Australian Government

THE AUSTRALIAN GUIDED WEAPONS AND EXPLOSIVE ORDNANCE PLAN

2024

Defence acknowledges the Traditional Custodians of Country throughout Australia. Defence recognises their continuing connection to traditional lands and waters and would like to pay respect to their Elders both past and present.

Defence would also like to pay respect to the Aboriginal and Torres Strait Islander people who have contributed to the defence of Australia in times of peace and war.

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Foreword

There is no greater responsibility for the Government than defending Australia. That is why the Albanese Government is committed to deploying all elements of national power to protect our security, interests and way of life.[1]

The Albanese Government embarked on the ambitious but necessary endeavour of reshaping Australia's defence strategy through the 2023 Defence Strategic Review and 2024 National Defence Strategy, backed up by a record $330 billion investment in defence capability over the decade through the 2024 Integrated Investment Program.

One of the capability priorities identified by the Government as integral to delivering an integrated, focused force was the provision of Guided Weapons and Explosive Ordnance (GWEO). Building GWEO stocks and establishing a domestic manufacturing capability are critical to ensuring Defence has access to the munitions needed to keep Australia safe and improving the resilience of supply chains.

The Albanese Government has backed this priority with $16–$21 billion of funding over the decade, representing five per cent of the Integrated Investment Program. Taking into account the funding for targeting and long-range strike as well as missile defence, the Government has committed $58–$74 billion of the Integrated Investment Program over the decade towards capabilities that integrate with GWEO and contribute directly to increasing deterrence effects.

This unprecedented investment in the Australian Defence Force (ADF) addresses historic shortfalls of funding and resources within the GWEO Enterprise, as identified by the Defence Strategic Review.

The Australian GWEO Plan sets out how the Albanese Government will manufacture GWEO in Australia and deliver a transformative uplift in Australia's defence industrial capabilities. It builds on the legacy of Labor Prime Ministers John Curtin and Ben Chifley, who called for increased manufacture of munitions in Australia as far back as before the Second World War.

1 *2024 National Defence Strategy, Commonwealth of Australia*, p 5. https://www.defence.gov.au/about/strategic-planning/2024-national-defence-strategy-2024-integrated-investment-program

The Australian GWEO Plan represents the first time that an Australian Government has produced a holistic strategy on GWEO, with a long-term plan on how we increase domestic manufacture of GWEO within Australian industry. Such a strategy is necessary to bring Government, industry and unions together, ensuring tripartite collaboration to achieve this significant endeavour.

Under the Australian GWEO Plan, we will move from having no dedicated guided missile manufacturing factories, to at least two purpose-built guided missile manufacturing factories by 2029. The Government will establish a munitions factory, by the end of the decade to supply the ADF and our trusted partners with longer-range artillery ammunition. Additionally, we will also invest in a dedicated solid rocket motor manufacturing facility to support our GWEO manufacturing ambitions, which will be operational by 2030.

Central to realising these domestic manufacturing projects will be Australian industry uplift, with a commitment of more than $500 million to ensuring Australian businesses manufacture components and sub-systems for Australian-made GWEO.

This Australian GWEO Plan sends a signal to our trusted partners and defence industry of the Government's intent to increase defence materiel resilience and sovereign capability, and is a further step toward deterring our potential adversaries.

This Australian GWEO Plan presents a vision to develop local industry capability and to increase industrial resilience in order to provide increased sovereignty for Australia. It supports *National Defence*, leveraging the industrial capabilities of the nation to upgrade production capacity of existing conventional weapons and advanced missiles, while establishing the foundations of long-term domestic manufacture and investment in next-generation capabilities. The Australian GWEO Plan will be updated biennially alongside the National Defence Strategy.

Ultimately, investment in the Australian GWEO Plan will equip the ADF with the capabilities it needs to increase preparedness and strengthen deterrence, and keep Australians safe.

The Hon Pat Conroy MP
Minister for Defence Industry and Capability Delivery

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Chapter 1:
Strategic Rationale

The Defence Strategic Review identified a new strategic reality for Australia, outlining the most challenging strategic environment since the Second World War and requiring the adoption of *National Defence.* It also reaffirmed the end of the ten-year warning time for major conflict amid the backdrop of entrenched and increasing global strategic competition.

The basis of Australia's response to this strategic environment has been outlined in the National Defence Strategy. It involves maintaining a favourable strategic balance through our trusted partners and having an ADF capable of deterring any potential adversary's attempt to project power against Australia through our northern approaches.

An unprecedented conventional and non-conventional build-up of military capability is occurring in the Indo-Pacific, with countries investing in new and sophisticated weapons. These weapons are frequently characterised by greater range and speed, and are increasingly difficult to counter.

The proliferation of long-range precision guided missiles has rapidly reduced our geographical advantage and qualitative regional capability edge.

China continues to develop the largest ballistic missile program in the world, with an expanded arsenal of cruise and hypersonic missiles. This is taking place without the strategic reassurance or transparency the region expects from great powers. North Korea is expanding its ballistic missile program and providing munitions to Russia to prosecute its unprovoked, illegal and immoral war against Ukraine.

Recognising the challenge of entrenched and increasing global strategic competition, Australia and its trusted partners, such as the United States, New Zealand, Japan, the Republic of Korea, the United Kingdom and NATO have sought to deepen military cooperation. This is evident through an increased appetite for co-design, co-development, co-production and co-sustainment of defence capability. In a time of serious global challenges, there is a window of opportunity for enhancing international industrial collaboration between trusted partners on advanced military technologies.

Recent global conflicts have shown the proliferation of precision guided munitions. While not decisive in and of themselves, these capabilities have enabled belligerents to impose costs and use coercive force, or the threat of force, in an attempt to achieve their strategic ambitions, and required an increase in our force protection requirements.

The war in Ukraine has highlighted the importance of having a national defence industrial base and munitions manufacturing capability, along with secure supply chains with trusted partners as a cornerstone of self-reliance and the protection of national sovereignty. It has reminded countries high intensity conflict quickly exhausts stockpiles of munitions, from small calibre ammunition and artillery shells to long-range missiles.

Escalating conflict in the Middle East has resulted in increasing frequency and complexity of missile attacks between Israel, Iran and Hizballah. Additionally, other non-state actors such as the Houthi have demonstrated the capability to use long-range missiles to target and attack commercial shipping in the Red Sea, highlighting the erosion of technological barriers that have historically provided a capability edge for state actors. These examples have also demonstrated the destructive reality of modern warfare, as the rise of a new 'missile age' means there is increasing reliance on missiles to achieve strategic gains on the battlefield.

These events have prompted a re-evaluation of Australia's consumption rates of munitions in conflict, of stockpile levels during peacetime and of the industrial base needed to expand production of advanced weapons. Industrial capacity in the West has declined to the point where there is insufficient capacity to escalate to surge production quickly. This means that lead times for munitions, especially advanced weapons, are excessively long. There is a strong imperative for increased self-reliance through the establishment of domestic manufacture capabilities.

The COVID-19 pandemic further highlighted the pressures on existing supply chains and demonstrated the challenges of rapidly scaling the Australian economy to meet urgent needs. These events have highlighted the need to build secure supply chains with trusted partners, and to develop increased sovereign industrial capabilities in key areas to build a safer and more secure Australia.

A key feature of the Government's response to the deteriorating strategic environment has been to invest in capabilities that enhance Australia's readiness and preparedness, and increase our resilience and self-reliance.

One critical area highlighted to build sovereign capability has been the Government's new approach to GWEO.

The Australian GWEO Plan outlines this approach with a transformative agenda that progressively increases our domestic GWEO manufacturing capability through technological enhancements in the domestic industrial base, ensuring we can be more resilient in our deteriorating strategic environment.

The GWEO Challenge for Australia

The nature of the global munitions industry creates challenges for Australia. The industry is dominated by a small number of large primes, major defence contractors, and niche GWEO technology companies such as fuse or thermal battery manufacturers. The hundreds of companies in the supply chain, from the primes to the small to medium sized companies, all are rightly protective of their intellectual property. The supply chains feeding into these primes include hundreds of other companies.

The guided weapons industry generally operates on a sell-then-build approach, incorporating overheads for research, engineering and manufacturing development into acquisition costs paid by governments. The most advanced weapons are effectively sold before they are made, sometimes years in advance, creating long delivery lead times. This results in a lack of existing stockpiles of advanced weapons.

It takes years of planning and investment to establish the supply chains for a new weapon, or to increase the rate of production for existing weapons. Most advanced weapons contain large numbers of highly specialised components, many of them unique to that weapon. The only credible way to surge production is to buy and stockpile components in large numbers. This strategy is prohibitively expensive, particularly for complex weapons containing thousands of specialised components and sub-components.

Most contemporary guided weapons are intimately connected to specific launch platforms or combat systems. Integrating new weapons into existing ships, aircraft and launchers can be slow, expensive and complex. This constrains the types of guided weapons that can be practically employed by the ADF.

Foundations for Australia's Sovereign GWEO Enterprise

Without a domestic GWEO manufacturing capability, Australia will remain highly vulnerable to delays or disruptions to foreign supply chains over the long-term, especially in key long-range guided weapons needed to meet the demands of *National Defence*.

Growing domestic manufacture from a relatively modest industrial base in an accelerated timeframe is an ambitious, complex and labour-intensive undertaking. However, it is necessary to uplift Australian defence industry in line with the priorities of the Defence Industry Development Strategy.

Aside from the sovereignty benefits, establishing domestic manufacture of GWEO will deliver whole-of-nation advantages by increasing the highly skilled workforce and providing opportunities for small and medium businesses. It also unlocks long-term work opportunities for Australians to contribute to our national security, driving an increased demand for a skilled workforce and further motivating young Australians to pursue study in technical and trade occupations.

Based on Defence's assessment, undertaken in line with the principles of the Australian Government's Future Made in Australia agenda, domestic manufacturing of GWEO will require Government intervention to attract private investment at scale. Without Government support, the private sector will not deliver the necessary investment in GWEO manufacturing.

Investment will be made in compliance with the Commonwealth Procurement Rules, including developing a pathway to achieving value for money.

National Defence and GWEO

The concept of *National Defence* includes national resilience, industrial resilience and supply chain resilience.

> *Guided weapons are fundamental for the ADF to build enhanced lethality and long-range precision strike.*

Success in the Australian GWEO Plan is essential to delivering on Australia's strategic policy. The foundations for this strategic approach are:

- The achievement of an asymmetric capability edge, enabled through AUKUS Pillars I and II, the Advanced Strategic Capabilities Accelerator (ASCA) and key advanced defence capabilities in priority areas such as GWEO for the integrated force.
- Accelerated capability delivery to achieve minimum viable capability in the shortest possible time through reforms highlighted in the Defence Industry Development Strategy and the Defence Innovation Science and Technology Strategy.
- Enhanced levels of military preparedness.

Australia must become more self-reliant to meet its *National Defence* needs and to contribute to regional security. This does not mean complete self-sufficiency but rather increasing our ability to withstand, endure and recover from disruption.

The COVID-19 pandemic, war in Ukraine, grey-zone activities and increasing strategic competition in the Indo-Pacific have all highlighted the changing nature of economic security and the need to balance risk and opportunity in economic and defence policy.

Central to responding to this need is the Government's Future Made in Australia agenda. It provides a framework to respond to economic security and national resilience.

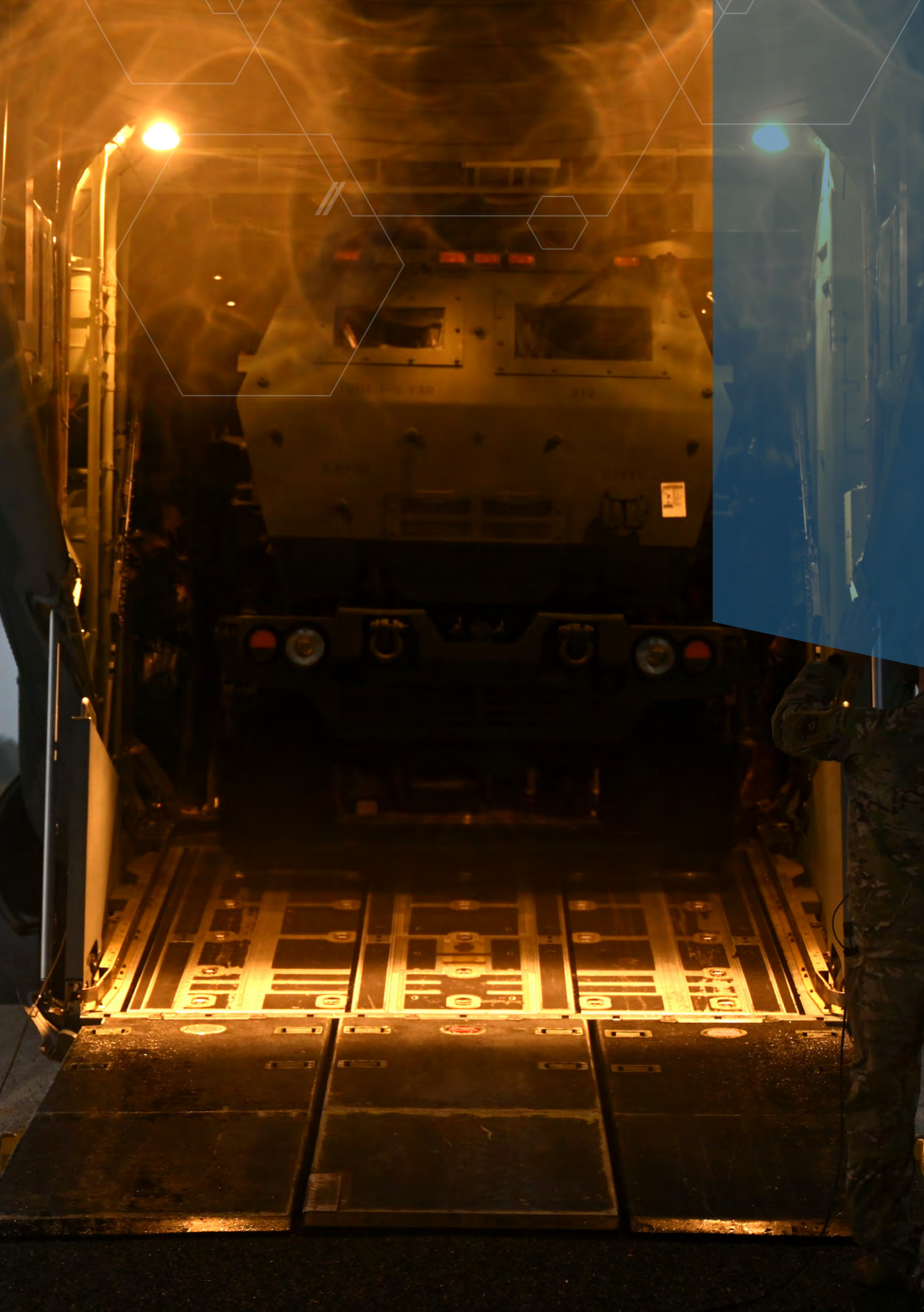
The Government's Future Made in Australia agenda is tailored to develop more resilient domestic and international supply chains in key areas. This builds on Australia's foreign investment regime and the Security of Critical Infrastructure Act which includes electricity, gas, water, ports, data storage and communications. In 2023, the Government doubled the number of critical infrastructure assets deemed to be systems of national significance. Through the Future Made in Australia agenda, the Government introduced a National Interest Framework to build resilience through the ability to absorb, adapt and transform to ongoing change.

Improved resilience is essential to enact deterrence by denial. Some critical requirements for increasing Australia's strategic resilience include:

- enhanced military preparedness
- advanced munitions manufacturing (especially in long-range guided weapons)
- robust national logistics
- a national industrial base with capacity to scale.

Additionally, the Government's $15 billion National Reconstruction Fund identifies defence capability as one of its priority areas. This provides opportunities for investment in the defence industrial base in manufacturing products that are for use in, or in connection with, Defence. This includes products directly relevant to GWEO or with dual-use applications, supporting a Future Made in Australia.

In all these areas the Australian GWEO Plan has a critical and central role in delivering outcomes to achieve requisite levels of national resilience and defence preparedness. It takes a phased approach to achieve the required capability and preparedness outcomes. Increasing Australia's self-reliance, particularly in our defence industrial base will contribute to regional stability, speed up innovation and acquisition cycles and contribute to deterrence over the short, medium and long-term.

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Chapter 2: The Australian GWEO Industrial Base

Australia's Industrial Foundations

Australia has over 100 years of history in the manufacture, production and storage of ordnance. The first ammunition arsenal and ordnance depot for the Australian colonies was established in 1897. After Federation, the production of cordite and the manufacture of small arms was enabled by the establishment of factories in Victoria and New South Wales.

During the Second World War, the Curtin Government increased the number of government munitions factories from six to 48, with capital expenditure on the Australian munitions industry increasing from £59,000,000 to £141,000,000.

After the Second World War, Australia continued to accelerate research, development and manufacture of ammunition, weapons and explosive ordnance. However, like many countries in the West, the post-Cold War era saw a period of disarmament and reduced defence spending. The reduced demand that accompanied these policy settings meant the domestic GWEO industrial base entered a period of stagnation.

Despite this, Australian industry continues to retain many of the foundational capabilities needed to build a world-class domestic GWEO manufacturing industry. The Government is committed to a program of work over the coming years to accelerate the creation of that industry.

$220 million investment in Mulwala and Benalla munitions factories

The Government has invested $220 million in the Commonwealth-owned munitions factories at Mulwala, New South Wales and Benalla, Victoria. It includes $35 million for new explosive mixing equipment, a large industrial X-ray and refurbishment of buildings as initial steps towards manufacturing rocket motors. The Government has also approved funding to expand storage capacity to improve production efficiency, and provide necessary security and safety upgrades.

This investment will significantly boost industrial capacity through:

- infrastructure redevelopment to support future production demands
- new explosive mixers at Mulwala
- enhanced munition manufacturing procedures, including non-destructive testing.

Australia does not currently manufacture any complete guided weapons, similar to many other countries. However, Australia manufactures some non-guided munitions such as small arms ammunition and aircraft bombs, and military-grade explosives and propellants at two Commonwealth-owned munitions factories at Benalla and Mulwala. Australian companies do manufacture a small number of missile components for the global market, however there are few Australian companies that currently have the industrial maturity to produce requisite guided missile components to the standards required by major global prime manufacturers.

The Nulka active missile decoy is an example of the Australian ingenuity residing within our defence industrial base. Defence scientists, in collaboration with BAE Systems Australia, developed the hovering rocket motor. Prior to the Government's $3 billion export agreement to produce Boxer Heavy Weapon Carrier vehicles for Germany, it was Australia's largest defence export. Nulka has generated over $1 billion of sales and has been in service with the Royal Australian Navy and the United States Navy for more than 20 years.

RIM-162 Evolved SeaSparrow Missile (ESSM)

The RIM-162 Evolved SeaSparrow Missile is an advanced, medium-range surface to air missile developed to protect warships from anti-ship cruise missiles and other airborne threats.

The ESSM is an international venture being undertaken to develop and produce an improved version of the RIM-7P NATO SeaSparrow Missile. The ESSM has enhanced speed and manoeuvrability compared to the original SeaSparrow. The ESSM is launched from the Mark 41 Vertical Launching System installed in Anzac class frigates, Hobart class guided missile destroyers and Hunter class frigates.

Australia is a member of the North Atlantic Treaty Organisation (NATO) SeaSparrow Consortium and Australian local companies have manufactured and supplied sub-assemblies into the ESSM through BAE Systems Australia as the Australian industry lead.

Australia has developed and produced the BLU-111 high-explosive 500-pound bomb through an ongoing collaboration between the United States, Defence and Australian industry. The Australian-made BLU-111 is a variant of the Mark 82 general purpose bomb using locally manufactured ingredients for the explosive fill. These bombs are safer for ADF personnel to store and handle compared to previous variants.

The BLU-111 can be configured as a Joint Direct Attack Munition Global Positioning System guided bomb or GBU-12 Paveway II laser-guided bomb through the addition of tail kits and guidance sensors, and can be employed as a Joint Direct Attack Munition – Extended Range (JDAM-ER) weapon through wing kits produced locally by Ferra. Still used internationally, the JDAM-ER was withdrawn from RAAF inventory with the retirement of the F/A-18A/B Hornet in 2021.

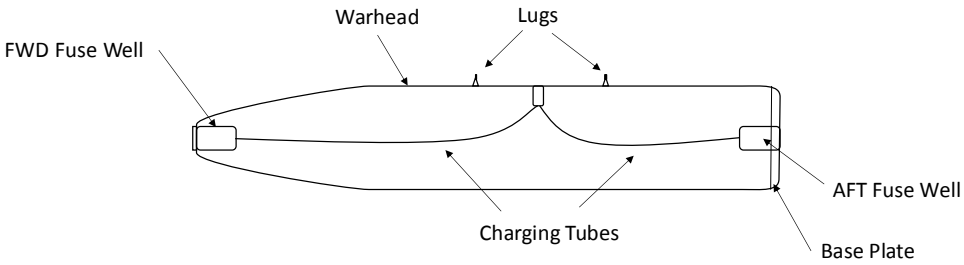

Figure 1: BLU-111(AUS) Warhead

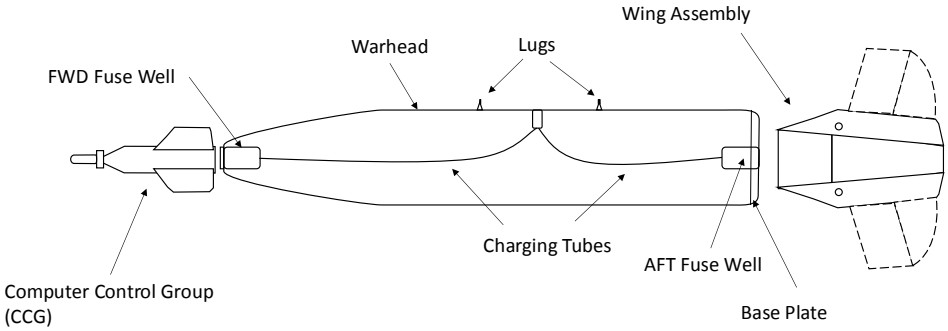

Figure 2: GBU-12 Paveway II Laser Guided Bomb (PWII LGB)

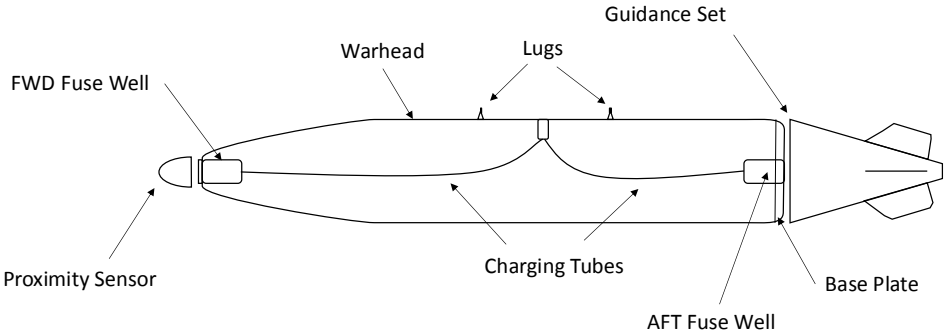

Figure 3: GBU-38 Joint Direct Attack Munition (JDAM)

The Government has continued to invest in research and development of rocket motors through the Defence Science and Technology Group's Advanced Rocket Motor Technology Demonstrator Program. This led to the static firing of the Kooniba Rising rocket motor in late 2023, the first successful demonstration of an Australian designed and manufactured solid rocket motor for military use.

Additionally, several Australian companies are already developing their own rocket motors.

These capabilities and corresponding experience mean Australian scientists and engineers have expertise in state of the art research in rocket motors, warheads and other components. In partnership with industry, this is being leveraged to deliver GWEO prototypes such as loitering munitions and hypersonic weapons.

The nascent capability in our defence industrial base represents a credible starting point for the advancement of Australia's GWEO ambitions. It will take time, ongoing investment and a long-term commitment to establish and sustain a robust, reliable and sustainable guided weapons manufacturing industry in Australia. Beyond manufacturing, Australia needs to increase our capability and capacity across all the enablers including workforce, test and evaluation, and storage.

Case Study: NASAMS Sub-Systems – Built in Australia by Kongsberg Defence Australia with Australian suppliers

The National Advanced Surface to Air Missile System (NASAMS) is a highly capable, short to medium range ground based air defence system that will provide protection to the ADF and its partners from current and emerging air threats.

The Australian Army completed its first successful test firing in 2023 using the Kongsberg canister launcher, the Raytheon AIM-120 Advanced Medium-Range Air-to-Air Missile (AMRAAM) missile, and a new Active Electronically-Scanned Array (AESA) radar from CEA Technologies. System operation was controlled from the Kongsberg Fire Distribution Centre. NASAMS will achieve full operational capability by 2026, which will include the Raytheon High Mobility Launcher and electro-optic sensor.

Kongsberg draws on multiple Australian suppliers and subject matter experts to manufacture and assemble the NASAMS Fire Distribution Centres and Classroom Trainers, which are completed in Australia. Australian suppliers include REDARC Defence and Space for power-supply and electro-mechanical components, Daronmont Technologies for shelter systems, Milspec Manufacturing for mechanical components, and Eylex for cable systems.

Australian industry is critical to GWEO capability. The Australian GWEO Plan provides the Government's strategy and commitment to industry, but delivering its vision requires close partnership with industry. In line with the Defence Industry Development Strategy, the GWEO Group will establish a consistent and proactive engagement approach to ensure industry is provided with clarity on Defence's GWEO priorities.

GWEO as a Sovereign Defence Industrial Priority

A strong sovereign defence industrial base is a key part of Australia's national power and will improve the resilience of supply chains, provide for greater strategic sovereignty, enhance export opportunities and deliver broader economic and employment benefits.

A sovereign GWEO industrial base is critical to the success of the Australian GWEO Plan.

The Defence Industry Development Strategy aims to foster seamless collaboration across Australia's defence industrial base and trusted partners, as well as gaining access to and leveraging international industrial capabilities.

The domestic manufacture of GWEO is one of the Government's seven Sovereign Defence Industrial Priorities identified in the Defence Industry Development Strategy.

As laid out in the Defence Industry Development Strategy, in Epoch 1 from 2023–2025 the focus will be on:

- manufacture of selected guided weapons, commencing with assembly of imported sections and components
- manufacture of expanded types and quantities of non-guided munitions
- uplift of industry for the development of GWEO technologies. This will include investigation of technologies such as loitering munitions and hypersonic weapons to identify future opportunities for greater sovereign resilience, or co-development and co-production opportunities with our trusted partners.

In Epoch 2 from 2026–2030 our focus will be on:

- manufacture of selected weapon sub-sections and components to improve supply chain resilience (such as rocket motors and warheads)
- uplift of industrial capability and capacity in a broader range of GWEO-related technologies to position Australia to develop, manufacture and sustain future weapon systems.

The Defence Industry Development Strategy confirmed the Government's commitment to a targeted uplift of Australia's domestic GWEO manufacturing capabilities. There will be work with industry to identify shortfalls, critical paths and areas for growth using the model (figure 4) to approach industrial prioritisation.

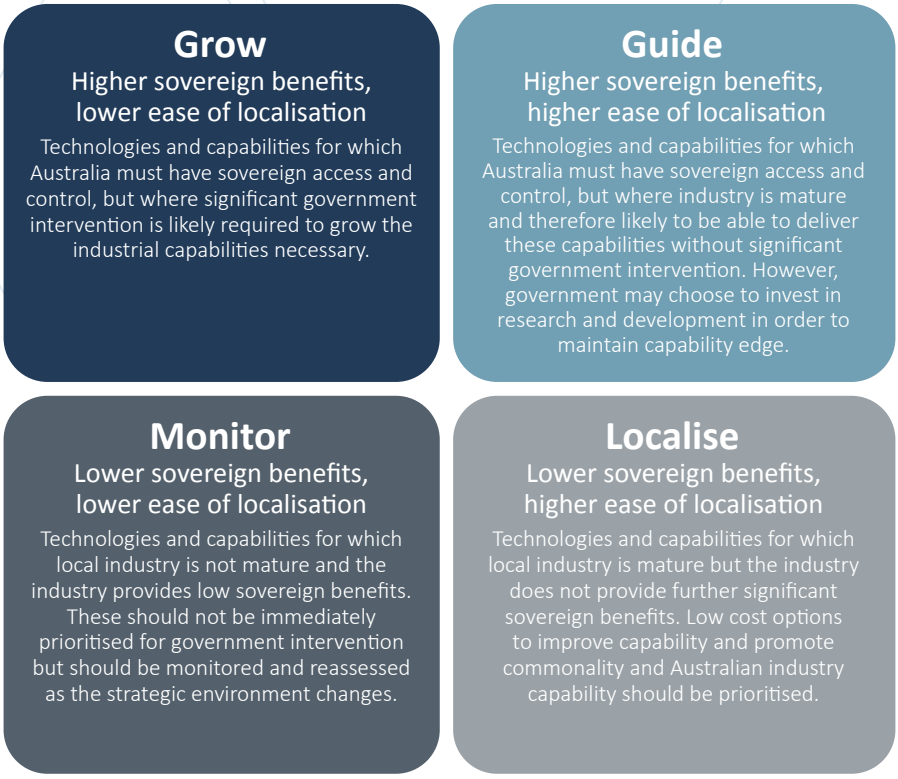

Figure 4: Approach to industrial prioritisation

This framework will be used to inform the phased approach necessary to draw on the expertise of global primes to grow Australia's domestic GWEO manufacturing. To accelerate the development of domestic guided weapons, Australia will manufacture existing weapons in the first instance by harnessing the expertise of global manufacturing primes through their Australian subsidiaries. This is the fastest way for Australia to acquire the overseas components and build the skills to assemble modern guided weapons. While there will be some specialised components that will remain subject to export control, the Government's long-term intent is to manufacture select weapons in Australia in full using Australian-sourced components enabled through the transfer of technology.

The Government is also pursuing opportunities to co-design, co-develop, co-produce and co-sustain new and advanced weapons with our trusted partners, in particular the United States. This will generate opportunities to develop and manufacture Australian-designed guided weapons, such as hypersonic missiles or loitering munitions. Australia's ability to generate and pursue such opportunities will be greatly enhanced as we rapidly expand our GWEO industrial capabilities.

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Chapter 3: The Australian GWEO Plan

The Australian GWEO Plan is a long-term transformational national endeavour that will give Australia greater control over our security.

In response to recommendations in the Defence Strategic Review, the Government appointed Air Marshal Leon Phillips, OAM as the inaugural Chief of the newly formed GWEO Group. The Government's mandate for the GWEO Group is to pursue three lines of effort under the GWEO Enterprise:

1. long-range strike
2. uplift of GWEO stockpiles
3. domestic GWEO manufacture.

The release of the National Defence Strategy and Integrated Investment Plan outlined the Government's focus on:

- the development of a sovereign ability to produce, maintain, repair and overhaul select weapons
- growing the expertise Defence needs to strengthen Australia's contribution to the industrial base it shares with the United States and other key partners
- the manufacture of Guided Multiple Launch Rocket System (GMLRS) missiles in Australia, commencing in 2025, representing an important first step toward establishing domestic missile manufacturing on a large scale
- the expansion and uplift of storage and distribution facilities to accommodate Defence's growing GWEO inventory.

The consolidation of Defence's needs within the GWEO Group has accelerated the momentum to secure sufficient stocks of GWEO and establish a domestic GWEO manufacturing capability.

Vision and Objectives

The Australian GWEO Plan is the strategic framework for delivering the GWEO Enterprise. It is focused on supporting *National Defence* by increasing ADF readiness and preparedness to deter conflict, enhancing national self-reliance, building national resilience and increasing Australia's ability to protect its sovereignty.

Vision

The Government has set out a vision to build a resilient and coordinated GWEO Enterprise that delivers an effective GWEO capability to meet the warfighting needs of the ADF.

The Australian GWEO Plan is a long-term national endeavour to ensure we have better control over our own security. Manufacturing alone is not enough. To be successful, we will need to grow GWEO manufacturing, inventory and critical enablers, including research and development, testing, storage and training in a coordinated and logical sequence.

The Australian GWEO Plan's objectives are to:

- increase readiness through the expansion of priority war stocks
- increase ADF preparedness and national resilience by establishing domestic manufacture of key components and weapons systems
- develop a sovereign ability to produce, maintain, repair and overhaul select weapons as part of a multinational ecosystem
- strengthen Australia's contribution to the international munitions base it shares with the United States and trusted partners
- expand storage and distribution facilities to accommodate Defence's growing GWEO inventory
- undertake targeted research and development critical to improving our sovereign access to GWEO technology
- support training and education to develop a capable and sustainable workforce
- enable Australian companies to contribute to the design and manufacture of a wider range of GWEO components and types, including through co-development of future weapons.

The GWEO Enterprise does not solely sit within Defence. Australian industry will manufacture guided weapons and their critical components. Australian companies and universities will drive innovative technologies like warheads and fuses for hypersonic missiles, loitering munitions and advanced manufacturing processes. Universities and TAFEs will help build a highly skilled workforce through education and training.

GWEO Enterprise Principles

The three lines of effort under the GWEO Enterprise are the focus areas where the GWEO Group will direct its resources and funding. They are underpinned by foundational principles that balance cost, timeframe and risk to deliver Defence and industrial outcomes.

1. A focus on contributing to *National Defence*:
    - » The GWEO Enterprise should leverage, where available, all arms of national power to get access to long-range strike weapons for the ADF and to maintain or increase its GWEO stockpiles. This could involve collaboration with other Commonwealth departments and industry to understand the availability, reliability and responsiveness of global missile and munition supply chains. It could also involve working with academia on disruptive missile technologies and then harnessing industry to create a pathway to production. Essentially, the GWEO Enterprise should be guided by *National Defence*, particularly around domestic GWEO manufacture, to achieve industry and supply-chain resilience.
2. Adopting a phased approach to establishing domestic manufacturing:
    - » Local production will start with the assembly of a small number of existing weapons (initial manufacturing) and gradually increase the number of Australian-manufactured components over time (sustained manufacturing). This will enable Australia to build an industrial ecosystem comprising a skilled workforce, advanced and large-scale industrial infrastructure, certified processes and accredited domestic suppliers. As this ecosystem matures we will transition to design and production of more advanced guided weapons (advanced manufacturing), cooperatively with our trusted partners, though remaining independent.

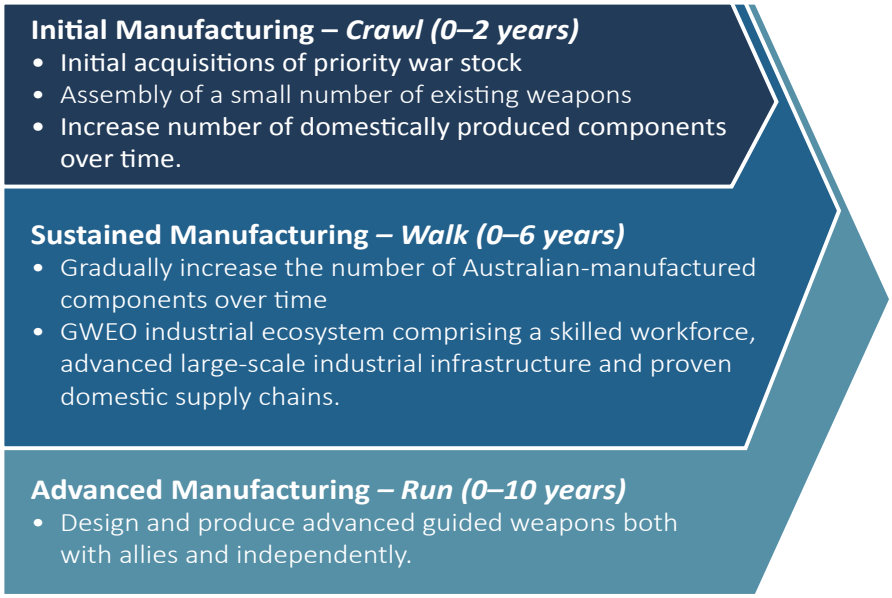

Figure 5: Manufacturing Time Horizons

3. We will manufacture weapons and components where we have sufficient volume to sustain production and which deliver a relevant and enduring Defence or industrial capability:
    - » Identifying munitions and components that deliver warfighting capability to the ADF, and which establish a valuable industrial capability. We will avoid manufacturing pathways that are not ongoing, such as small numbers of weapons produced over a finite period, which do not deliver an enduring industrial capability; or weapons not suitable to be fielded by the ADF.
4. Initial Government intervention is required but should diminish over time:
    - » The Government, through Defence, will be the primary sponsor, customer and coordinator of the GWEO Enterprise. We will expect primes to build and manage their own domestic supply chains, for component production. As the industry grows and matures it should become more self-reliant, self-organising and sustainable.
5. The GWEO Enterprise will require sustained investment, patience and a long-term view:
    - » Establishing a new high-technology industry in Australia will take time. Even for the world's most advanced missile manufacturers, it can take well over a decade to develop a new weapon and establish its production line and supply chain. We must be ambitious but also patient.

International Collaboration

To achieve productive and meaningful engagements, Australia must collaborate with our trusted partners to establish long-term mutually beneficial relationships. This will include integrating into international supply chains, joint test and evaluation, cooperation on maintenance and repair infrastructure for common guided weapons, joint research and development and improved technology transfer and information sharing. Achieving such cooperation will require both extant defence cooperation and the development of new security agreements and arrangements.

Australia's defence relationship with Norway has undergone unprecedented growth in relation to GWEO. Australia and Norway share a vision of a stronger and more assured global supply chain for guided weapons. Australia and Norway are working at pace to achieve these shared priorities by partnering with Norwegian missile manufacturer Kongsberg Defence and Aerospace and its Australian subsidiary Kongsberg Defence Australia.

Key recent milestones include accelerating acquisition of long-range strike weapons. As announced in August 2024, the Australian Government will invest $850 million in partnership with Kongsberg Defence Australia to manufacture and maintain the Naval Strike Missile (NSM) and Joint Strike Missile (JSM) in Australia. This funding will be

used to establish a new missile production facility in the Newcastle Airport Precinct in New South Wales and uplift local industry to manufacture missile components.

In September 2024, the Australian and Norwegian Governments announced Australia is acquiring the JSM as early as 2025 through a $142 million contract with Kongsberg Defence and Aerospace. This acquisition will further accelerate Australia's long-range strike capability.

The Australian Government further announced that Kongsberg Defence Australia will be included as a new Strategic Partner of the GWEO Enterprise. Kongsberg intends to integrate Australian industry into its global supply chains, demonstrating a genuine and meaningful collaboration on guided weapons.

The export control environment is ever-evolving. Positive progress has been made to streamline United States export control regulations for Australia and the United Kingdom as part of AUKUS to support our scientific, technological and industrial cooperation. This includes the creation of an export licence-free environment, which removes barriers to defence trade, collaboration, research and innovation between Australia, the United Kingdom and the United States. This opens opportunities for Australian companies in the GWEO industrial base to export their products and grow their businesses, strengthening their resilience and capabilities.

The United States Alliance

Our Alliance with the United States plays an important role in the development of a resilient and enduring sovereign industrial base with the capability and capacity to meet Australian defence requirements. Australia's guided weapons inventories are mostly derived from United States weapons systems and intellectual property. Australian-United States cooperation on GWEO is essential to meet the needs of both countries.

The 2023 Australia–US Ministerial Consultations (AUSMIN) agreed to deepen cooperation on Australia's GWEO Enterprise, with an initial focus on potential co-production of GMLRS by 2025 and the transfer of technical data for the 155mm M795 artillery shells for future production in Australia. In addition, there were agreements to pivotal enhancements to maintenance, repair, overhaul and upgrade of priority munitions in Australia, with an initial focus on Mark 48 heavyweight torpedoes and Standard Missile 2 surface-to-air and anti-ship missiles.

In January 2024 the United States Department of Defense released its first ever National Defense Industrial Strategy (NDIS). The NDIS commits the United States to working with allies and partners, both multilaterally and bilaterally, to boost defence production, innovation and overall capability.

The 2024 *United States National Defense Authorization Act* (NDAA) established a national exemption for Australia (and the United Kingdom) from United States defence export control licensing and added Australia to the Title III of the *United States Defense Production Act*. This is only the second time in the 74 year history of the *United States Defense Production Act* that the Congress has expanded the definition of a domestic source for Title III. Australia's entry into Title III of the *United States Defense Production Act* will allow Australia to:

- diversify supply chains through engaging trusted partners to expand production and increase supply chain resilience
- enhance access to critical components from respective industrial bases
- aggregate demand signals for common munitions and weapons systems
- license production of United States systems
- expand overseas defence company production with the United States
- increase sharing of science and technology.

The AUSMIN 2023 initiatives have progressed at pace. In January 2024, a $37.4 million agreement between the Australian Government and Lockheed Martin Australia ensured that the first batch of GMLRS would be manufactured in Australia in 2025. In March 2024, the Australian Government, the United States Government and Lockheed Martin signed a joint statement agreeing to collaborate on a pathway for manufacturing GMLRS in Australia that supports up to 4,000 GMLRS per annum into the global supply chain; more than a quarter of the current global production.

AUSMIN 2024 reaffirmed bilateral cooperation on the GWEO Enterprise and emphasised a shared commitment to streamline cooperation on missile technologies. The joint statement acknowledged the strategic importance of the GWEO Enterprise and the bilateral pathways to co-development, co-production and co-sustainment of long-range fires and their supply chains. The commitment to finalise the memorandum of understanding on GMLRS and Precision Strike Missile (PrSM) by December 2024 demonstrated the bilateral momentum on these munitions.

Significantly, AUSMIN 2024 expressed bilateral support for Australia's establishment of a sovereign solid rocket motor capability. Alongside the commitments to collaborate on integrated air and missile defence and hypersonic weapon development, these initiatives chart out future bilateral cooperation in support of Australia's GWEO ambitions.

Establishing GWEO Manufacturing in Australia

GWEO manufacturing will initially focus on weapons that support Australia to build its industrial capability and knowledge, with the complexity increasing over time through the domestic manufacture of various components. The foundation for this approach is demonstrating our industrial competence through weapons such as GMLRS. The GWEO manufacturing projects are designed to contribute to national security by bolstering ADF stockpiles, improving the ADF's access to weapons and building resilience into Australian and global supply chains.

Australia's access to GWEO production will increase by:

Assembling Guided Weapons. Initial assembly of guided weapons will build the infrastructure, grow the skilled workforce and initiate the transfer of intellectual property and technical data needed to manufacture GWEO. We will begin by contracting Kongsberg to assemble NSM and JSM, and contracting Lockheed Martin Australia to assemble GMLRS missiles.

Manufacturing and Maintaining GWEO Components. We will support Australian companies to develop their industrial capability to manufacture and maintain critical components for specific weapons, so that they can compete to join global supply chains. We will continue to negotiate access to global demand with industry partners and the United States Government across the spectrum of guided weapons sub-systems including seekers, guidance and navigation, effectors and propulsion.

Developing GWEO Technology. We will improve our sovereign access to GWEO-relevant technology through targeted research and development. We will focus on technology that is less likely to be shared with Australia (for example, seekers and guidance sections), and components that are difficult to transport (for example, warheads and rocket motors). We will support Australian companies to mature their technology so that it is ready for production, and can be integrated into current or future weapons and their supply chains.

GWEO manufacturing projects are designed to contribute to national security by bolstering ADF stockpiles, improving the ADF's access to weapons and building resilience into Australian and global supply chains.

GWEO manufacturing projects will be assessed against Commonwealth Procurement Rules and developed under five key criteria:

Defence Requirements. The project must contribute to current or future ADF weapon capability through domestic manufacture or maintenance and sustainment of existing weapons.

Manufacturing Viability and Sustainability. The project must demonstrate a pathway to long-term viability and sustainment. There must be both short-term and long-term demand, whether through manufacturing for ADF needs, global supply, diversifying manufacturing to other weapons types or contributing to regional maintenance needs.

Building Manufacturing Pathways. The project must create pathways to develop the knowledge, skills, experience and expertise necessary to develop and maintain a domestic GWEO manufacturing and maintenance capability. This includes positioning Australia as a trusted supplier of choice for guided weapons and components to capture future weapon development and production opportunities.

National Supply Chain Resilience. The project must provide diversity to supply chains, diminish the impact of external threats and hazards and, expand domestic and partner countries' production capacity to assure access to sufficient quantity of guided weapons in times of conflict.

Economic Opportunities for Australian Industry. The project must present opportunities to establish, develop and expand Australian industry's contribution to the GWEO manufacturing capability.

4

Chapter 4:
Long-Range Strike and Uplift of GWEO Stockpiles

Delivering Long-Range Strike Capability for the Strategy of Denial

With vast maritime borders and critical northern approaches, Australia must be able to defend against adversaries who may project power close to our territory. Long-range precision strike systems allow Australia to respond before an adversary approaches, thereby safeguarding our sovereignty and economic security. The Defence Strategic Review identified an enhanced long-range strike capability in all domains was a critical capability for the ADF to effect a Strategy of Denial.

Australia's strategic shift towards enhancing its long-range strike capabilities is a vital part of the National Defence Strategy, driven by the evolving security environment in the Indo-Pacific. Australia has committed significant resources to acquiring, developing, and manufacturing advanced strike weapons. Through a combination of international collaboration, substantial financial investment and domestic manufacturing initiatives, Australia is on track to meet its long-range strike capability requirements.

Across Defence, the Government has committed to spend over $14 billion and placed in excess of $10 billion of orders for the acquisition and sustainment of GWEO since May 2022.

The aim is to ensure Australia has the capability to hold adversary forces at risk before they can threaten Australian territory, helping to maintain a credible deterrence posture.

The Government's investment in the long-range strike capabilities of the ADF will mean:

- The Royal Australian Navy will move from a legacy fleet with a maximum range weapon of 200 kilometres to a larger and more lethal fleet, with a maximum range weapon of over 2,500 kilometres
- The Australian Army will transform from a legacy force with a maximum range weapon of 40 kilometres to a littoral manoeuvre force capable of land and maritime strike to 1,000 kilometres
- The Royal Australian Air Force will be enhanced with more stealth, anti-ship and high-speed weapons, taking its strike weapon range from greater than 100 kilometres to up to 900 kilometres.

The Government is implementing a multi-pronged strategy to develop, acquire, and manufacture long-range strike systems. Several key steps have been taken to meet the pressing need for advanced strike capabilities and expanding GWEO stockpiles. These focus on consolidating Australia's weapons needs, including the development of land-based maritime strike systems and long-range missile launchers.

Following the recommendations of the Defence Strategic Review, the Government has moved swiftly to deliver these capability enhancements.

Acquisition of the High Mobility Artillery Rocket System (HIMARS) has been brought forward from the early 2030s to 2026–27. The number of HIMARS launchers has more than doubled, from 20 to a total of 42.

In July 2024, the first NSM for Australia was successfully fired from the Hobart class destroyer HMAS *Sydney* during Exercise RIMPAC 2024. This was noteworthy as the contract was only signed in December 2022, resulting in the acceleration of NSM integration, representing the quickest ever introduction into service of long-range missile capability into the Navy.

In August 2024, HMAS *Sydney* successfully fired the first Standard Missile 6 (SM-6) for Australia. Australia is the first country, other than the United States, to fire an SM-6 missile.

Australia and the United States are working to integrate the Hypersonic Attack Cruise Missile (HACM) onto the Royal Australian Air Force F/A-18F Super Hornets and conduct flight tests in Australia.

In addition, the Government has announced a diverse portfolio of longer range weapons, each designed to fulfil specific operational roles across the different services of the ADF. The capabilities below represent an initial surge, as the GWEO Enterprise grows and domestic manufacturing capability expands to also provide GWEO to the ADF:

Navy

- $7 billion to acquire Standard Missile 2 Block IIIC (SM-2 IIIC) and SM-6 missiles for the Hobart class destroyers and Hunter class frigates. These are the most advanced air and defence missiles in the world. The SM-2 IIIC brings active seeker technology which will enhance defensive capabilities against evolving threats. The SM-6 will introduce an extended-range air defence and anti-ship capability and, for the first time, a terminal ballistic missile defence capability for Navy.
- $1.3 billion to equip the Hobart class destroyers with the RGM-109E Tomahawk cruise missile, with future acquisitions, subject to feasibility assessment, for the Hunter class frigate and Virginia class submarines. These subsonic cruise missiles are capable of striking land targets at a range of over 2,500 kilometres and represent a significant boost to Navy's long-range strike capabilities.
- Over $1 billion to acquire the NSM. The NSM is an anti-ship and surface-to-surface missile also in-service, or entering service, with Norway, the United States, the United Kingdom and several of our other trusted partners. The ADF is currently introducing the NSM on Hobart class guided missile destroyers and Anzac class frigates to replace the ageing Harpoon anti-ship missile. The NSM will significantly increase the lethality and survivability of Australia's surface fleet by holding adversaries at risk at greater range.

Army

- $1.6 billion to expand and accelerate the acquisition of HIMARS, increasing the total number of HIMARS to 42. The HIMARS will initially be equipped with GMLRS. Through the Precision Strike Missile (PrSM) co-development program, Army will also introduce PrSM into HIMARS. The PrSM family of weapons will provide a generational uplift in land-based strike capabilities, with an initial range of 500 kilometres. Future development will extend the range of PrSM to over 1,000 kilometres and be capable of striking maritime targets.
- Acquisition of the Switchblade 300, a precision loitering munition to be introduced into service by the Australian Army in 2025. It will provide soldiers with a disruptive capability that can deliver kinetic lethality at longer range against potential adversaries. It can also provide force protection through intelligence, surveillance and reconnaissance missions.
- Over $50 million to deliver Spike Long-Range 2 anti-tank guided missiles for the Boxer Combat Reconnaissance Vehicle and Redback Infantry Fighting Vehicles. This will enable armoured threats to be engaged at greater distances, enhancing the protection of our soldiers.

Air Force

- $659 million to acquire Long-Range Anti-Ship Missile (LRASM) capability for the F/A-18F Super Hornet, P-8A Poseidon and F-35A Lightning II aircraft and $575 million to acquire Joint Air-to-Surface Standoff Missiles Extended Range (JASSM-ER). The AGM-158 family of weapons are highly advanced, long-range, air-launched cruise missiles that will be initially integrated on to Australia's F/A-18F Super Hornets, and subsequently to the F-35A Lightning II. The AGM-158B JASSM-ER is able to strike land targets at extended ranges and the AGM-158C LRASM is able to conduct maritime strikes, providing Australia with enhanced anti-ship capabilities.
- $431 million to acquire Advanced Anti-Radiation Guided Missile Extended Range (AARGM-ER) missiles for the EA-18G Growler, F/A-18F Super Hornet and the F-35A Lightning II aircraft.
- $142 million to acquire Joint Strike Missile (JSM) for the F-35A Lightning II aircraft. The JSM is a multi-role air-launched variant of the NSM that will be acquired by Australia, Norway, the United States and Japan. The JSM is designed to fit into the F-35A Lightning II internal weapon bay, preserving the aircraft's stealth characteristics. The JSM will provide significant long-range strike capabilities against both land and sea targets.

Continuous GWEO Inventory Uplift

As we work to grow the ADF, we are also expanding our inventory of GWEO. In addition to the long-range strike systems, the Government will increase stockpiles of less advanced, but equally important weapons including:

- Evolved SeaSparrow surface-to-air missiles (ESSM) Block II
- Nulka active missile decoy
- AIM-9X-2 and AIM-9X-3 Sidewinder Air-to-Air missiles
- AIM-120D Advanced Medium Range Air-to-Air missiles (AMRAAM)
- Joint Direct Attack Munitions (JDAM)
- Javelin missiles
- Sea mines
- A range of aerial bombs and warheads including the domestically manufactured BLU-111.

The Government is investing in additional storage facilities at locations throughout Australia such as HMAS *Stirling* in Western Australia, RAAF Amberley in Queensland, Defence Establishment Orchard Hills, Explosive Ordnance Depot at Myambat and Explosive Ordnance Depot at Jennings in New South Wales. This means our increasing inventory can be safely stored, readily accessible by operational units, and operationally dispersed in line with the National Defence Strategy.

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Chapter 5:
Domestic Manufacture of GWEO

The Government has prioritised four GWEO manufacturing projects. These investments represent a carefully balanced mix of weapons and ordnance, industrial complexity, cost and risk. They are the first steps in uplifting Australia's industrial capabilities. Building on these projects, the Government will make further investments and decisions in the future as the GWEO industrial base continues to mature.

Naval Strike Missile and Joint Strike Missile Production

Australia is heavily reliant on open sea lines of communication and maritime trade.

> *The ADF must be able to deter and deny potential adversaries from applying coercion on our northern approaches, which have our critical sea lines of communication. A key way to achieve this is having the capability to conduct long-range maritime strike and to be able to replenish such weapons through the domestic industrial base.*

The advanced anti-ship capabilities of the NSM and JSM make these weapons ideal candidates for domestic manufacture.

The Government will invest $850 million in partnership with Kongsberg Defence Australia to manufacture the NSM and JSM in Australia. A new purpose-built facility will be constructed at the Newcastle Airport Precinct in New South Wales. In the current schedule, it will be the first facility outside of Norway to manufacture both the NSM and JSM, and only the second facility in the world.

Construction of the facility will begin from the end of 2024, with scheduled completion in 2026. It will create more than 500 jobs in the construction phase and once complete, employ approximately 100 workers. Initial-rate production will begin in 2027, with full-rate production in 2028. At the full-rate production phase, the facility will have the capacity to produce in excess of 100 missiles per annum.

Such is the global demand for NSM, by building a manufacturing facility, Australia will receive its NSMs faster than if they were ordered from the existing Norwegian factory.

Local assembly of NSM components will commence in 2026. The initial phase will be assembly of imported components and then a transition to Australian-made components being introduced into the production line from 2027. This will mean the number of Australian-made components will grow over time and to achieve this, a significant share of the Government's $850 million investment is allocated to building up the Australian supply chain.

Australian Manufacture and Maintenance of Components

The Government is investing up to $137 million over 2024–2030 to fund select non-recurring costs to qualify Australian companies up to full-rate manufacture and maintenance of priority NSM and JSM components.

Kongsberg has a proven track record of engaging with Australian industry to contribute to NSM and JSM capabilities. Kongsberg has:

- established a successful network of Australian suppliers to support the ADF's acquisition of the NSM under the project SEA1300 Navy Guided Weapons. Australian companies—such as Aerobond, Marand and QPE Advanced Machining—currently produce components for NSM launchers. Meanwhile companies such as Nupress Group and Stahl Metall respectively will be supplying mechanical components and cable systems
- invested in a new manufacturing facility in Mawson Lakes, South Australia, supporting assembly of launchers for the NSM and other key defence priorities
- contracted BAE Systems Australia to supply Passive Radio Frequency Sensors for the JSM as part of Kongsberg's global supply chain.

Domestic NSM and JSM production is a key part of the maritime strike element of establishing GWEO manufacturing in Australia. The establishment of this industrial capability fills both a minimum viable manufacturing capability for Australian requirements, while also providing for optimal production rates and global surge capacity for NSM and JSM production. It also opens up opportunities for co-development, co-production and co-sustainment of future variants of these missiles.

Naval Strike Missile and Joint Strike Missile Production will:

- grow Australian industrial capability
- support assured access to NSM and JSM production
- improve supply chain resilience and redundancy
- increase weapon availability including through reduced lead times for weapons
- support a larger ADF inventory of NSM and JSM
- enable Defence to quickly procure NSM and JSM if required
- provide export opportunities for manufacture and maintenance.

Investing in NSM and JSM production will help Australia to develop critical maintenance and sustainment capabilities. Without these capabilities, Australia would need to send missiles requiring complex re-certification or maintenance back to Norway, resulting in long maintenance lead times. These capabilities allow Australia to operate as an Indo-Pacific regional maintenance hub for maritime strike weapons for trusted partners, opening up co-sustainment opportunities.

NSM and JSM production will also support the enhancement of ADF lethality, the Sovereign Defence Industrial Priorities and create opportunities for Australia to contribute to global guided weapon supply chains. Defence is working with Kongsberg Defence Australia and Kongsberg Defence and Aerospace to:

- confirm pathways to use any additional capacity in the Australian facility to help meet global demand
- qualify Australian companies up to full-rate manufacture and maintenance for a range of NSM components.

This investment will bolster Australia's sovereign defence industrial base and is aligned with the objectives of the Government's Future Made in Australia agenda.

Guided Multiple Launch Rocket System

Currently the Australian Army is limited to delivering strike at a maximum range of 40 kilometres using artillery. The Government's acquisition of the HIMARS with GMLRS will almost double the Army's maximum range weapon by 2026. This will deliver a precision land-based strike that is unprecedented for Army. The HIMARS is a transformative capability for Army and will be a core feature of its long-range strike over the decade, with a pathway to increasing the range to over 1,000 kilometres through the family of Precision Strike Missiles (PrSM).

Recent global conflicts have delivered a reality check on the consumption of munitions in conflict and difficulty of sourcing munitions amid the backdrop of global conflicts. GMLRS is the example of such a munition. It represents the ideal candidate for domestic manufacture as there is a pathway for Australian industry to manufacture more advanced munitions in the family of PrSM, securing long-term opportunities for Australian industry.

Lockheed Martin Australia will initially manufacture GMLRS missiles in Defence facilities from 2025. This will allow Defence and Lockheed Martin Australia to exercise and test United States Government licencing and export approval processes for components, test equipment and build the skills of an Australian workforce. This will reduce risk and be a demonstration of Australian manufacturing capabilities.

There is a need for a dedicated facility to provide an enduring Australian guided weapons production capability.

The Government will invest an initial $316 million to establish an Australian Weapons Manufacturing Complex (AWMC) in partnership with Lockheed Martin Australia. The Government has identified potential sites for the AWMC in New South Wales and Victoria, with these sites now being assessed to inform a Government decision in 2025. This is a transformative undertaking that will establish approximately 70 missile manufacturing jobs being created during the construction of the facility. A substantial component of the Government's initial investment will go to uplifting Australian companies, supporting their ability to manufacture specific GMLRS components. These selected GMLRS components will be introduced into the production process in stages.

Australian Industry Uplift

In addition to the initial $316 million to establish the AWMC, the Government has committed $320 million of additional funding over 2024–2030 to evaluate and develop the feasibility of select Australian companies to manufacture specific GMLRS components. This investment sends a strong signal on Australia's long-term commitment to increasing the level of Australian-made components over time in domestically manufactured missiles.

The AWMC will be able to manufacture a range of weapons and contribute production capacity to our trusted partners. It will be flexible and scalable, expand global manufacturing capacity and reduce Australia's dependence on international supply chains and foreign infrastructure. It is a strong signal to industry of Australia's long-term commitment to a domestic GWEO manufacturing capability.

The first guided weapon to be manufactured in the AWMC will be the GMLRS. Domestic GMLRS production is a critical stepping stone to building Australia's GWEO capability to manufacture longer-range strike weapons, such as the family of PrSM. This will mean the AWMC will be the first facility outside of the United States that will be capable of producing GMLRS, and potentially PrSM.

The AWMC will be operational by 2029, with the permanent infrastructure capable of producing up to 4,000 GMLRS per annum, more than a quarter of the current global production and more than ten times the current ADF demand. This will enable Australia to be a major player in the global GMLRS supply chain, opening up opportunities for Australian industry to manufacture components, sub-systems and all-up-rounds for domestic and global supply chains. It will also promote co-development, co-production and co-sustainment opportunities through increased Australian industrial capability.

GMLRS, and later PrSM, present a path for Australia to enter into the co-development and co-production of hypersonic weapons. Australian manufactured weapons will rely on new mechanisms for the transfer of manufacturing knowledge, expertise and technical data from the United States. This requires deep cooperation with the United States to ensure Australian manufactured GMLRS are fully-compliant with United States certified weapons for the global supply chain.

The GMLRS domestic guided weapons manufacturing in Australia will:

- support the development of skills, knowledge and expertise in the Australian workforce required to manufacture more complex guided weapons, such as PrSM, and hypersonic missiles in future
- build industrial base integration with the United States by developing and exercising the processes and arrangements necessary for manufacturing approvals and transfer of technical data down to component level
- ensure Australian manufactured GMLRS can be accepted into Australian inventory with the potential to expand to other GMLRS variations from 2029 onwards.

Sovereign Rocket Motor Manufacturing

Rocket motors are a critical component of guided missiles. However, global demand has outstripped the supply capacity of United States defence primes, which traditionally dominate the market. This has led to a shortage of rocket motors and represents one of the most significant chokepoints constraining the production rate of missiles.

The United States manufactures the majority of rocket motors for current and projected ADF guided weapons inventory. While the efforts of United States defence primes to uplift rocket motor supply chains, combined with the emergence of new entrants into the market, will help with diversification and resilience, the surging global demand presents a significant opportunity for Australia to develop a sovereign rocket motor production capability that supports our GWEO ambitions.

A sovereign rocket motor production capability would help meet the needs of the ADF, supplement the production capability of our trusted partners, and open up export opportunities for Australia, helping alleviate global shortages and supply chain constraints. As identified in the Defence Industry Development Strategy, the development of rocket motor manufacturing in Australia is a Sovereign Defence Industrial Priority.

The Government has taken the first step towards establishing a domestic rocket motor manufacturing capability through a limited request for information. The limited request for information is seeking options from selected industry partners on the operating model and detailed plans for a Rocket Motor Manufacturing Complex. An initial $22 million investment will support this request for information and inform the uplift of Australia's domestic supply chain on rocket motor componentry. These activities will inform a Government decision in the near future on the location of the Rocket Motor Manufacturing Complex that will produce qualified solid rocket motors for some of the world's most advanced missiles by 2030.

The Rocket Motor Manufacturing Complex will manufacture multiple solid rocket motor types to achieve increased scale and flexibility in manufacturing across ADF guided missiles. The intention is to begin the manufacture of a rocket motor with high demand, which will likely be GMLRS rocket motors to align with the establishment of GMLRS production capability.

The focus for this Rocket Motor Manufacturing Complex is:

- manufacture multiple solid rocket motor types within the current and future ADF inventory by 2030.
- increase surety of supply in the short term, optimising domestic and international supply arrangements and being capable of allowing vertical integration of precursors and other solid rocket motor components into the supply chain.
- support skill development and domestic industrial base uplift to manufacture, maintain, repair and overhaul more advanced weapons over the longer term including hypersonics and long-range strike missiles.

Australia has foundational expertise but nascent capability in this field. The Defence Science and Technology Group and Thales Australia, with their corresponding industry network, have successfully developed prototype tactical-missile class rocket motors. This investment by Defence, through the Advanced Rocket Motor Technology Demonstrator Program (ARMTD), has uplifted and skilled Australian industry in the manufacture of military relevant solid fuel rocket motors. This represents a firm foundation for Australia to build upon through the Rocket Motor Manufacturing Complex. The existing base expertise, knowledge and facilities of the Rocket Motor Manufacturing Complex will initially rely on established overseas industry expertise for design, uplift, operation and access to intellectual property to deliver a manufacturing capability.

The Rocket Motor Manufacturing Complex is an important component of the overall GWEO Enterprise vision. It will require partnerships with industry, intellectual property transfer and the growth of a domestic workforce. These dependencies are critical in order to enable rocket motor production able to be certified and integrated into overall missiles.

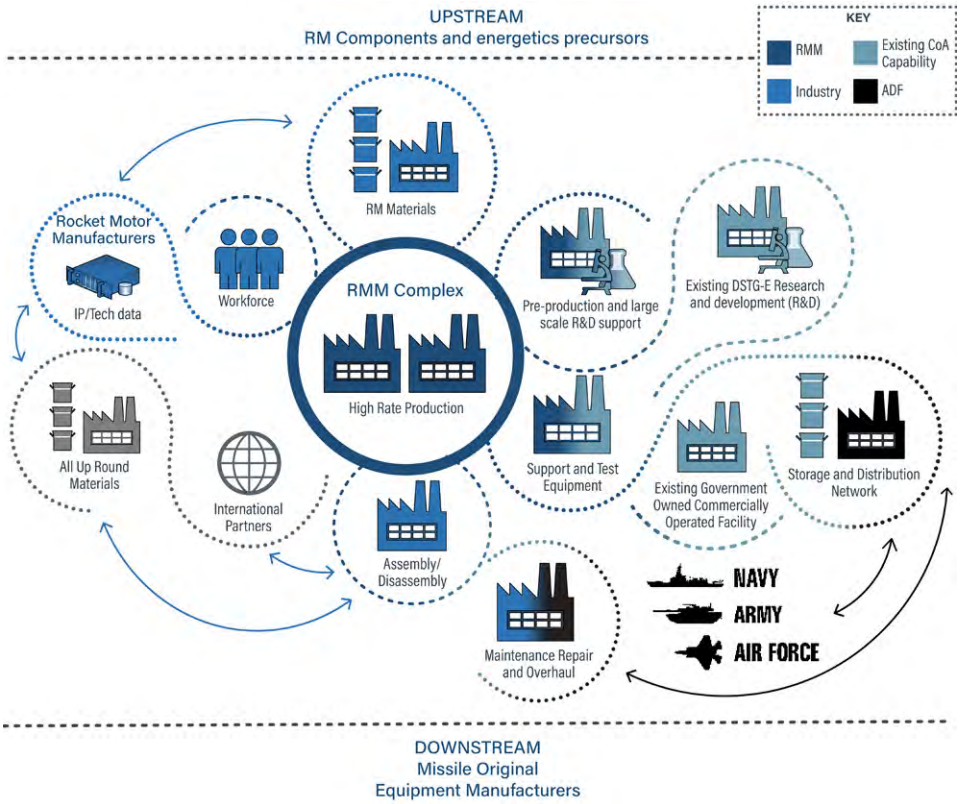

Figure 6: Rocket Motor Manufacturing Complex – High level concept

Establishing the Rocket Motor Manufacturing Complex:

- **Design.** Selection of suitably experienced provider/s to lead design of the operating model, facilities and early Australian industry uplift and risk reduction activities required for the energetics fill of solid rocket motors.
- **Build and Commission.** Construct the facilities and establish intellectual property and technical data access and controls, coordinate the supply chain and conduct initial commission and low-rate qualification activities. Industry uplift and risk reduction will shift focus to developing domestic capabilities for precursor and solid rocket motor component manufacture.
- **Operate.** Ongoing operation of the Rocket Motor Manufacturing Complex at high rate across multiple solid rocket motors, including assembly and quality assurance testing by 2030.

Large Calibre Ammunition Manufacturing (155mm artillery ammunition)

The war in Ukraine has highlighted how rapidly stockpiles of munitions can be depleted in conflict and the challenge of ramping up production rates when there is high demand. Stockpiles of 155mm artillery ammunition are a noteworthy example, with millions of these rounds having been supplied to Ukraine from the United States and Europe since Russia's invasion in 2022. Open source reporting indicates that the current daily usage rates of 155mm munitions in Ukraine is estimated to be between 3,000 – 6,000.

This high usage has dwindled the domestic stocks of countries and required arms manufacturers to ramp up production in an effort to replenish stockpiles. Despite this, the high global demand for 155mm ammunition remains a risk to the ADF in ensuring it has viable stockpiles.

A high global demand presents the opportunity to build the strategic and commercial case for Australia to manufacture 155mm ammunition locally. This would both meet the needs of the ADF and alleviate global supply chain pressures by using surplus capacity to produce munitions for our trusted partners.

The Mulwala facility is the sole Australian domestic manufacturer of propellants, various types of explosives and concentrated acids for both the military and civil markets. The propellants and high explosives produced at the Mulwala facility are transferred to the Benalla munitions facility and used in the manufacture of munitions for the ADF. Propellants from the Mulwala facility are also sold commercially as bulk propellant or used to manufacture civil small arms ammunition, mainly into the US sporting shooters market.

Additionally, assembly of the all up Nulka active missile decoy is undertaken at the site by BAE Systems Australia, as well as the manufacture of rocket motors and components.

The Benalla facility is a modern munitions manufacturing site capable of a broad range of munitions manufacture, from raw materials and some partially completed components sourced elsewhere, supplying the ADF and other customers.

The Government will work with industry to establish a facility capable of producing 15,000 rounds per annum, with the capacity to scale up to 100,000 per annum to meet both Australian and global needs. The Government intends to establish this capacity by the end of the decade.

Large Calibre Ammunition Manufacturing

The Government is investing $56 million in acquisition and capability development to expand test and evaluation capability, technical data and program support for the initial establishment of domestic production of 155mm artillery projectile components.

Domestic production of the United States 155mm M-series rounds will be enabled through the sharing of technical data and United States certification of Australian manufactured munitions, which were commitments reiterated at AUSMIN 2024.

This will demonstrate Australia's ability to contribute to global supply, industrial base integration, and a mature understanding of United States technical certification requirements for manufacturing more complex munitions.

While some components of 155mm rounds will be imported and stockpiled, the investment will give Australia the capability to forge and fill all the 155mm ammunition needed by the ADF. It will also provide surplus capacity to help support the wider allied industrial base, which has not been able to keep up with the surging demand for 155mm ammunition. In addition, Australian production will offer an alternate source of supply for our partners operating and training in the Indo-Pacific region.

Defence is undertaking a staged approach to manage the technical challenges inherent in manufacturing modern artillery ammunition including the high safety standards and performance specifications.

Figure 7 illustrates the new components to be domestically manufactured to reduce Australia's reliance on overseas supply chains, allowing careful consideration of the costs and benefits of manufacturing subsequent components.

Figure 7: 155m componentry

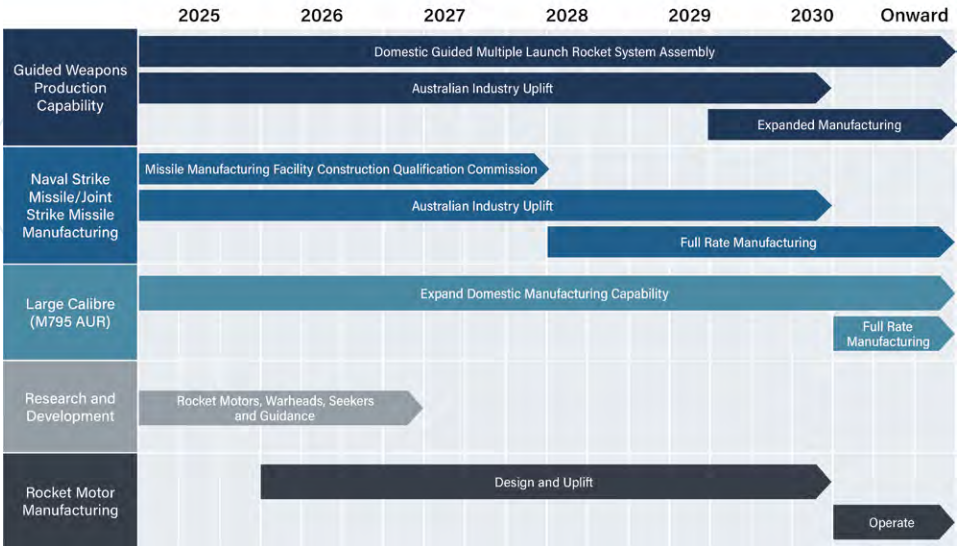

Figure 8: Timeline of the current GWEO Enterprise Projects

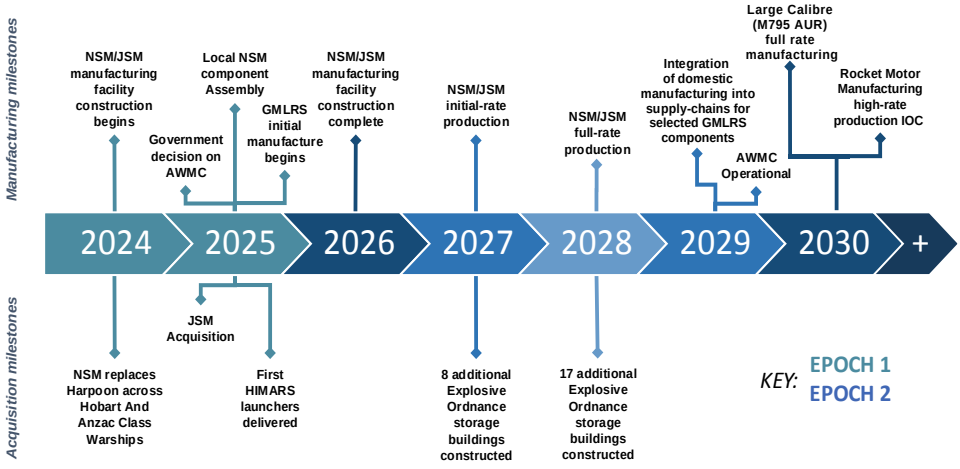

Figure 9: Future GWEO Enterprise Milestones

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Chapter 6:
GWEO Capability Elements and Enablers

GWEO Strategic and Enterprise Partners

The Defence Industry Development Strategy highlighted the value of strategic partnerships with industry to provide long-term opportunities to work with Defence on progressive capability development and innovation. The establishment of enduring strategic partnerships is based on trust and mutual respect, supported by contractual frameworks that encourage the sharing of risk and reward.

Lockheed Martin Australia and Raytheon Australia were the initial Strategic Partners of the GWEO Enterprise, supported by Aurecon and the Australian Missile Corporation as the Enterprise Partners.

Strategic Partners

The GWEO Group looks to our Strategic Partners to identify opportunities, lead engagement and establish domestic supply chains with other companies across the industrial base, including small and medium-sized Australian businesses.

The Strategic Partners are currently working with Defence to:

- accelerate the delivery of GWEO inventory
- identify and expand manufacturing and maintenance pathways for guided weapons and components in Australia.

Lockheed Martin Australia: is the first Strategic Partner selected by the Government and will develop a domestic manufacturing capability for the GMLRS missiles, which Australia will start manufacturing from 2025. This is in an important first step towards establishing domestic missile manufacturing on a larger scale.

Raytheon Australia: is the second Strategic Partner of the GWEO Enterprise and provides GWEO capabilities to the ADF including the AIM-120 AMRAAM missile used in the NASAMS platform.

Enterprise Partners

The GWEO Enterprise Partners demonstrate expertise and provide specialist advice and services directly to Defence. They do this through collaboration with the GWEO Enterprise across the short, medium, and long-time planning horizons. This has initially focused on establishing the GWEO Enterprise, supporting the definition of requirements, and developing a range of options for consideration by Defence.

Aurecon: was signed on as the inaugural Enterprise Partner to the GWEO Enterprise. Aurecon is an international design, engineering and advisory company and has initially focused on GWEO Enterprise infrastructure, as well as related enabling capabilities such as storage and distribution, asset management, and test and evaluation.

Australian Missile Corporation: was formed to support the establishment of the GWEO Enterprise and was signed on as the GWEO Enterprise's second Enterprise Partner.

It is natural that over time, additional partners are added as the maturity of the GWEO Enterprise increases in response to Government direction.

This is why the Government recently appointed two new Strategic Partners:

- Kongsberg Defence Australia;
- Thales Australia.

Kongsberg Defence Australia: will deliver a missile manufacturing factory for NSM and JSM. The ability to produce these long-range anti-ship missiles continuously, and at scale, will be a formidable industrial capability for Australia. Both the NSM and JSM are employed by a number of our trusted partners in the Indo-Pacific. This opens potential opportunities for Australia to contribute to regional production and maintenance for these weapons.

Thales Australia: is the current custodian of the two Commonwealth-owned munitions factories at Mulwala and Benalla. They are national strategic assets that provide much of the industrial foundations upon which we rely on for munitions.

Workforce

The delivery of the ambitions laid out in the Australian GWEO Plan will be dependent on growing our domestic workforce and uplifting the nascent skills and experience in industry. The demand for skilled and experienced labour is being felt globally, and both Defence and industry face many common challenges in growing their workforce in the timeframes required.

The Government has approved an increase in Defence's workforce to support GWEO capability, including over 100 additional Australian Public Service positions. Defence is actively recruiting to positions in specialised Australian Public Service job families such as science and technology, engineering, project management, and procurement and contracting. Defence is also continuing to upskill its current workforce in these specialised job families, through professionalisation courses, industry secondments and education assistance schemes.

Education and Training

The Defence Industry Development Strategy supports workforce growth in the broader Defence industry through initiatives such as Defence Schools Pathways program Grant, the Defence Industry Internship program and the Defence Industry Development Grants (DIDG) program. These programs will provide a pipeline of workers with foundational skills who can go on to further build and develop specialised skills required to strengthen the GWEO industrial base.

Universities and vocational education and training

Universities and vocational education and training (VET) institutions play a key role in growing and upskilling the GWEO workforce.

VET institutions currently provide programs essential to the development of defence industry. For example, VET institutions conduct courses in relevant skills, such as in logistics, safe material handling and transport of dangerous goods.

Universities also provide critical specialist training and education. Defence and the University of New South Wales have partnered to establish the Masters of Explosive Ordnance program, and many universities further provide specialist degrees relevant to GWEO.

The GWEO Research and Development program is establishing a vibrant and specialised university network to support the development of the future workforce for warheads and rocket motors and other energetic components. This network will produce the required qualified and experienced GWEO scientists and engineers across critical fields such as chemistry, physics, mechanical and electrical engineering disciplines.

Supporting Australian Small and Medium Enterprises

Defence cannot succeed without a sovereign defence industrial base that is able to provide and deliver capability and capacity into our supply chains and deliver strategic effect.

Uplift of Australian Business to Support GWEO

The Government has committed more than $500 million across all the GWEO domestic manufacturing projects to support Australian industry. This will help Australian businesses, particularly small and medium enterprises, to increase their capabilities in manufacturing selected GWEO components.

A key focus of the Defence Industry Development Strategy is growing the middle tier of Australian defence industry, often represented by small and medium enterprises, in areas of strategic priority. This tier includes businesses that deliver major equipment, systems, assemblies and services. The GWEO Group, as Defence's lead in developing the GWEO Enterprise, is adopting a phased approach to build Australia's domestic manufacturing capability.

Defence is also strengthening its industry and market intelligence capability to better assess the capacity, size and scale of the sovereign defence industrial base. This is being delivered through a range of initiatives including: engagement from the Office of Defence Industry Support, leveraging supply chain tools offered by industry such as the Industry Capability Network and introducing systems such as the Joint Supply Chain Accreditation Register (JOSCAR) to streamline industry solicitation.

Office of Defence Industry Support (ODIS)

ODIS positions defence industry to deliver sovereign capability to equip and sustain the ADF by providing advisory, guidance and mentoring services for small to medium enterprises.

ODIS works with Defence Groups and Services, state and territory agencies, industry associations, small to medium enterprises and Defence primes.

Further information can be found at: ***www.defence.gov.au/odis***

Industry Capability Network (ICN) Gateway

ICN has been a driving force in connecting small-to-medium enterprises to major projects in Australia and New Zealand.

Australia-wide, locally based industry specialists work closely with project owners to create opportunities for small to medium businesses in the supply chain.

This is an easy-to-use tool for project owners to promote upcoming procurement and contracting opportunities, and for suppliers to showcase their capabilities.

Further information can be found at: ***www.gateway.icn.org.au***

The Defence Industry Development Strategy announced the new DIDG program to support Australian small and medium sized businesses in the defence sector. Australian small and medium businesses may use the DIDG program to access financial support and increase their industrial capabilities in support of GWEO.

DIDG program

The DIDG program provides more than $150 million over four years to support Australian small to medium sized businesses operating in the defence sector to enhance their capabilities, capacity and security posture.

It consists of four dedicated streams to support the development of sovereign industrial priorities, export opportunities, technical skills and security controls which are relevant in the defence sector.

Applicants must demonstrate how a proposed grant project will contribute to the development or enhancement of one or more of the seven Sovereign Defence Industrial Priorities.

Sovereign Industrial Priorities Stream – will assist eligible businesses to purchase manufacturing plant and equipment which is used directly to develop and deliver programs in priority areas.

Skilling Stream – will assist eligible businesses to upskill and train in priority trade, technical and professional skillsets to develop a workforce to meet Defence requirements in priority areas.

Exports Stream – will assist eligible businesses to purchase manufacturing plant and equipment, or to achieve international certifications or accreditations, which are needed to develop and deliver defence export opportunities in priority areas.

Security Stream – will assist eligible businesses to uplift and maintain security controls and accreditations aligned to the Defence Security Principles Framework.

The Department of Industry, Science and Resources also provides a series of grants and support programs, including the Industry Growth program and the Cooperative Research Centres program to help bolster innovation in Australian businesses and further collaboration with government.

Research and Development

Defence has a deep history in GWEO research and development, including significant engagement with our Five Eyes partners to co-develop advanced GWEO technologies. Defence's research program is designed to spur on the development of domestic GWEO technologies, in collaboration with Australian industry, and enable them to be commercially viable so it can be integrated into specific supply chains.

Defence's research program is focused on demonstrating and maturing technologies through collaboration with industry. The activities undertaken will be Defence led, agnostic of any specific GWEO system and useable across multiple future weapon systems. This is research that Australian companies cannot do themselves, and that primes would not necessarily fund independently.

Investment in GWEO research and development:

The Government is investing up to $60 million over the next five years to develop the next generation of guided weapon sub-systems and components. This investment includes research and development focused on the development of domestic rocket motors, warheads, fuses, seekers and guidance technologies.

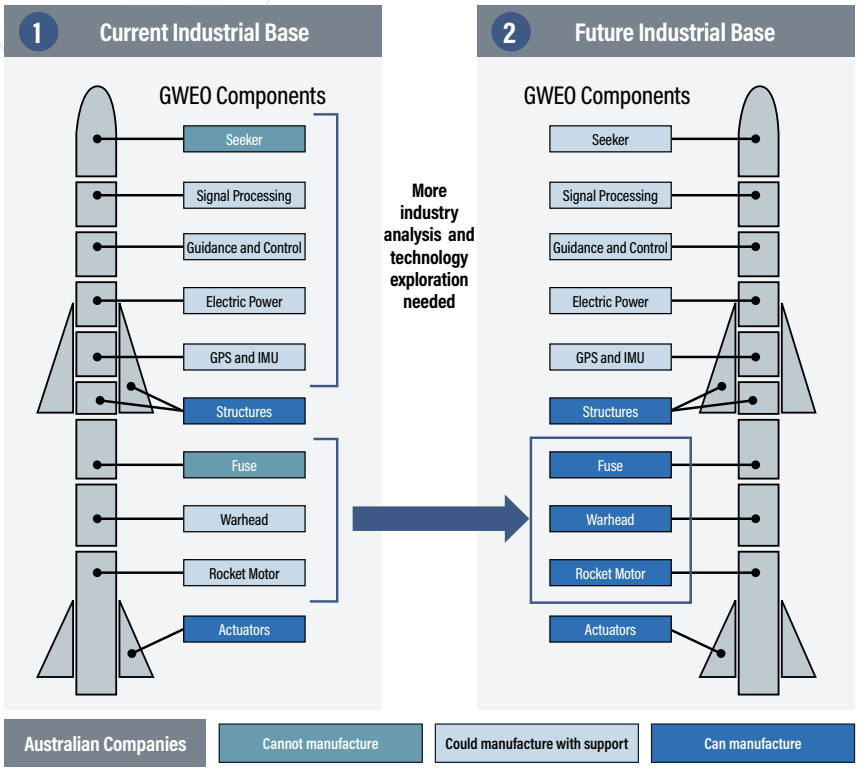

Figure 10: Industrial growth of GWEO components through research and development investments

Growing a domestic industrial base that can manufacture weapons and their components is challenging. The industry lifecycle adopted by GWEO manufacturing includes:

(a) Researching technology in partnership with industry, prototyping components to demonstrate manufacturing feasibility.

(b) Engineering and manufacturing development to become production-ready by developing pre-production prototypes and pilot production lines.

(c) Producing and introducing the systems into service, and undertaking through-life assurance.

Research and development funding will:

- continue the Advanced Rocket Motor Technology Demonstrator program, jointly funded with Air Force, which will deliver an industry-developed tactical missile class of solid-fuel rocket motor, building a foundation for future development and production of larger rocket motors for long-range weapons
- accelerate the development of Defence warhead and fuse technologies that could be used for loitering munition
- fund research into guidance and seeker technologies exploration activities for targeting future weapon systems, such as loitering munitions, hypersonic weapons and long-range strike.

Research and development activities enable Australian industry to commence engineering and manufacturing development of sub-systems for GWEO manufacturing proposals to:

- undertake the feasibility of improvements to in-service weapons
- set up industry for future weapon system developments
- raise Australia's value proposition for international weapon co-development programs
- gain access to advanced overseas GWEO technologies
- develop the Australian research and development GWEO ecosystem to support through life systems for GWEO programs.

The GWEO Research and Development program works closely with related programs such as the Hypersonic Weapon and Long-Range Fires programs. Defence Science and Technology Group, under a Project Agreement with the United States Army on enabling technologies for long-range fires, is contributing innovation, science and technology to the co-development of the PrSM family of missiles and the Autonomous Multi-domain Launcher to increase the range, lethality, survivability and depth of fire available to the Army.

The Hypersonic Weapon Program is delivering research outcomes that will deliver long-range strike capabilities to hold an adversary further away and earlier than conventional methods. Defence Science and Technology Group is collaborating with academia, the United States and Australian industry with the aim of establishing sovereign manufacturing capabilities in key hypersonic technologies in Australia. This includes investing in areas such as aerodynamics, fluid dynamics and thermal dynamics, as well as scramjets and novel propulsion systems. Research partnerships will also design and develop hypersonic systems, including common GWEO technologies such as seekers, solid-fuel, guidance navigation and control.

Manufacturing and Maintenance

Manufacturing will involve activities to grow Australia's industrial capabilities to produce current and future missile components, systems, non-guided explosive ordnance and energetic materials. This will require targeted Government investment to increase Australian industry capabilities. The Government will evaluate the cost and risk of manufacturing options based on their overall benefit to ADF capability and the extent to which they enable Australia's involvement in the wider allied industrial base.

Focus areas are:

- energetics and munitions – expand the range and capacity of munitions production to meet identified domestic and international demand
- industrial facilities and infrastructure – modernise manufacturing processes and capabilities to ensure alignment with defence capability requirements, supporting domestic manufacturing and expanding partnerships with industry
- capability enablers – enhance the domestic supply chain, develop the workforce, and modernise manufacturing infrastructure to support preparedness and increase resilience
- governance and assurance – establish a mature governance framework inclusive of domestic industry to ensure strategic alignment, accountability, and effective oversight.

Maintenance will include activities to increase Australia's industrial capabilities to modify, repair and upgrade GWEO components or systems and disassemble, overhaul and repair GWEO components or systems domestically in Australia. To achieve this, the Government will increase the scale and timeliness of GWEO maintenance and expand and upgrade maintenance infrastructure and equipment. This will provide opportunities for Australia to increase the volume and variety of GWEO maintenance services that Australia provides to the United States and other countries.

Focus areas are:

- innovative and high-quality GWEO maintenance solutions, including for new GWEO
- assessing requirements for expanded GWEO maintenance infrastructure
- advanced GWEO inspection technologies for identifying defects, such as non-destructive test techniques.

Test and Evaluation

To produce missiles, munitions and components such as rocket motors domestically in Australia, we need to able to test them. GWEO acquisition projects funded through the Integrated Investment Program will create an increase in demand for test and evaluation services to 2031–32.

The Government is investing in new test and evaluation facilities in the two Commonwealth-owned factories at Mulwala and Benalla. Defence is also undertaking remediation works across the Joint Proof and Experimental Establishments at Port Wakefield, South Australia and Graytown, Victoria. These investments will directly support production of select large warheads and rocket motors in Australia. Defence is also investing in new ranges, to support testing needs for long-range and high-speed guided weapons that are on order or planned to be procured in the near future.

Defence is enhancing Defence Science and Technology Group's Explosive Ordnance Precinct at Edinburgh, South Australia, to allow industry access to its unique test equipment for the development of warheads, rocket motors and other critical GWEO sub-systems. This will also strengthen Defence Science and Technology Group's contribution to the through life support of the GWEO stockpiles.

Building on the foundations

The Commonwealth-owned factories at Mulwala (established 1943) and Benalla (established 1994) are strategic assets that provide a critical foundation from which to expand GWEO production. The facilities are currently managed and operated by Thales Australia trading as Australian Munitions. Current production includes aircraft bombs, mortar ammunition, medium calibre munitions and small arms ammunition and pyrotechnics.

In 2024, the Government has invested an additional $23.4 million in infrastructure, storage and capability development activity investments in these facilities, improving the sites' functions and work environment.

Storage and Distribution

GWEO products contain dangerous explosive material and must be stored and handled in strictly controlled, specialised facilities. The Government is rapidly expanding Defence's explosive ordnance storage network to accommodate a growing GWEO inventory. By 2028, at least an additional 25 explosive ordnance storage buildings will be constructed.

The Defence Industry Development Strategy highlighted security within the storage and distribution network as a shared responsibility between Defence and industry. Such security initiatives will position Australian industry as a trusted source in global defence supply chains. Defence is upgrading the GWEO distribution network to ensure it provides effective operational support for the ADF and meets security measures under *National Defence*. Defence is assessing ADF usage of the storage and distribution network, and implementing changes to address operational requirements and readiness. Public private partnership contracts to design, build, operate and sustain these storage sites are being explored. These long-term contracts between Defence and the private sector will achieve value for money through single long-term contracts.

The Government is currently expanding explosive ordnance storage and non-explosive goods storage at Defence Establishment Orchard Hills through the provision of new purpose-designed explosive ordnance storage facilities and associated infrastructure upgrades.

Disposal and Demilitarisation

Disposal and demilitarisation is required for explosive ordnance items that have exceeded their life-of-type for safe storage or transportation. Defence is developing new disposal and demilitarisation capabilities that will support effective and efficient management of GWEO, ensuring safe, economical and environmentally responsible disposal and demilitarisation of explosive ordnance. It will also address changing societal and international expectations on the responsible management of hazardous Defence materiel.

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Chapter 7:
The GWEO Budget

The 2024 Integrated Investment Program outlined the historic investment in GWEO, with a commitment of $16–$21 billion over the decade, which represents five per cent of the IIP. The investment prioritises the development of a sovereign ability to produce, maintain, repair and overhaul selected weapons. It also includes the acquisition of weapons and munitions to help ensure sustained operations in a time of conflict and the expansion of storage and distribution facilities to accommodate Defence's growing GWEO inventory.

The breakdown of investment priorities will be allocated between the following:

- GWEO manufacturing
- increasing GWEO stockpiles, with a focus on the most strategically impactful weapons
- GWEO enablers including storage and distribution, test and evaluation, and research and development.

The immediate priority is the domestic manufacture of GWEO, in particular the rapid establishment of guided weapons.

The Government has, to date, approved $4 billion of the GWEO funding provision from 2024–25 to 2033–34 comprising:

- $1.9 billion for GWEO Domestic manufacturing capability
- $1.7 billion for GWEO Enterprise enablers
- $0.4 billion for acquisition of weapons stock.

There remains $12–$17 billion under the GWEO funding provision up to 2033–34 for additional GWEO Enterprise projects. The Government will consider opportunities for such projects in parallel with the development of the next iteration of the Australian GWEO Plan in 2026.

The specific funding for GWEO in the Integrated Investment Program should not be considered in isolation in terms of supporting the ADF's GWEO needs. It should be noted that there is investment throughout the remainder of the Integrated Investment Program that is either directly related to the outcomes of GWEO or enables the delivery of GWEO. These include acquisition of long-range strike capabilities and acquisition of weapons stock being delivered outside of the GWEO Enterprise.

Taking into account the funding for targeting and long-range strike as well as missile defence, the Government has committed $58–$74 billion of the Integrated Investment Program over the decade towards capabilities that integrate with GWEO and contribute directly to increasing deterrence effects.

Targeting and Long-Range Strike

The Government is investing $28–$35 billion to develop and enhance targeting and long-range strike capabilities across Defence. This involves acquiring advanced guided weapons that deliver potent effects at longer ranges, building weapons stockpiles and developing and integrating targeting capabilities, including sensors and ICT systems, to ensure the weapons can be used effectively. These capabilities provide the ADF with a greater capacity to hold at risk a potential adversary's forces that could target Australia's interests during a conflict. The suite of weapons that the ADF will acquire will inform investments under the GWEO Enterprise.

Navy:

- Enhancement of air and missile defence and anti-ship capabilities through Standard Missiles (SM-2 IIIC and SM-6)
- Land attack missiles such as the RGM-109E Tomahawk weapon system
- Next generation Evolved Sea Sparrow Missile (ESSM) Block II to protect ships
- Next generation anti-ship missiles such as the Naval Strike Missile (NSM).

Army:

- Acquisition of land based long-range fires through High Mobility Artillery Rocket System (HIMARS) armed with Guided Multiple Launch Rocket System (GMLRS) and Precision Strike Missiles (PrSM)
- Loitering precision munitions and their associated launch platforms.

Air Force:

- Next generation stealth anti-ship missiles such as Long Range Anti-Ship Missile (LRASM) and Joint Strike Missile (JSM)
- Stealth air-launched cruise missiles such as the Joint Air-to-Surface Standoff Missile – Extended Range (JASSM-ER)
- Air-to-surface missiles designed to target surface-to-air radars such as the Advanced Anti-Radiation Guided Missile – Extended Range (AARGM-ER)
- Hypersonic air launched weapons to engage targets at longer ranges with high speed weapons.

Missile Defence

The Government is investing $14-$18 billion in integrated air and missile defence (IAMD), spread across the capability priorities outlined in the National Defence Strategy. This involves investment in advanced active IAMD capabilities that can defeat key air and missile threats in flight, including missile launchers and munitions. It also includes investment in sensors, command and control systems and communications capabilities and critical IAMD supporting systems.

A key project is the Joint Air Battle Management System (JABMS), which will develop a sovereign command and control system that seeks to enable a multi-domain response to threats through the ADF's air and missile capabilities. Within this framework, acquisition of new active missile defence systems will be considered as technology matures, including in the context of the 2026 National Defence Strategy, taking into account development in the technology used by the United States and other key partners.

Investments in missile defence will inform the maintenance of GWEO stockpiles and decisions on integration of missile capabilities into the ADF layered IAMD.

Key active missile defence response capabilities include:

- the acquisition and integration of the Aegis Baseline 9 combat system onto the Hobart class destroyers and introduction of Hunter class frigates fitted with Aegis Baseline 9
- the acquisition of the enhanced ground-based National Advanced Surface to Air Missile System in service with NATO countries;
- F-35A Lightning II and F/A-18F Super Hornet aircraft fleets, with the capability to detect airborne threats and employ air-to-air missiles to intercept and destroy fixed and rotary-wing aircraft, cruise missiles and uncrewed aerial systems
- the development of counter-small uncrewed aerial systems in response to the proliferation of uncrewed aerial systems and loitering munitions.

Integrated Investment Program planned investment summary			
Capability Element	**Approved Planned Investment (2024–25 to 2033–34)**	**Unapproved Planned Investment (2024–25 to 2033–34)**	**Total Planned Investment (2024–25 to 2033–34)**
ASCA	$3.1bn	$500m–$700m	$3.6bn–$3.8bn
Undersea warfare	$14bn	$48bn–$61bn	$63bn–$76bn
Martime capabilities for sea denial and localised sea control operations	$10bn	$40bn–$58bn	$51bn–$69bn
Targeting and long-range strike	$9.5bn	$18bn–$26bn	$28bn–$35bn
Space and cyber	$4.5bn	$22bn–$31bn	$27bn–$36bn
Amphibious capable combined-arms land system	$20bn	$16bn–$23bn	$36bn–$44bn
Expeditionary air operations	$17bn	$12bn–$16bn	$28bn–$33bn
Missile defence	$1.8bn	$12bn–$17bn	$14bn–$18bn
Theatre logistics	$890m	$14bn–$20bn	$15bn–$21bn
Theatre command and control	$2.0bn	$9.1bn–$13bn	$11bn-$15bn
GWEO	$820m	$15bn–$20bn	$16bn–$21bn
Northern bases	$3.4bn	$10bn–$15bn	$14bn–$18bn
Enterprise infrastructure	$3.9bn	$13bn–$18bn	$17bn–$22bn
Enterprise data and ICT	$1.5bn	$7.0bn– $10bn	$8.5bn– $11bn
Grand Total	**$92bn**	**$240bn–$330bn**	**$330bn–$420bn**

Figure 11: The Budget Summary from the Integrated Investment Program released 17 April 2024


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Chapter 8: Performance and Governance

Biennial Strategy Cycle

The move to a biennial National Defence Strategy will support greater active engagement on the strategic imperatives and direction of *National Defence*. This cycle will allow policy strategy, planning and reform effort to keep pace with the evolving strategic environment.

To ensure the evolution of Defence's GWEO manufacturing and acquisition priorities is aligned with the biennially-updated National Defence Strategy and Integrated Investment Plan, the Government will also adopt a biennial cycle of updating the Australian GWEO Plan.

The next iteration of the Australian GWEO Plan will be delivered in 2026 and will include updated assessments of:

- progress towards achieving strategic objectives
- opportunities around the establishment and sustainment of domestic GWEO manufacturing capability
- effectiveness in delivering improvements to industrial uplift
- efficacy of the governance framework and culture.

Measuring Success

Accurate monitoring and reporting of progress will be critical in the evaluation of performance. This will allow for review of the effectiveness of the Australian GWEO Plan, and for appropriate corrective actions and risk mitigations to be considered and established.

Defence will improve its existing performance framework to support more precise reporting on the metrics that reflect improved resilience and uplift of the domestic GWEO industrial base. GWEO acquisition and manufacturing projects will maintain the same high standards for transparent reporting on cost, schedule, scope and risk vectors.

Assurance and Audit

Defence will undertake regular reporting to Government on the progress of the Australian GWEO Plan, GWEO manufacturing projects and stockpile uplift. This reporting will support Government in making timely and informed decisions.

The manufacturing and procurement of GWEO by Defence continue to be subject to a number of performance audits by the Australian National Audit Office. These performance audits are in addition to the Australian National Audit Office's annual Major Projects Report. Defence's regular internal Independent Assurance Reviews will also provide an audit of the progress of work outlined in this Australian GWEO Plan.

Australian Government

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