS- and ACE-aligned interoperability.
3. **Embed FACO Principles in Future Force Design:** Ensure FACO’s requirements, mobility, dispersion, and survivability, are embedded in the design and acquisition of next-generation air combat and autonomous platforms, ensuring a force that can operate flexibly across the Indo-Pacific.

The future of Australian airpower will be defined by dispersion, adaptability, and resilience, not fixed infrastructure. Flexible Air Combat Operations offer a pathway to reduce the vulnerability and defence burden of northern bases, enabling Defence to reallocate effort from static defence toward agile, combat-ready capability.

By institutionalising FACO, Australia can ensure its airpower remains unpredictable, survivable, and operationally independent, able to generate combat power from anywhere, at any time. This approach strengthens deterrence, sustains strategic freedom of action, and ensures that Australia’s air combat force can endure and prevail in the most contested operational environments.

Establishing a Sovereign Indo-Pacific Readiness and Resupply Hub

The 2023–24 Defence Annual Report emphasises the importance of strengthened partnerships across the Indo-Pacific and Defence’s continued investment in northern Australia’s logistics and sustainment networks to improve readiness and collective resilience.

The 2024 National Defence Strategy reinforces this direction, identifying deterrence by denial and regional partnerships as foundational to Australia’s security posture, and calling for sovereign sustainment and shared logistics across allied and partner forces.

Complementing these initiatives, the Defence Industry Development Strategy highlights that industrial readiness, repair capacity, and sustainment infrastructure are essential components of deterrence, ensuring forces can respond rapidly, recover quickly, and sustain operations over time.

To enhance collective resilience and strengthen regional deterrence, Australia should establish a Sovereign Indo-Pacific Readiness and Resupply Hub, a secure, jointly funded logistics and sustainment network supporting Group 3 uncrewed aircraft systems (UAS), future combat aircraft, and loitering munitions.

This hub would transform Australia into the strategic logistics backbone of the Indo-Pacific, providing trusted facilities for the storage, maintenance, assembly, and rapid redeployment of advanced autonomous and uncrewed systems.

By situating these capabilities within Australia’s secure territory, partner nations would gain assured access to critical platforms and munitions without exposing their domestic infrastructure to direct threat, creating a shared layer of resilience that supports deterrence and operational continuity.

The Sovereign Indo-Pacific Readiness and Resupply Hub would provide Indo-Pacific partners, including Japan, South Korea, Taiwan, the Philippines, Indonesia, and Pacific Island nations, with an out-of-country sustainment and reconstitution capability, located safely beyond the reach of immediate conflict zones yet close enough to support rapid regional response.

This concept embodies deterrence through distributed sustainment, ensuring allied and partner forces can rearm, refit, and re-engage quickly, even under pressure from adversary strikes or infrastructure denial.

Strategic and Industrial Advantages

The Sovereign Indo-Pacific Readiness and Resupply Hub would transform Australia into the region’s secure logistics backbone and would offer the following clear advantages:

- **Deterrence and Survivability:** Keeps regional uncrewed systems, munitions, and autonomy-enabled platforms secure yet immediately deployable, denying adversaries the opportunity to degrade regional readiness through strikes on forward infrastructure.
- **Rapid Re-Supply and Surge Capacity:** Establishes a “pull-from-Australia” logistics model for rapid replenishment and surge operations, shortening response timelines and enabling agile reconstitution during crisis or conflict.
- **Shared Investment and Collective Resilience:** Facilitates a jointly funded regional reserve that reduces individual nation costs while deepening interoperability, industrial coordination, and political trust among Indo-Pacific democracies.
- **Industrial and Economic Growth:** Creates a Sovereign Autonomy and Munitions Readiness Complex (SAMRC), a national network for maintenance, repair, overhaul (MRO), assembly, software updates, and export sustainment, supporting Australian defence industry, advanced manufacturing, and high-technology employment.
- **Strategic Depth for Partners:** Provides frontline nations with access to a secure, rear-area sustainment base, allowing them to preserve combat capability and recover faster without concentrating high-value stores within their own borders.

This regional sustainment model directly complements AUKUS and QUAD objectives by providing shared logistical depth and redundancy, enabling allied and partner forces to sustain collective operations under pressure. For Australia, it establishes a permanent strategic and industrial role as the southern arsenal of democracy in the Indo-Pacific.

Strategic Recommendations

1. **Develop a Multinational Logistics and Sustainment Concept:** Task Defence and DFAT with developing a multinational logistics framework to pre-position Group 3 UAS, loitering munitions, and future combat aircraft inventories across Australia.
2. **Establish Allied Co-Funding and Burden-Sharing Mechanisms:** Design a shared investment model to support infrastructure development, storage, maintenance, and workforce training, ensuring cost efficiency and joint ownership.

3. **Integrate Sustainment into the Defence Integrated Investment Program:** Align the hub with sovereign sustainment and industrial base priorities under the Integrated Investment Program, ensuring long-term funding and Defence-industry integration.
4. **Build Sovereign Infrastructure for Allied Readiness:** Develop Australian-owned sustainment facilities capable of maintaining and reconstituting multinational autonomous and precision-effect systems at scale, including secure data, software, and certification environments.

The Sovereign Indo-Pacific Readiness and Resupply Hub would anchor Australia's role as the secure logistics and sustainment hub for collective defence in the Indo-Pacific.

By combining sovereign industrial capability, allied cooperation, and regional access, this initiative would provide partners with the depth, resilience, and responsiveness required to sustain operations in a contested environment.

For Australia, it represents a strategic evolution, transforming the nation into the southern logistics and sustainment backbone of regional deterrence, ensuring the Indo-Pacific's collective readiness, industrial strength, and ability to respond decisively to future crises.

Conclusion

Australia stands at a decisive juncture in its defence transformation. The emerging strategic environment demands not just new equipment, but a fundamental shift in how capability is conceived, acquired, sustained, and operated. To prevail in an era defined by speed, complexity, and contestation, Defence must evolve from a system built for efficiency and scale to one designed for adaptability, sovereignty, and continuous evolution.

The reforms outlined in this submission, phased acquisition, structural separation of autonomy from platforms, sovereign AI and autonomy development, allied interoperability under AUKUS Pillar II, Flexible Air Combat Operations (FACO), and the Sovereign Indo-Pacific Readiness and Resupply Hub, together form a coherent framework for delivering that transformation.

Collectively, they enable Defence to field capabilities at the speed of relevance, continuously evolve them through operational learning, and sustain them through sovereign control. This approach replaces slow, monolithic acquisition cycles with an agile, modular, and distributed capability ecosystem that aligns directly with the objectives of AUKUS Pillar II and strengthens cooperation with key regional partners, including Japan, South Korea, Taiwan, the Philippines, Indonesia, and the Pacific Island nations.

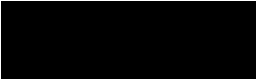
Through the separation and sovereign development of autonomy, Australia gains full control of the AI decision logic that will underpin future military power, a capability as sensitive and decisive as cryptographic systems, cyber defence tools, or electronic warfare software. By advancing and localising technologies such as Shield AI's Hivemind, Defence can deploy, adapt, and certify advanced autonomy domestically, ensuring interoperability with U.S. and U.K. forces while maintaining full Australian sovereignty and ethical oversight.

The adoption of Flexible Air Combat Operations (FACO) and the establishment of a Sovereign Indo-Pacific Readiness and Resupply Hub transform Australia's geography from a logistical vulnerability into a strategic strength. Runway-independent operations, dispersed basing, and shared regional sustainment networks reduce the burden of defending major northern bases and instead create a mobile, survivable, and forward-deployed airpower architecture.

Together, these reforms turn northern Australia into a resilient forward logistics and operations network, the secure southern arsenal of democracy, capable of sustaining allied deterrence and rapid response across the Indo-Pacific.

Embedded within the next iteration of the Defence Strategy and Force Design process, these initiatives will ensure that Australia maintains technological and operational superiority, builds enduring industrial resilience, and strengthens collective deterrence in an increasingly contested region.

Shield AI Australia stands ready to partner with Government, Defence, and industry to realise this vision, one where sovereign autonomy, rapid acquisition, and flexible airpower combine to ensure that Australia remains secure, agile, and technologically superior in the decades ahead.


Mark Palmer
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