The Missing Shield:
Acquiring Israeli Air Defenses Makes Golden Dome Sustainable

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I. Executive Summary

"The homeland is relatively undefended."[1] That was the alarming assessment of U.S. Space Force General Michael Guetlein, the military officer responsible for revamping America's home front air and missile defense program, during congressional testimony on April 27, 2026. These dangers have become readily apparent in recent months, as Iran's missile and drone attacks during Operation Epic Fury tested the limits of defense infrastructure within the area of responsibility (AOR) of U.S. Central Command (CENTCOM). Even where capable U.S. and partner defenses were present, missiles and drones still inflicted damage across the Gulf and Israel, showing how dangerous these weapons remain when defenses prove good but insufficient and underscoring the urgency of building a true homeland air and missile defense shield for the United States.

The 2025 National Security Strategy, the 2026 National Defense Strategy, and the executive order that launched the Golden Dome program to improve America's homeland air defenses all call for closer cooperation with partner nations[2] Israel is the strongest of those partners because it already operates one of the world's most capable air and missile defense networks, built on mature, cost-effective systems and decades of combat experience against the same missile and drone threats Golden Dome is designed to stop. Without a deliberate effort to build Golden Dome around the existing U.S.–Israel framework, that policy commitment risks going unfulfilled in practice, with the Department of Defense potentially spending billions reinventing systems Israeli and American taxpayers already funded and built together. Acquiring proven Israeli air defenses offers the fastest and most affordable way to build the defensive architecture the United States needs to make Golden Dome sustainable for the long term.

A. The Homeland Faces Its Highest Threat Since the Cold War

America's approach to air defense no longer fits the threats it must stop, threats that are at their highest level since the Cold War. Current U.S. strategic defenses protect against only small numbers of incoming missiles. But as Iran and Russia have demonstrated in recent conflicts, adversaries now have, and fire, large quantities of projectiles in large barrages that U.S. defenses would struggle to handle. At the same time, missiles and drones launched from closer distances now pose a growing risk to the homeland. Mexican cartels actively violate U.S. borders and Iranian-linked networks operate in parts of Latin America, bringing these threats closer to the homeland.[3] Yet, the United States has too few of the defenses capable of stopping these threats.

These capabilities can already penetrate strong defenses. Despite high overall interception rates during Operation Epic Fury, Iran struck targets with drones and missiles throughout the conflict, including U.S. radar systems that anchor the defense networks. The high costs of current U.S. air defenses make the problem worse. The United States often fires very expensive interceptors to stop missiles and drones that cost far less to build. When large attacks occur or continue over time, this imbalance makes defense hard to sustain. Two wars with Iran have shown that Golden Dome needs an architecture built to survive sustained attack, coordinate across borders, and draw on an industrial base sized for wartime production.

Recognizing the United States remains vulnerable unless it takes homeland defense more seriously, President Donald Trump launched the Golden Dome initiative to build air defenses that can fix these problems and defeat these challenges. Trump's directive calls for defending against strategic threats to the homeland while also improving defenses against shorter-range missiles and drones.[4] Congress has already supported this effort through new funding and authorities.[5] However, given limited resources, designing, buying, and building the Golden Dome will necessarily involve tradeoffs with enormous ramifications for America's future security.

B. Addressing Air Threats Forces Tradeoffs

Decision-makers must balance spending across long-range, medium-range, and short-range threats. Planners must decide whether to defend everywhere or focus on the most critical locations. They must balance investment in sensors that find and track threats with investment in interceptors that defeat them. The budget must weigh spending on launchers against spending on interceptor stockpiles. Leaders must choose how much to rely on ground-based, sea-based, air-based, or space-based defenses. Officials must balance buying systems available now against building the production capacity and new technologies needed to expand defenses later. Finally, new technological developments now force a choice between costly but more proven interceptors that physically hit threats to destroy them and cheaper but less developed non-kinetic defenses, like lasers.

The Trump administration has already begun to make choices on how to build the Golden Dome, placing greater emphasis on strategic and space-based defenses. These systems could eventually provide wide-area protection, but they require time and sustained investment before they can operate at scale. Prioritizing them risks strengthening one part of the defense while leaving other layers underbuilt as threats continue to grow. A balanced approach would field proven medium- and short-range defenses now while investing in strategic and space-based systems, so near-term gaps do not widen while future capabilities mature.

C. U.S.-Supported Israeli Systems Expand Coverage at Lower Cost

Using less expensive and existing systems can minimize these tradeoffs. Buying systems that American taxpayers have already invested more than $14 billion to help develop with Israel so that the United States can incorporate them into the Golden Dome would provide several key improvements to U.S. defenses that minimize the tradeoffs.[6] Israeli air defenses, like Arrow, David's Sling, and Iron Dome offer strong defensive capability at lower cost than U.S. alternatives, with launchers 58 to 88 percent cheaper, interceptors 19 to 97 percent cheaper, and radars 32 to 87 percent less expensive than comparable U.S. systems. Lowering costs makes it possible to expand coverage by buying more launchers and building larger interceptor stockpiles.

Therefore, swapping some U.S. air defense purchases for cheaper Israeli-designed launchers and interceptors would free up funds for the United States to buy more Golden Dome technologies that can protect more locations and fight for longer. Since less expensive Israeli-designed interceptors require their corresponding Israeli launchers, the United States would save substantially on the thousands of interceptors Golden Dome will need by purchasing those launchers, with that decision continuing to generate more savings each time it must replenish interceptors. Directed-energy systems, such as Israel's now-operational Iron Beam laser, which the United States also helps fund, would further lower the cost of sustained defense by stopping drones and rockets at very low costs, easing pressure on interceptor inventories and production lines. The United States can then pass savings on from purchasing cheaper Israeli short- and medium-range systems to buying more expensive strategic and space-based technologies.

Including Israeli-designed systems would also make Golden Dome easier to build, expand, and improve over time. Israeli air defenses build new capabilities on top of existing designs, allowing defenses to improve over time without discarding earlier investments. For example, Arrow-3 launchers fire from the launcher Israel and the United States developed previously to fire Arrow-2. Instead of spending more money to adopt entirely new products, Israel has repeatedly updated Iron Dome to counter new threats, including drones, cruise missiles, and, most recently, some ballistic missiles. With 102 companies across 34 states coproducing Israeli air defenses, the United States could also leverage these strong relationships to build the Golden Dome faster. Since Israel continues to improve its air defenses after it faces frequent attacks, those enhancements could also benefit the Israeli air defenses that the U.S. purchases to include in the Golden Dome. Similarly, buying Israeli systems for the Golden Dome would also make it easier for the United States to fight alongside U.S. partners like the United Arab Emirates (UAE) who increasingly have chosen to buy these same platforms.

Despite these benefits, both countries would proactively need to address challenges that arise with any effort to connect partner air defenses. Golden Dome would require closer communication between U.S. and Israeli equipment so sensors, launchers, and interceptors can work together without friction. Sharing data could raise real concerns about protecting sensitive information and deciding what can and cannot be exchanged, even between close partners. Both governments would also need to address intellectual property and export-control issues that affect how systems are co-developed, produced, and sustained.

D. Israel Benefits from Its Systems in Golden Dome

Overcoming these issues to enable the inclusion of Israeli systems in the Golden Dome would also benefit Israel. U.S. adoption of Israeli systems would expand both nations' industrial bases, improve Israel's access to America's larger supply chain for materials and critical minerals, provide long-term demand, and integrate Israeli systems into a broader defense framework. This would strengthen Israel's defense industry, improve the ability to fight alongside U.S. forces, and ensure Israeli technologies continue to develop as part of a larger system rather than in isolation.

E. A Path to a Sustainable Golden Dome

For these reasons, the United States should place Israeli air defenses as a key feature of the Golden Dome. To achieve a successful Golden Dome for the long-term, the United States should:

- Appropriate specific Golden Dome funding for medium- and short-range defenses so investment in strategic and space-based technologies does not come at the expense of broader protection.
- Include Golden Dome in the next U.S.–Israel Memorandum of Understanding (MOU) to focus joint defense cooperation.
- Buy proven, lower-cost Israeli air defenses that free up the budget for protection against more threats now while saving money for future technologies.
- Cooperate to expand the U.S. and Israeli defense industrial bases so both countries can build larger and faster production lines with stronger supply chains.
- Build the Golden Dome network with Israel by updating export controls so both countries' defenses can share technology and connect more easily.
- Use Golden Dome as a model for creating security partnerships by showing how shared defenses can strengthen deterrence and protection for the United States and its partners.

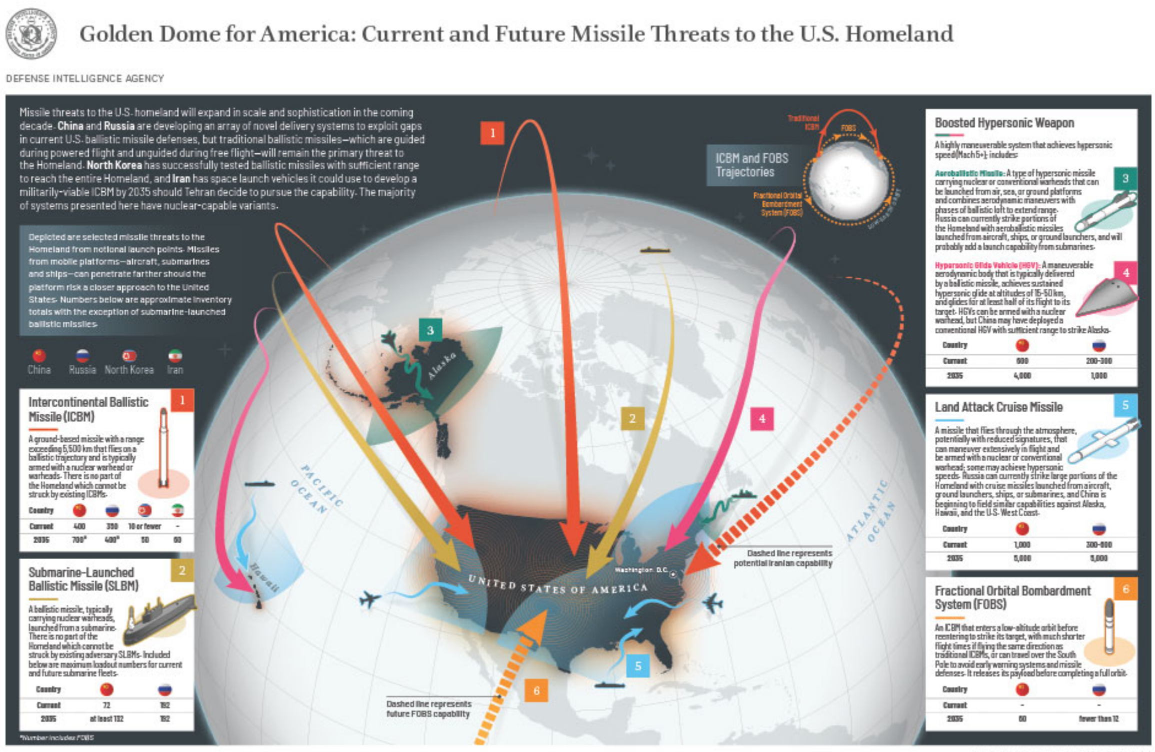
II. The Need for a Golden Dome

The United States faces growing air and missile threats as adversaries field larger numbers of missiles and drones, placing increasing strain on existing defenses. In response, President Donald Trump launched the Golden Dome initiative to expand and modernize U.S. air and missile defense. Golden Dome marks a shift toward addressing the scale and persistence of modern air threats, but its success will depend on whether it delivers cost efficient, sustainable defensive capacity across long-, medium-, and short-range missions.

A. Rising Threats in the Airspace

The growing number and diversity of ballistic missiles, cruise missiles, hypersonic systems, and drones in the arsenals of state and non-state adversaries pose increasing dangers to U.S. territory, forces abroad, and America's global partners. As Golden Dome program director U.S. Space Force General Michael Guetlein noted during congressional testimony on April 27, 2026, "a new generation of advanced air and missile threats unprecedented in their speed, numbers, and lethality now holds the American homeland at risk. Our adversaries are not just expressing the intent. They are demonstrating the capability to threaten our families and our way of life."[7] These threats reflect a global shift among U.S. adversaries toward cheaper and higher-volume air operations intended to evade and overwhelm U.S. and partner defenses.

Adversaries, namely Iran, Russia, China, and North Korea, continue to expand their missile and drone forces intended to overwhelm defenses through volume and repeated attacks.[8] After losing as much as two-thirds of its missile launchers and roughly a third to half of its missile stockpile during the 12-Day War in 2025, Iran rebuilt production to more than 100 missiles a month by early 2026 and, during the war this year, fired on the U.S.-U.K. base at Diego Garcia roughly 4,000 kilometers from Iranian territory, suggesting its missiles may reach farther than previously assessed.[9] Russia has fired thousands of missiles and drones during the war in Ukraine, including extensive use of Iranian weapons against civilian and industrial infrastructure.[10] Meanwhile, China and North Korea continue to pursue larger inventories and survivable launchers that support sustained missile operations.[11] In addition to expanding their individual arsenals, adversary countries are increasingly collaborating, with Iran assisting Russia in building drones and missiles within Russia, while China supplies Iran with precursor chemicals essential for manufacturing ballistic missiles.[12] At the same time, a growing number of states now possess space-launch and counterspace capabilities, expanding the battlefield into orbit and accelerating the pace of strategic competition.[13]



Source: U.S. Defense Intelligence Agency[14]

Against this backdrop, the Trump administration's 2025 National Security Strategy and 2026 National Defense Strategy elevated defense of the Western Hemisphere and highlighted a parallel challenge from non-state actors operating close to U.S. territory.[15] Groups such as Mexican cartels have violated U.S. airspace using commercially available drones for surveillance and smuggling by exploiting proximity to the U.S. border.[16] Iran's relationship with Latin American countries like Venezuela creates further concerns about extending its capabilities to the Western Hemisphere. Hezbollah's longstanding presence and logistical networks in parts of Latin America, including involvement in finance and illicit activity, reinforce the risk that Iranian proxies could leverage the region to project capabilities closer to the United States.[17] Reports shortly before the U.S. operation targeting Venezuelan leader Nicolás Maduro indicated that Venezuela had begun deploying Iranian Mohajer-6 drones, underscoring that the same Iranian drone threats seen for years in the Middle East and Ukraine are now appearing much closer to U.S. borders, as does Cuba's reported acquisition of more than 300 Russian and Iranian drones just 90 miles from Florida.[18]

In March 2026, U.S. officials detected unidentified drones over Fort McNair, the Washington Army base where Secretary of State Marco Rubio and Defense Secretary Pete Hegseth live, prompting security reviews and a White House meeting to assess the response. These sightings reinforce that the drone threat is not confined to overseas military theaters and that domestic air defenses capable of detecting, tracking, and defeating small UAS at low altitude are essential to any credible homeland defense architecture.[19]

B. Insufficient U.S. Air and Missile Defenses

Yet U.S. air and missile defenses no longer match the scale or character of the threats they face. Existing strategic defenses remain limited in number and optimized for small, discrete attacks, even as adversaries field larger, more diverse arsenals that include ballistic missiles, hypersonic systems, cruise missiles, and drones. At the same time, medium- and short-range limited area defense capabilities have become increasingly relevant to homeland defense as low-altitude threats exploit proximity, persistence, and gaps in coverage. Across strategic and lower-tier layers alike, limited interceptor inventories, constrained launcher density, and uneven sensing capacity leave the United States poorly positioned to sustain defense against large-scale missile and drone attacks directed at U.S. territory, forces, or critical infrastructure.

Air Defense Layers

Layer	Typical Threats	Primary Purpose	Range (km)	Altitude (km)	Key Characteristics
Long-Range	Ballistic Missiles, Hypersonic Threats, and Space-based Threats	Strategic and Homeland Defense	500–2,500+	100–1,500+	Exo-atmospheric Interception, Very Large Defended Areas, and Highest Cost Per Interception
Medium-Range	Cruise Missiles, Aircraft, Larger Drones, and Some Ballistic Missiles	Point and Theater Area Defense	70–300	15–150	Upper Atmosphere or Near-space Interception and Flexibility Against a Variety of Threats
Short-Range	Rockets, Artillery, Mortars, Small Drones, and Some Cruise Missiles	Point and Local Area Defense	5–70	0–15	Closest-in Interception, Smallest Defended Areas, and Lowest Cost Per Interception

i. Strategic Defenses

Existing U.S. strategic and space-based missile defenses remain far too limited to counter the full range of long-range nuclear and conventional threats facing the U.S. homeland, such as intercontinental ballistic missiles, emerging hypersonic delivery systems, and other advanced strike concepts. The United States maintains only 44 deployed Ground-based Midcourse Defense (GMD) interceptors for homeland defense against long-range ballistic missile threats, a force sized for small, limited attacks rather than the volume, diversity, and sophistication of modern adversary arsenals. The architecture supporting this mission, particularly space-based detection, tracking, discrimination, and prospective space-based intercept, lacks the persistence, redundancy, and survivability required for sustained defense against complex or coordinated attacks. While central to Golden Dome's concept, space-based capabilities remain costly and underdeveloped, requiring significant investment in new constellations, resilient architectures, and integrated command-and-control before they can meaningfully contribute.

ii. Medium- and Short-range Limited Area Defenses

U.S. medium- and short-range limited area air and missile defense capacity remain similarly inadequate. While medium- and short-range air defenses have traditionally focused on protecting U.S. forces and interests beyond America's borders, emerging threats from the Western Hemisphere, particularly drones that adversaries could launch from maritime launchers or Latin America, make these capabilities increasingly relevant to homeland defense. Yet the current capacity of U.S. limited area air defenses remains too small to provide the necessary sustained, wide-area protection for U.S. territory, deployed forces, partners, or critical infrastructure against large-scale missile and drone attacks.

a. Medium-range Area Defenses

U.S. medium-range defenses lack the capacity to withstand sustained or large-scale attacks. Although these systems provide critical regional protection, their limited numbers, constrained interceptor inventories, and sparse sensor coverage prevent them from delivering the density and endurance required in high-intensity conflict.

The United States only maintains a limited number of medium-range surface-based defense systems. Terminal High Altitude Area Defense (THAAD) and its Talon interceptors provide upper-atmospheric defense against short- to intermediate-range ballistic missiles with 360 degree radius of coverage, but the Army operates only eight batteries with a total of 48 launchers.[20] At sea, 74 Arleigh Burke-class destroyers provide globally deployable air defense by launching Standard Missile (SM) interceptors, including the SM-3 Block IIA and SM-6 Block IA, while Aegis Ashore sites in Romania and Poland provide fixed, regional protection.[21] Yet, the United States has only a few hundred SM-3s and a few thousand SM-6s, which is insufficient to counter large-scale ballistic missile attacks.

U.S. aircraft can also fire air-to-air interceptors against cruise missiles and drones, but these costly systems are not replacements for insufficient surface-based air defenses because they are not effective against ballistic missile threats.[22] For example, the AIM-120 AMRAAM and its new, classified replacement, the AIM-260A Joint Advanced Tactical Missile, can conduct beyond-visual-range air-to-air interception, while the AIM-9X Sidewinder offers high maneuverability at short range but is less effective against long-range or hypersonic threats.[23]

b. Short-range Point Defenses

U.S. short-range air and missile defense also lacks the capacity to provide robust, layered protection against modern missile and drone threats. Although the United States fields several capable point-defense systems, their limited numbers, constrained interceptor inventories, and narrow coverage areas restrict defense to a small set of priority sites. This structure leaves U.S. forces and critical infrastructure vulnerable to attack saturation, persistence, and geographic dispersion, precisely the methods adversaries increasingly favor.

U.S. short-range defenses are spread across a narrow inventory of point-defense systems. The MIM-104 Patriot system remains the backbone of U.S. point defense, with only roughly 15 batteries likely containing approximately a total of 480 launchers armed with PAC-3 interceptors meaning that only select critical sites can be protected.[24] Other short-range systems, such as NASAMS, Avenger, and emerging counter-UAS launchers, help address cruise missiles and drones but lack the reach or capacity to substitute for higher-end defenses. Together, these systems provide protection in discrete locations rather than continuous or layered coverage.

Interceptor shortages further constrain short-range defense effectiveness. As of June, the United States reportedly only possessed about 25 percent of PAC-3s required to meet the Pentagon's military plans, a situation so critical that the Trump administration froze transfers to Ukraine.[25] These constraints are compounded by sensor limitations, as point-defense radars provide narrow fields of view and depend on cueing from a small number of aging or overstretched surveillance systems. Without greater interceptor depth and more resilient sensing, U.S. short-range defenses remain vulnerable to being exhausted or bypassed.

iii. Sensors

The effectiveness of U.S. air and missile defense also remains increasingly constrained by sensor limitations, as gaps in detection, tracking, and discrimination undermine the employment of available interceptors. While U.S. sensors remain among the most capable in the world, their limited numbers constrain the ability to provide persistent, wide-area coverage and battle management at the scale required for sustained missile defense operations.

At the strategic layer, U.S. homeland missile defense remains restricted by a limited long-range radar architecture, including the Upgraded Early Warning Radars (UEWR), the Sea-Based X-Band Radar (SBX), and the Long Range Discrimination Radar (LRDR). These sensors are indispensable for initial detection and midcourse tracking, but they do not provide the persistent, high-fidelity, globally distributed sensing needed to reliably maintain continuous tracking and discrimination across increasingly complex missile threats. While the United States fields space-based missile warning and tracking satellites, current constellations do not provide sufficient coverage or persistence to fully compensate for these geographic limitations.

At the lower-tier layer, sensor constraints directly limit regional air and missile defense performance by restricting persistence, coverage, and integration. Only roughly 12 AN/TPY-2 radars support THAAD batteries and forward-based deployments, providing excellent range and tracking but too little geographic coverage to address global threats.[26] With sensing for Aegis and Patriot systems optimized around individual launchers rather than a shared theater-wide layer, the United States must make hard tradeoffs about where to position sensors, leaving gaps that adversaries can exploit through saturation, maneuver, and coordinated salvo timing and complicating cueing and integration with the strategic layer.

Airborne sensing faces parallel constraints. The aging E-3 Sentry Airborne Warning and Control System (AWACS) fleet continues to provide airborne early warning and battle management but suffers from declining readiness and modernization delays.[27] Although, the bill to end the government shutdown in November 2025 included a $200 million spending exception for the E-7 Wedgetail, the replacement for the E-3 that the U.S. Air Force had canceled in June because of ballooning costs that made the project unsustainable.[28]

C. Cost-Curve Challenges

The cost curve in air and missile defense increasingly favors U.S. adversaries over the United States. American forces rely on high-end interceptors that cost millions of dollars per shot to defeat missiles and drones that adversaries produce at a fraction of the price. As Iran, Russia, China, and North Korea design strike forces around volume, mixed salvos, and expendable systems, the United States absorbs disproportionate financial and industrial burdens even when its defenses succeed tactically.

Adversaries intentionally exploit this imbalance by pairing inexpensive drones and cruise missiles with more capable ballistic missiles. This mix forces U.S. defenders to expend costly interceptors against targets whose replacement costs remain low. Attackers accept losses and continue firing, while defenders must preserve scarce, expensive magazines to protect high-value assets, turning air defense into a contest of economic attrition.

Asymmetries in innovation and replacement cycles further widen the gap. The United States fields interceptors that depend on complex integration, long development timelines, and constrained production capacity, which drive up unit costs and slow replenishment. Adversaries accept lower reliability and shorter lifespans in exchange for speed, adaptability, and low cost, allowing them to iterate faster and regenerate strike capabilities more cheaply than the United States can replace interceptors.

Interceptor firing doctrines magnify the cost imbalance. To achieve acceptable kill probabilities, U.S. forces often fire multiple interceptors at a single incoming threat, especially against maneuvering or uncertain targets. Each additional interceptor raises the defensive cost per engagement and widens the gap between offensive and defensive expenditures. In complex engagements, this practice rapidly consumes magazines and intensifies the underlying cost-curve disadvantage, even when interception rates remain high.

D. An Overdue Remedy

Due to the accelerating pace of adversary missile development and the shortfalls in U.S. air and missile defenses, the United States faces a narrowing window to rebalance its defensive architecture. Golden Dome reflects the recognition that incremental adjustments to U.S. air and missile defense no longer address the scale, diversity, and integration demands of modern threats.

Golden Dome envisions a layered system that combines space-based sensors for global tracking and interception, surface-based interceptors to engage missiles during midcourse and terminal flight, and an integrated sensor network to connect these layers across domains. President Trump's executive order announcing the initiative calls both for "deploying and maintaining a next-generation missile defense shield," oriented toward strategic defense against global missile threats, and an expanding medium- and short-range limited area defense to "increase cooperation with allies," "improve defenses for forward-deployed forces and allied populations," and "accelerate the provision of U.S. missile defense capabilities to partners."[29] The 2026 National Defense Strategy directs the Department of Defense to "defend America's skies with President Trump's Golden Dome for America and other, drone-specific measures," prioritizing "cost-effective ways to defeat large missile barrages and other advanced aerial attacks," accelerating counter-UAS capabilities, and ensuring U.S. forces retain access to "the electromagnetic spectrum required to defend the Homeland."[30] Together, these elements shape Golden Dome as an effort that spans both strategic homeland defense and medium- and short-range limited area defense, seeking to counter ballistic missiles, hypersonic glide vehicles, cruise missiles, drones, and other advanced aerial threats.

To guide the Golden Dome initiative, President Donald Trump announced the architecture would cost $175 billion for the first five years, with the objective of dramatically expanding layered defenses, accelerating interceptor production, and integrating advanced technologies.[31] Congress allocated roughly $24.4 billion toward the initiative in the 2025 reconciliation legislation, signaling a major investment in the nation's layered homeland missile-defense effort.[32] The Fiscal Year (FY) 2026 NDAA authorized multiyear procurement for Patriot PAC-3, THAAD, SM-3, SM-6, Advanced Medium-Range Air-to-Air Missile (AMRAAM), and other key munitions.[33] The bill also directed the Pentagon to stand up a U.S.–Israel Defense Industrial Base Working Group to deepen industrial integration and examine adding Israel to the National Technology and Industrial Base.[34] This approach reflects a necessary shift from legacy defense toward a continuous, globe-spanning shield capable of engaging threats across every phase of flight.

However, the Congressional Budget Office estimated that a full-scale Golden Dome could cost up to $831 billion over about 20 years, and lawmakers have claimed the Department of Defense failed to provide sufficient budget detail or justification for the prior allocation to the program in last year's reconciliation bill.[35] In response, the FY 2026 NDAA requires the Pentagon to submit a comprehensive Golden Dome spending plan within 60 days of enactment, detailing planned obligations from FY25 through FY27 and a standalone Golden Dome budget justification book beginning in FY28.[36]

President Trump's FY2027 request for a $1.5 trillion defense budget, roughly $445 billion and more than 40 percent above the FY2026 level, reinforces the need to sustain funding increases over multiple years rather than treat them as a one-off.[37] The administration has since submitted an $87.6 billion supplemental spending request to Congress, including $67.1 billion for the Department of Defense to replenish munitions and rebuild stocks expended in Operation Epic Fury against Iran, a sign that wartime consumption has outrun peacetime budgeting.[38] The bill also added $4 billion for Airborne Moving Target Indication (AMTI) and the Space Data Network (SDN) Backbone, which are part of the Golden Dome program.[39]

E. Learning from Operations Against Iran

U.S. air and missile defense has faced its most demanding test since the Cold War across two successive conflicts with Iran, and each has exposed deeper vulnerabilities than the last. Together, these conflicts demonstrate that the United States requires an architecture that is resilient against systematic attack, integrated across national boundaries, and backed by an industrial base capable of sustaining operations at wartime scale. Absent those conditions, high interception rates in the opening days of a conflict will give way to degraded coverage, exhausted stockpiles, and partners left to fend for themselves, precisely the trajectory both wars have followed.

The high expenditure and limited replenishment capacity of U.S. interceptors during the 12-Day War exposed serious vulnerabilities in the nation's ability to sustain air and missile defense in the face of large-scale attacks. Despite the United States and Israel jointly achieving an 85 percent interception rate against Iranian missiles, the 12-Day War suggested shortcomings for U.S. interceptors. As JINSA's report on the air defense during the 12-Day War detailed, Iran launched 574 ballistic missiles and 1,084 drones at Israel.[40] However, the volume of U.S. interceptors expended exposed dangerous gaps in readiness and current production rates. The United States used over 150 THAAD "Talon" interceptors, around a quarter of its stock, costing $1.8-$2.1 billion. The U.S. Navy also used roughly 80 SM-3 interceptors during the war, costing the United States anywhere from $640 million to $2 billion.[41] High U.S. interceptor usage was likely due, in part, to the need for multiple interceptors to guarantee successful engagements, raising concerns about the effectiveness of U.S. systems in high-intensity conflicts.

Operation Epic Fury laid bare even more severe vulnerabilities. Iran fired roughly 2,186 ballistic missiles, 5,191 drones, and 59 cruise missiles at targets across the Gulf and Israel, and while the United States and its regional partners achieved an interception rate exceeding 90 percent, sustaining that performance came at enormous cost. The United States alone expended a reported 1,200 Patriot interceptors—a volume that strains production capacity and depletes stockpiles needed for other theaters. As JINSA's analysis of air defense operations during the war showed, Iran entered the war with a deliberate plan to dismantle the air defense architecture enabling high intercept rates, and that plan achieved early successes.[42] Fragmented national inventories, Iranian damage to sensors, and sustained pressure on interceptor stockpiles degraded the architecture's ability to conduct effective operations across the theater. Golden Dome must be built from the outset to resist this kind of systematic dismantlement, with resilient and redundant sensor coverage capable of tracking threats across all altitudes, integrated national architectures, layered engagement tiers against diverse threats, and allied industrial capacity to sustain operations beyond what any country's peacetime stockpiles allow.

Drones, Iran's cheapest and most abundant projectiles, proved far harder to detect and defeat than its ballistic missiles, exposing that radars optimized for high-altitude ballistic threats struggle to detect low-flying drones until they are already within strike range. Iran struck the AN/FPS-132 early warning radar at Al Udeid Air Base in Qatar—a roughly $1.1 billion fixed phased-array radar that provides long-range ballistic missile detection across the region and feeds tracking data to interceptor batteries in multiple countries—as well as the AN/TPY-2 X-band radar at Muwaffaq Salti Air Base in Jordan, which provides precision tracking data to THAAD and Patriot batteries, and a radar facility tied to missile defense in the UAE. These sensors are few in number, expensive, slow to replace, and have little to no mobility, meaning destroying even a small number weakens the entire defensive network by delaying detection and degrading the tracking quality that interceptors depend on. Iranian attacks that struck a Saudi air base also destroyed one U.S. and damaged another with the United States only having roughly 17 E-3s before the start of the war.[43]

III. Air Defense Priority Tradeoffs

Building an effective air and missile defense always involves tradeoffs. Defenses must balance coverage, cost, and endurance, and no system can maximize all three at once. Choices about what to protect, how to allocate resources, and how defenses grow over time shape whether a defense can withstand repeated attacks or fails after limited use. Managing these tradeoffs well determines whether air defense remains credible as threats increase.

A. Budget for Long-, Medium-, or Short-range Defenses?

Protecting against the most consequential long-range nuclear and conventional missile threats rightly remains the top priority for funding, but medium- and short-range limited area defenses remain essential to managing escalation, protecting forces and interests abroad, and shaping the most frequently occurring regional conflicts involving conventional weaponry. As spending on strategic homeland defense and space layers accelerates, it risks crowding out the limited area air defense capacity needed to impose costs on adversaries and prevent saturation, leaving Golden Dome strategically unbalanced unless the United States finds ways to deliver limited area defense at far lower cost and far greater scale. How Golden Dome balances these competing demands will determine whether it delivers credible protection or spreads resources too thin across missions.

The strategic and limited area defense missions within Golden Dome impose fundamentally different force-design requirements because they combine cost and operational use in opposite ways. Strategic and space-enabled defenses rely on very high-cost capabilities intended for rare but potentially existential threats, meaning each increment of capacity absorbs substantial resources despite infrequent use. Limited area defense faces the opposite condition. Medium- and short-range missiles, cruise missiles, and drones appear in large numbers and adversaries launch them routinely, requiring defenses that can operate continuously at lower cost per engagement.

Given the reality of constrained budgets, it will remain essential to ensure that limited area defense acquisitions receive adequate resources that absorb the bulk of real-world attacks, even as the majority of Golden Dome funding is directed toward expanding surface and space-based systems for strategic attacks that arise far less often. Lower-tier defense is not ancillary to Golden Dome's success. It underpins forward deterrence, protects deployed forces and allies, and absorbs the bulk of missile, rocket, and drone threats that adversaries can generate in large numbers. Since air defenses with the purpose of destroying strategic nuclear and conventional threats focus on defeating them in space, sufficient investment in limited area capabilities against "air breather" projectiles that stay within the earth's atmosphere remains critical to maintain balanced, layered protection and avoid gaps that adversaries could exploit.

Air Defense Tradeoffs

Tradeoffs	Benefit	Downside
Long-Range	Stops Rare Catastrophic Strikes	Not Optimized for Smaller Attacks
Vs.		
Medium- and Short-Range	Stops Frequent High-Volume Attacks	Less Capable Against Large Missiles
Broad Territory	Wider Protection Area	Higher Cost, Thinner Coverage
vs.		
Specific Targets	Denser Defense at Key Sites	Narrower Overall Protection
Ground, Sea, or Air	Proven and Movable Systems	Limited Persistent Coverage
vs.		
Space	Persistent Sensing and Earlier Engagement	Unproven and Costly to Field
Sensing	Better Warning and Targeting	Does Not Stop the Threat Itself
vs.		
Defeat Systems	More Capacity to Stop Threats	Less Warning Time Without Sensors
Launchers	More Defended Locations	Fewer Shots Per Site
vs.		
Interceptors	Longer Endurance Under Attack	Fewer Defended Locations
Kinetic	Proven Kill Capability	Higher Cost Per Shot
vs.		
Non-Kinetic	Cheaper Per Shot	Lower Technology Maturity
Buy Now	Faster Near-Term Fielding	Limited Future Output Capacity
vs.		
Build Capacity	Larger Future Output	Slower Near-Term Fielding
Current Systems	Known Capability Now	Misses Future Cost and Reach Gains
vs.		
Future Technologies	Better Cost and Reach Later	Unproven and May Not Materialize

B. Broad Territory or Specific Target Coverage?

Air defense planning must decide, within each engagement range, whether to pursue broad territorial coverage or concentrate defenses around the targets that face the greatest risk. This question applies across long, medium-, and short-range layers, but it becomes progressively more difficult as engagement ranges shorten and defended areas shrink. This problem is especially pronounced for the United States, which has nearly 2,000 miles of southern border with Mexico and roughly 4,000 miles of northern border with Canada in the contiguous United States, expanding to about 5,500 miles when including Alaska.

At longer ranges, sensors and interceptors can influence expansive engagement volumes, allowing relatively small numbers of systems to support wide-area coverage. As ranges decrease, those volumes contract and effective defense increasingly depends on interceptor density, basing proximity, and sustained presence. In the short-range layer, low-altitude threats and compressed timelines sharply limit the geographic reach of each defensive unit, making the cost of extending coverage mile by mile far higher than at upper tiers and rendering the tradeoff between broad territory and specific target coverage most acute at close range.

C. Ground-, Sea-, Air-, or Space-based Systems?

Air defense acquisition involves choosing between systems that operate across multiple domains, each with different constraints on basing, movement, and engagement timing. These choices affect how defenses respond to surprise, how they shift as threats evolve, and how much time exists to detect and defeat an attack. Taken together, tradeoffs across ground-, sea-, air-, and space-based systems determine the ability to provide persistent presence, maneuver, and earlier interception.

Ground-based air defense supports both fixed positioning and redeployment, allowing defenses to protect locations continuously while shifting coverage as threats evolve. Different ground-based systems can operate at short- to long-range threats against a multitude of threats, including mortars, drones, rockets, ballistic missiles, cruise missiles, and aircraft. Ground basing also shortens logistics by enabling the positioning of launchers close to interceptor stocks, supporting sustained defense during prolonged fights.

Sea-based air defense can provide defense against a similar variety of threats but also enable mobile coverage, allowing defenses to follow threats and protect maneuvering forces. Coverage remains temporary rather than continuous, since presence depends on where ships operate at a given time. Ships must also carry interceptors onboard away from stockpiles and face limited ability to reload at sea, which can force withdrawal once inventories decline.

Air-based air defense uses aircraft or other airborne objects, like balloons, as sensors or shooters, including firing interceptors from aircraft against drones, cruise missiles, and selected ballistic missile threats. Aircraft can redeploy rapidly and have much greater maneuverability than either ground- or sea-based systems. However, aircraft are less effective at neutralizing long-range ballistic missiles and very short-range projectiles that spend little time in the airspace. Aircraft also add the possibility of fusing defense and offense, since they could conduct both air-to-air interceptions and air-to-ground attacks during the same sortie. However, aircraft carry far fewer missile interceptors than ground or sea batteries but can carry many gun rounds or low-cost munitions, which improves effectiveness against drones while limiting their ability to defeat cruise missiles or ballistic threats. Flight endurance, basing, and mid-air tanker refueling support also all affect how long air-based defenses remain available.

Space-based air defense extends the response time against threats to earlier in flight by supporting sensing and interception. Against ballistic missiles, this could enable interception during boost, midcourse, or glide phases, expanding the time available before a missile nears hitting its target during the terminal phase. If proven, space-based defenses could provide persistent, fixed coverage comparable to ground-based air defense, but on a global scale that enhances deterrence by denying adversaries confidence in successful attack. Yet, this permanence depends on developing unproven satellite constellations that can operate as a network rather than individual systems, since satellites continuously move through orbit and only achieve constant coverage when large numbers of coordinated, constantly moving platforms ensure a launcher or sensor remains in range of a threat at any given moment.

D. Focus on Sensing or Defeating Threats?

Expanding air and missile defenses forces a choice between investing in the capabilities that sense or neutralize the threat. Effective air defense expansion hinges on balancing these investments rather than maximizing either in isolation. Over-investment in sensing risks creating a high-fixed-cost architecture that struggles to translate awareness into protection, while over-investment in interceptors without sufficient sensing increases waste and operational inefficiency, and without integrated offensive and intelligence tools, defenses risk addressing symptoms rather than shaping the threat itself.

Sensors provide the foundation of any defense architecture. Early warning, tracking, and target discrimination all depend on persistent, resilient sensing across domains, and intelligence collection underpins the ability to understand adversary intent, capabilities, and timelines. Investments in space-based and terrestrial sensors can extend coverage, improve battle management, and enable more efficient use of interceptors by reducing uncertainty and misallocation. However, sensing alone does not lead to better protection. Without sufficient launchers, interceptors, or other defeat mechanisms, and without the ability to cue offensive options or disruption, even the most comprehensive sensor network could lead to merely observing attacks rather than stopping them.

Prioritizing defeat mechanisms presents a different set of constraints. Expanding interceptor inventories, launcher density, and alternative defeat options such as directed energy directly increases the number of threats a defense can neutralize and decreases the relative cost curve. These investments translate more immediately into operational capacity, particularly at the lower tier where volume, tempo, and geography drive demand for an increasing number of launchers and interceptors. Yet defeat systems rely on adequate sensing and integration with intelligence and offensive capabilities to function efficiently. Weak discrimination of threats or limited coverage, or the absence of strike options, can require more extensive offensive operations, demand firing more interceptors, or render defeat capabilities ineffective if they cannot launch in time and track their targets.

E. Emphasize Launchers or Interceptors?

Within defeat systems lies another tradeoff of balancing launcher capacity against interceptor inventories. Choices about how many launchers to field relative to interceptor inventories shape whether defenses can protect many locations simultaneously or sustain high rates of fire at fewer defended sites. This balance reflects a fundamental tradeoff between geographic coverage and engagement endurance.

Air defense planners must choose between spreading defenses across more locations or concentrating interceptors to sustain heavier fighting at fewer sites. Emphasizing more launcher capacity increases coverage by allowing defenses to operate at more sites, creating the possibility of overlapping coverage zones, and enabling alternative interception trajectories, but a finite number of interceptors means that each launcher would have fewer of them, constraining an individual launchers' ability to sustain high-volume defensive fire. Coverage widens, but at the expense of increasing endurance at any given location, forcing planners to assume shorter or less intense engagements at each defended point. On the other hand, expanding interceptor inventories enables sustained engagement by supporting higher firing rates. This approach favors defending priority assets against dense or prolonged attacks, but it narrows coverage and leaves fewer locations protected.

F. Kinetic or Non-kinetic Interceptors?

Air and missile defense acquisition also requires choosing between kinetic and non-kinetic interceptors, each of which defeats threats through contact or non-contact means and therefore shapes cost growth, scalability, and employment. These choices determine whether a defense relies on costly but more proven physical interceptors to stop threats in flight or applies less developed technological means without colliding into the threat.

Kinetic interceptors defeat threats through physical impact or explosive effects and remain the primary means of countering cruise missiles and ballistic missiles across multiple phases of flight. Their performance depends on intercept trajectories, timing, and the ability to place an interceptor on a collision course with the threat. Physical destruction also provides a clearer and more immediate signal that the interceptor succeeded at defeating a threat. Yet, costs scale directly with use, since each engagement consumes an interceptor, possibly costing thousands to millions of dollars, and sustained defense requires large inventories, reload capacity, and production throughput, making scaling against volume attacks expensive and industrially demanding.

Within kinetic interception, planners must also choose the form of the interceptor itself—missile, gun-fired projectile, or drone. Missiles offer the greatest reach and precision and can engage threats at altitude and distance, but they are expensive, require complex launchers, and take time to replenish. Gun-fired ammunition, such as close-in weapon systems, is far cheaper per round and can sustain high rates of fire, but effective range is short and lethality against faster or higher-flying threats declines rapidly. Interceptor drones cued to collide with incoming threats offer a middle path that is cheaper to produce than missiles, can be launched from simpler platforms, and can be directed autonomously to closing targets, though they require sufficient reaction time and are less proven against high-speed ballistic or cruise missile threats than purpose-built interceptors.

Non-kinetic interceptors defeat threats without physical intercept. Directed energy, such as lasers and high-power microwaves, delivers electromagnetic energy to a target at a distance. Lasers require the energy to dwell on a specific point of the threat until the system heats up enough to damage it, and remain sensitive to weather and atmospheric conditions. Microwaves also require dwell time but distribute energy across a wider area, making them more effective against clusters or swarms. These systems face high research and development costs but offer very low cost per engagement once fielded, possibly as little as only a few dollars per intercept. Jamming interferes with the electromagnetic signals a threat uses for sensing or guidance by transmitting energy in the same frequency bands, degrading reception or inserting false information but requires continuous emission to sustain the effect and can limit restrict systems without precautions. Electromagnetic pulse releases strong electrical fields that damage currents inside circuits and wiring but requires being close to the target and can also damage friendly systems. Cyberattacks exploit software, firmware, or networks that enable sensing, guidance, or command and may be inserted pre-launch, but penetrating adversary networks can be difficult, and capabilities may become exposed or lost once employed. Other than pre-launch cyber operations, all non-kinetic approaches still require using ground-, air, sea-, or space-based platforms that can get close enough to the threat.

G. Buy Now or Build the Defense Industrial Capacity to Buy Later?

Beyond the architecture's form, planners will need to consider spending funds on acquiring launchers now or preparing to build more for the future. Golden Dome faces a fundamental defense industrial base constraint that will shape whether expanded air and missile defense remains scalable in practice rather than aspirational on paper. Even with sufficient funding, the ability to grow interceptor, launcher, and sensor inventories depends on a defense industrial base that currently operates near its limits. The Golden Dome initiative's ability to address production capacity will determine whether it delivers timely capabilities or remains constrained by manufacturing bottlenecks.

At present, U.S. production lines for key air and missile defense components operate close to existing capacity. Interceptors, launchers, and sensors rely on specialized manufacturing processes, skilled labor, and tightly qualified supply chains that cannot expand rapidly on demand. When requirements exceed current output, manufacturers must hire and train additional workers, add shifts, qualify new suppliers, invest in tooling, or establish additional production lines before output can rise. These steps take time and capital, even when demand signals are clear. As a result, orders that push beyond existing capacity often carry higher per-unit costs. These cost increases do not reflect inefficiency or declining productivity, but the upfront investments required to expand throughput. Without mechanisms to absorb or offset these costs, procurement decisions risk favoring smaller buys that fit within existing production limits, reinforcing the very capacity constraints Golden Dome seeks to overcome.

Without a major expansion of the defense industrial base, the United States risks ceding its role as the primary weapons provider for its partners to competitors who can deliver when Washington cannot. The United States, Israel, and Gulf nations will need to substantially replenish and expand their air defense capacity after Operation Epic Fury, but the defense industrial base is not positioned to meet that demand simultaneously across all partners. U.S. production lines will need to operate at capacity to address American stockpile depletion, which will likely come before partner deliveries.[44] Gulf nations cannot wait indefinitely for American production to catch up, and they are already turning to alternative suppliers, procuring air defense systems from South Korea to fill the gap.[45]

H. Pursue Current or Future Technologies?

Similarly, defense planning must manage a tradeoff between timing and risk when choosing between fielded systems available today and future technologies that promise greater capability but remain uncertain. This also depends on what existing production lines can deliver quickly, whether those lines can expand in the near-term with modest investment, and whether or not it would require a major lift to bring new production capacity online. Current systems provide immediate capacity and known performance strengths and weaknesses, while next-generation concepts aim to improve cost, coverage, and effectiveness but require time to mature. Overweighting future technologies increases near-term risk as threats mature faster than defenses, while exclusive reliance on current systems increases long-term risk by locking in cost and capacity constraints and leaving defenses vulnerable to quickly advancing threats. Effective air defense strategy requires fielding sufficient capability now while maturing new technologies in parallel, ensuring innovation reduces risk over time instead of deferring it.

Prioritizing existing systems allows the United States to add defensive capacity quickly in response to accelerating missile and drone threats. Fielded launchers, interceptors, and sensors benefit from established production lines, trained operators, and validated performance, limiting technical and operational risk. In some cases, purchasing more of what is already in production or modestly expanding existing lines could grow capacity, rather than standing up entirely new industrial bases. However, these systems often reflect legacy designs and costs that can constrain future improvements.

Meanwhile, future air defense technologies seek to address these structural limits by altering the economics or geometry of defense. Concepts such as new interceptor classes, expanded sensing layers, improved discrimination, and alternative engagement methods promise broader coverage or lower costs per engagement. With the defense industry rapidly pursuing new technologies, some of these capabilities could come online in the near term, while others would require substantial development, testing, and industrial buildup before meaningful quantities are available. Regardless, future technologies can have longer, uncertain development timelines and performance.

I. Golden Dome Currently Favors Legacy and Space-based Next-Generation Defense

Early Golden Dome efforts already illustrate the difficulty of translating ambition into a sustainable, comprehensive approach and reveal a strong emphasis on space and strategic layers using undeveloped technologies relative to near-term, scalable medium- and short-range limited area defense.

i. Space Emphasis

To date, Golden Dome planners have concentrated on space-enabled sensing and interception. Across two announcements at the end of 2025, the Missile Defense Agency approved roughly 2,100 companies under the Scalable Homeland Innovative Enterprise Layered Defense (SHIELD) indefinite-delivery, indefinite-quantity (IDIQ) mechanism, opening competition for up to $151 billion in future awards.[46] The timing aligned with Trump's December 2025 executive order, *Ensuring American Space Superiority*, which explicitly linked missile defense development to U.S. space dominance and set a 2028 objective for demonstrating prototypes for next-generation missile defense technologies and a moon base.[47]

Limited current production capacity and the need to account for longer-term next-generation technologies complicate planning. The Department reportedly acknowledged that work under the SHIELD contract vehicle will likely unfold over a decade, reflecting the complexity of developing, integrating, and fielding the space-based sensors, interceptors, and command-and-control systems envisioned under the initiative.[48]

Of the roughly $24.4 billion in reconciliation funding allocated to Golden Dome missile defense, the overwhelming share is directed toward strategic and future-oriented systems rather than lower-tier defenses. Pentagon planning allocates approximately $5.6 billion to space-based intercept capabilities, $2.2 billion to accelerating hypersonic defense systems, and about $2 billion for ground-based radars, together accounting for the bulk of Golden Dome spending. By contrast, only $250 million will go to directed-energy systems such as lasers, and just $40 million will help develop lower-cost air and missile defense interceptors, underscoring how current investments heavily favor strategic-layer sensing and interception over scalable, cost-sustainable defeat mechanisms for high-volume missile and drone threats.[49]

The FY2027 Presidential Budget Request, released on April 3, reflects this urgency. The administration raised the Golden Dome's cost estimate by $10 billion to $185 billion and requested $17.5 billion in FY2027 funding, the majority routed through reconciliation rather than regular appropriations, driven by the rapid depletion of interceptor stockpiles and the realization that U.S. production capacity cannot currently match wartime consumption rates.[50] The $185 billion figure reflects a deliberate decision to front-load space capabilities rather than a comprehensive accounting of Golden Dome's total cost. Yet, Golden Dome program director General Michael Guetlein acknowledged this sum only covers an initial capability, and baseline Golden Dome spending is estimated to reach $14.7 billion in FY2028 and $16 billion by FY2031 independent of any additional reconciliation funding. The program's continued reliance on reconciliation rather than the base budget creates structural instability, as reconciliation is unlikely to continue beyond FY2027, leaving the funding source for FY2028 and beyond unresolved.[51]

However, the president's FY2027 budget would simultaneously cut the Pentagon's basic research budget by roughly one-third, a $4.5 billion reduction, while directing massive increases toward procurement. Basic research spending would fall $3.7 billion, with the Space Force absorbing $2.6 billion of that reduction even as the same Space Force gains funds tied to Golden Dome missile defense work. The Iran war supplemental extends this space-focused pattern rather than correcting it. The $4 billion that the White House requested for the post-Iran war supplemental bill would fund Golden Dome sensor and communications programs, Airborne Moving Target Indication and the Space Data Network Backbone, both space-based systems that build on the existing tilt toward strategic-layer sensing. Routing this expansion through a supplemental rather than the regular budget process further reinforces reliance on temporary funding vehicles, leaving medium- and short-range defenses to compete for whatever base budget or future reconciliation funding remains.[52]

ii. Limited Incremental Steps on Lower Tiers

To date, the Pentagon has taken only limited and incremental steps to strengthen limited area air and missile defense, falling short of the scale and urgency demanded by evolving regional threats. The Pentagon's Munitions Acceleration Council has identified 14 legacy and emerging weapons as critical priorities for multiyear production agreements. The air defense systems on the list, including PAC-3 interceptors, THAAD interceptors, SM-6, and SM-3, confirm that the Pentagon views legacy interceptor platforms as central to near-term force structure even as it pursues next-generation Golden Dome technologies. The Pentagon has begun requiring defense contractors to fund their own capital expenditures for production line expansion and has imposed penalties for failing to meet agreed production ramp rates, a new model designed to accelerate output without relying solely on government-funded facility upgrades.

The Department of Defense announced deals to raise annual production of the Patriot PAC-3 interceptors from roughly 600 to about 2,000 per year and THAAD Talon interceptors from 96 to 400 per year under a seven-year $35 billion contract, but this will require congressional authorization and appropriations to support that production increase.[53] The Navy's FY2027 budget request for 405 PAC-3 MSE interceptors, worth roughly $1.6 billion, marks the beginning of Patriot integration into the MK-41 Vertical Launch System aboard Arleigh Burke-class destroyers, expanding air defense beyond fixed land-based batteries and into the fleet for the first time.[54] The Department of Defense also announced plans to expand production of the SM-6 to more than 500 annually, increase output of the SM-3 IIA, and accelerate production of the SM-3 IB.[55] As an improvement regardless of the Golden Dome's future form, the Pentagon's Joint Interagency Task Force 401 will share data with the Golden Dome to help defend against larger unmanned aerial threats, a promising step with a particular focus on better protecting the U.S.–Mexico border.[56]

While the Department of Defense reported a June 2026 milestone test in which a Dynamic Defense Autonomous Defeat (DDAD) directed-energy system autonomously identified and destroyed incoming drones and cruise missiles, the test targeted the least demanding threats under favorable conditions.[57] The Department released few technical details, with the development demonstrating early progress rather than a fielded capability that rivals Israel's operational Iron Beam laser.

iii. Betting on Unproven Technologies

Guetlein acknowledged on April 15 that space-based boost-phase interceptors may never prove affordable or scalable enough to include in the final architecture and that the program would not proceed with space-based interceptors if they fail affordability tests, emphasizing the Pentagon will pursue alternative midcourse and multi-domain intercept options instead. Just days later, the Space Force awarded 20 contracts worth up to $3.2 billion to 12 companies, including Anduril, Lockheed Martin, Northrop Grumman, SpaceX, and Raytheon, to develop space-based interceptor prototypes, with an initial capability demonstration targeted for 2028. This simultaneous pursuit of prototyping and open skepticism about affordability reflects the tension at the center of the Golden Dome's architecture between the administration's ambitions for space-based defense and the hard fiscal reality of scaling unproven technologies.[58]

iv. Risks for Current Golden Dome Approach

The tension between slashing the foundational research that produces next-generation interceptors and simultaneously betting $185 billion toward a layer that may never clear its own affordability test commits the country to a large outlay whose payoff, if it comes, arrives years away and at the top of the threat spectrum. Meanwhile the high-volume, low-cost threats striking partners today would go under-defended, so the near-term danger the program was created to answer persists even as its costs mount.

This approach creates a risk by choosing capability that might exist over capability that already does. Every dollar committed to unproven space-based interceptors is a dollar not spent on systems that already intercept the threats striking today, so the country delays the one kind of investment that could close its near-term gap in favor of the one kind that cannot close it for years.

Cutting research funding while committing procurement dollars to unproven systems leaves the United States with fewer ways to respond if those systems underperform. The $3.7 billion reduction in basic research narrows the work that develops the next generation of interceptors during the same years the program depends on that generation arriving. A shortfall in the space layer would then meet a smaller base of alternative development and a budget already spent, giving planners fewer options to field a replacement than they held at the outset.

IV. Including Israel in the Golden Dome

Relying exclusively on U.S. systems makes the tradeoffs for Golden Dome significantly sharper, as high unit costs force direct competition between interceptor quantities, geographic coverage, and long-term sustainability. By contrast, Israeli air and missile defense systems reduce these tradeoffs by enabling greater capacity at lower cost, fully leveraging existing defense industrial base coproduction, and providing improvements for global air defense partnerships. As with any closely networked defense architecture, the United States would need to address issues related to security, intellectual property, and technical alignment. With appropriate management of these considerations, U.S.–Israel integration could strengthen Golden Dome's effectiveness, scalability, and long-term sustainability without driving up costs.

A. Comprehensive Coverage Through Affordable Israeli Defenses

Golden Dome's success will depend on whether it can scale fast enough to meet growing missile and drone threats without becoming fiscally unsustainable. U.S.-only architectures rely heavily on a small number of exquisite, high-cost systems that drive up unit prices as coverage and inventories expand, forcing repeated tradeoffs between near-term capacity and future investment. Israel's air and missile defense systems offer better cost efficiency optimized for density, endurance, and sustained operations under fire that directly addresses this challenge. By incorporating Israeli systems, Golden Dome can bend the cost curve, enabling large increases in coverage and magazine depth while freeing resources for future technologies.

U.S. Architecture with Israeli Systems Addresses Tradeoffs Better

JINSA 50TH ANNIVERSARY

Tradeoff	Current Golden Dome Plan Focus	U.S. Architecture with Israeli Systems
Long-Range	✓	✓
Medium-Range		✓
Short-Range		✓
Broad Territory Coverage	✓	✓
Specific Target Coverage		✓
Ground-based Systems		✓
Sea-based Systems		✓
Air-based Systems		✓
Space-based Systems	✓	✓
Sensing		✓
Defeating Threats	✓	✓
Launchers		✓
Interceptors	✓	✓
Kinetic Interceptors	✓	✓
Non-kinetic Interceptors		✓
Buy Now	✓	✓
Build Industrial Capacity for Later		✓
Current Technologies		✓
Future Technologies	✓	✓

i. Bending the Cost-Curve

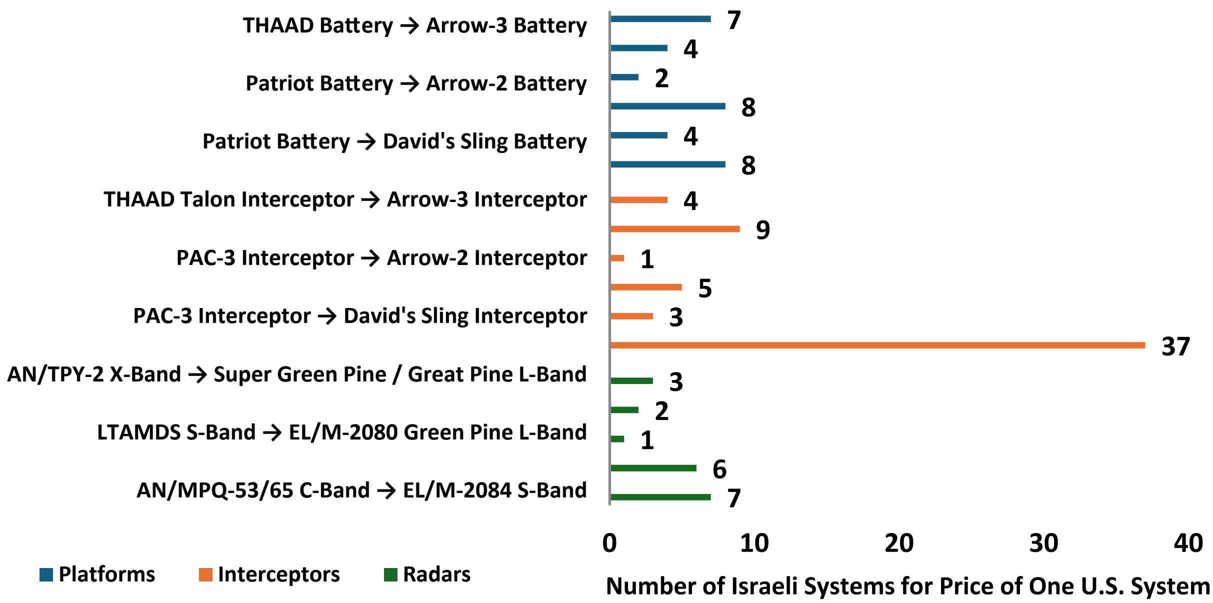
Israeli systems can help bend the cost-curve and make the Golden Dome program financially sustainable. The cost efficiencies achieved through Israeli systems would convert into large percentage savings that the United States could reinvest into other capabilities, including additional high-end sensors and select U.S. launchers critical to homeland defense.

Golden Dome's ability to scale hinges on whether its architecture incorporates systems that allow launcher density and interceptor inventories to grow at sustainable cost. Reliance on existing high-cost U.S. systems limits leaves little flexibility to balance strategic, theater, and future requirements. Instead, incorporating more affordable Israeli systems would enable Golden Dome to expand launcher, interceptor, and sensor capacity, avoiding an architecture with constrained coverage or thin inventories. With this larger architecture improving resilience, coverage, and endurance, Golden Dome could evolve into a scalable architecture capable of managing long-, medium-, and short-range air defense at scale.

Israeli air defense launchers, consisting of the launcher, radar, and command-and-control, are 58-88 percent cheaper than their American counterparts, Israeli interceptors are 19-97 percent cheaper than American ones, and Israeli radars are 32-87 percent less expensive than similar U.S. sensors. Since each system can only use its own type of interceptor, choosing launchers that fire less expensive interceptors could save billions for future interceptor resupply costs.

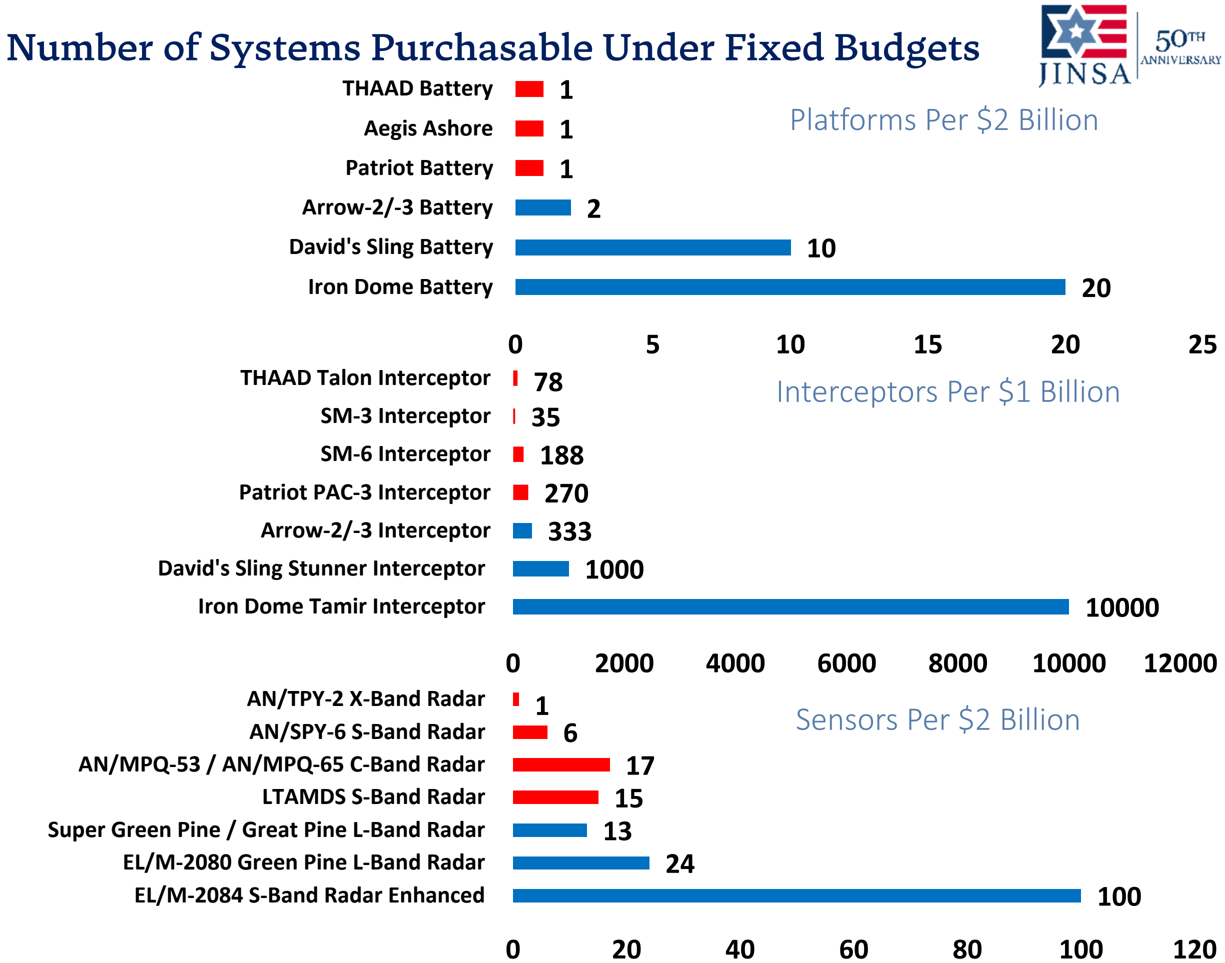
These significant acquisition differences present key opportunity costs, as opting for more affordable Israeli systems allows for greater quantity and coverage. At the price of a single U.S. air-defense system, the United States could instead secure several Israeli launchers. For example, the funds used to buy one THAAD system could be used to purchase seven Arrow-3 batteries, while the cost of an Aegis Ashore system could cover four Arrow-3 batteries or even eight David's Sling units. Similarly, the expense of one Patriot system could acquire either two Arrow-2 batteries, four David's Sling systems, or eight Iron Dome batteries. When it comes to interceptors, the difference is even more striking. The money for a single THAAD Talon interceptor could buy four Arrow-3 interceptors; the cost of one SM-3 could pay for nine Arrow-3 interceptors; an SM-6's price could provide five David's Sling interceptors; and for the cost of one Patriot PAC-3, the United States could obtain either three David's Sling interceptors or 37 Iron Dome Tamir interceptors.

Number of Israeli Systems for Price of One U.S. System



As the United States increases procurement of missile defense launchers, the large number of necessary acquisitions makes the billions in cost savings more pronounced. By leveraging Israeli technologies, the United States can purchase far more systems within a fixed budget, compared to relying solely on U.S. launchers. The purchase of these launchers brings not only launchers and command-and-control elements but also their integrated radars, thereby further enhancing air domain awareness and decreasing the number of separate radar purchases to expand coverage. The United States can strategically redirect the resources saved through this approach to enhance other critical defense priorities or invest in emerging technologies.

Additionally, opting for Israeli launchers not only reduces the upfront system costs but also enables the United States to acquire interceptors at significantly lower prices compared to procuring U.S. interceptors, compounding overall savings for replenishing these stockpiles. Considering the scale of procurement necessary for building an effective Golden Dome reaches into the thousands of interceptors, the cost differential becomes even more consequential, resulting in savings that reach into the tens of billions of dollars. However, realizing these substantial savings depends on the United States acquiring the necessary Israeli launchers that fire these interceptors. By strategically purchasing both Israeli launchers and interceptors, the United States can optimize coverage and readiness, while freeing up significant resources for other defense priorities.



Directed energy, particularly Israel's Iron Beam, offers an even stronger path to sustainable interception by substantially decreasing the cost per intercept. The United States has provided substantial financial support for Iron Beam's development and procurement, including approximately $1.2 billion in U.S. aid dedicated to the system as part of broader missile-defense assistance to Israel.[59] It is not yet clear how much it would cost the United States to acquire and field its own Iron Beam battery, but the system could provide Golden Dome with a low-cost, high-endurance defensive tier that preserves expensive interceptors for threats lasers cannot efficiently address. Iron Beam can hit mortars, drones, rockets, and missiles at a range of 10 km for only $2–$5 per intercept. Israel first used laser air defenses, including Iron Beam and Lite Beam, against drones in 2024, and Iron Beam entered active deployment in December 2025, marking the first fielding of a high-energy laser as part of a national air-defense architecture.[60]

Israeli System Advantages

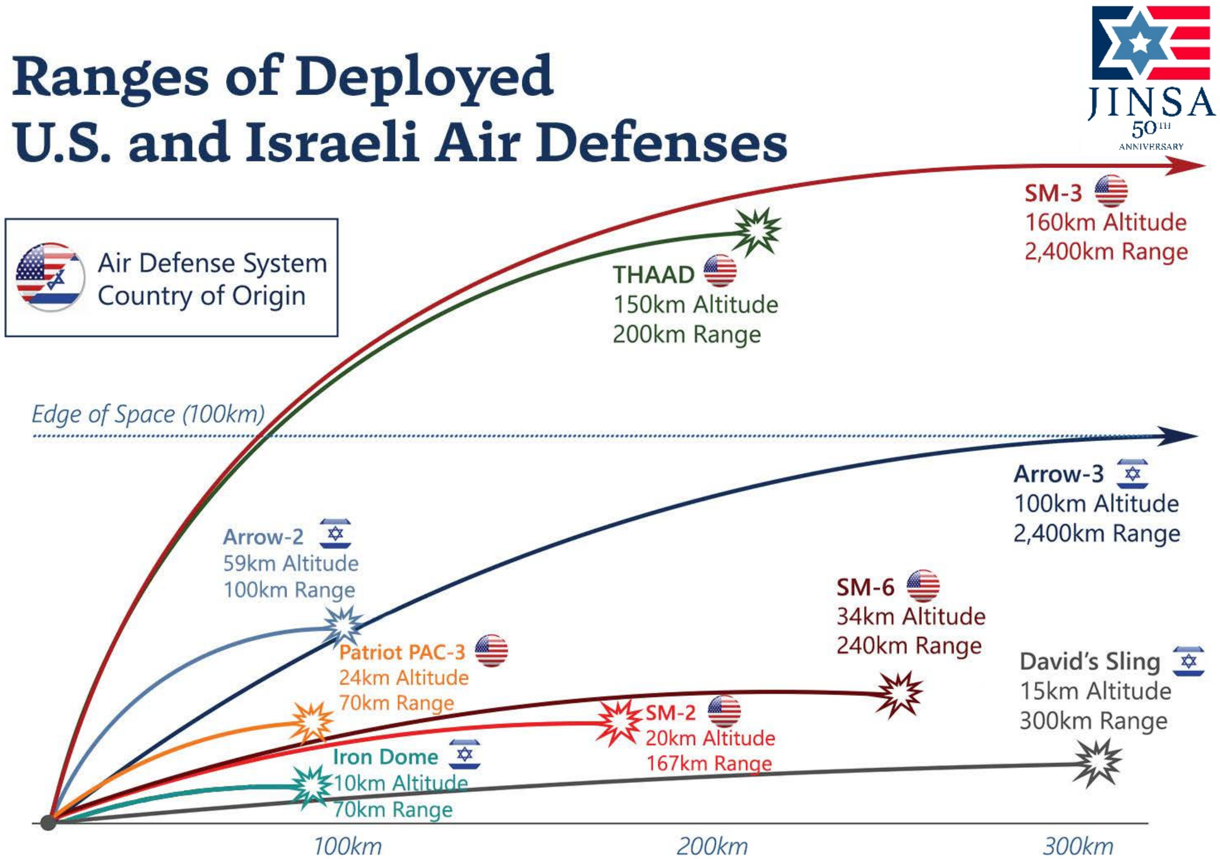
U.S. System	Israeli System	Capability Advantages	Israeli Cost Advantages
THAAD	Arrow-3	+1,100% range	System: −86% Interceptor: −76%
Aegis Ashore: SM-3 Block IIA	Arrow-3	Equal range	System: −79% Interceptor: −89%
Patriot PAC-3	Arrow-2	+43% range +146% altitude	System: −58% Interceptor: −19%
Aegis Ashore: SM-6 Block IA	David's Sling: Stunner	+25% range	System: −88% Interceptor: −81%
Patriot PAC-3	David's Sling: Stunner	+329% range	System: −75% Interceptor: −76%
Patriot PAC-3	Iron Dome: Tamir	Equal range	System: −88% Interceptor: −97%

U.S. directed energy programs are moving in the same direction but remain years behind. The FAA and Department of Defense reached a safety agreement in April 2026 clearing laser weapons for use against drones at the U.S.-Mexico border, and the Army and Navy have initiated the Joint Laser Weapon System to develop a laser capable of defeating cruise missile threats as part of the Golden Dome architecture, with over $675 million in combined research and development planned through FY2031. These programs have not yet demonstrated operational counter-cruise-missile capability, unlike Iron Beam, which has operated against live threats since December 2025, reinforcing the case for acquiring an Israeli system that works now while U.S. programs mature.[61]

ii. Improving Capabilities

Integrating Israeli air and missile defense systems would materially improve the effectiveness of U.S. and allied defensive architectures across multiple layers. Developed to defeat sustained, high-volume attacks under real combat conditions, Israeli systems emphasize earlier intercept, wider defended areas, and greater resilience against saturation. As a result, across the upper-, mid-, and lower-tier mission sets, Israeli air and missile defense systems provide stronger engagement capability than comparable U.S. systems.

Several Israeli air and missile defense systems demonstrate measurable capability advantages over U.S. counterparts across several layers of defense. At the upper tier, Arrow-3 engages threats far earlier than THAAD, extending the intercept envelope enough to defend a much larger area before a threat arrives.[62] SM-3 remains a strong high-altitude ballistic-missile defense option that matches Arrow-3's range, but at a substantially higher cost. Compared to Patriot PAC-3, Arrow-2 reaches farther and intercepts at a notably higher altitude, extending engagements beyond the terminal phase. In the mid-tier, Israel's David's Sling reaches well beyond both Patriot PAC-3 and SM-6.[63] At the lower tier, recent enhancements to the Iron Dome have enabled the ability for it to intercept ballistic missiles weighing up to 700–1,000 kg, making it comparable to the Patriot launcher for short-range threats. Collectively, these advantages translate into earlier engagements, wider coverage, and greater resilience against saturation, reinforcing the conclusion that Israeli systems deliver stronger operational capability per deployed unit than U.S. alternatives.



Iron Dome has proven capable of intercepting some ballistic missiles in both the 12-Day War and Operation Epic Fury, a capability far more advanced than its original design specifications against rockets and mortars. While not a replacement for upper-tier Arrow and David's Sling systems, this emerging last-ditch defense layer reinforces the value of a layered architecture built on Israeli systems that can evolve to meet unanticipated threats, particularly as upper-tier interceptor stocks face sustained pressure.

iii. Modularity of Future Systems

Israel has deliberately evolved its family of Arrow air defenses as a continuous architecture. New interceptors and capabilities are built on top of existing launchers, sensors, battle-management software, and command-and-control frameworks rather than replacing them, allowing successive systems to continue using production lines and launchers. This evolutionary approach minimizes integration challenges and preserves prior investments, allowing capability upgrades without forcing zero-sum budget choices. As a result, incorporating Israeli systems offers Golden Dome a path to expand capability without the severe tradeoffs of current U.S. systems. By adopting modular systems that can preserve architectural continuity for multiple generations of technological developments, acquiring Israeli systems would enable sustained investment in future technologies while simplifying upgrades and addressing IP sensitivities upfront rather than with each new product.

Interceptor Capabilities Against Missile and Drone Threats

Key:

+ Designed Or Likely Capability
± Engagement Might Be Possible
- No Capability

Interceptor	Intercontinental Ballistic Missile	Hypersonic Glide Vehicle	Medium- & Short-Range Ballistic Missile	Cruise Missile	Drone
AIM-120	-	-	-	+	+
AIM-260A	-	-	-	+	+
AIM-9X	-	-	-	±	+
Arrow-2	-	-	+	-	-
Arrow-3	+	±	+	-	-
Boost-Phase SBI	+	±	±	-	-
David's Sling	-	-	+	+	+
Glide-Phase SBI	-	+	-	-	-
Iron Dome	-	-	+	+	+
Midcourse-Phase SBI	+	±	-	-	-
Next-Generation Interceptor	+	±	-	-	-
PAC-3	-	±	+	+	+
SM-3	+	±	+	-	-
SM-6	-	+	+	+	+
THAAD	±	±	+	-	-

Incorporating Israeli systems would allow Golden Dome to adopt a more modular and evolutionary model, in which future technologies can add onto existing systems. This would not only lower lifecycle costs but also create a more sustainable pathway for integrating emerging technologies, such as improved sensors, enhanced discrimination of threats, and advanced interceptors, without crowding out the homeland and lower-tier defense capacity needed in the interim. By avoiding the need to launch entirely new programs each time a capability gap emerges, incorporating Israeli systems would free up resources that the United States would otherwise spend on duplicative development, testing, and integration. Decision-makers could then redirect those savings toward next-generation missile-defense challenges, including countering maneuvering reentry vehicles and hypersonic threats.

Although the United States has an evolutionary interceptor model in the Aegis system, which can launch various Standard Missile variants, this approach has not produced meaningful cost savings over time. Launcher and software commonality reduce integration friction, but each Standard Missile carries a high unit cost that limits the ability to scale defenses or absorb future capability growth without major budgetary tradeoffs. As a result, evolution within the U.S. system preserves capability but does little to bend the cost curve, constraining the resources available for experimentation, adaptation, and next-generation threats.

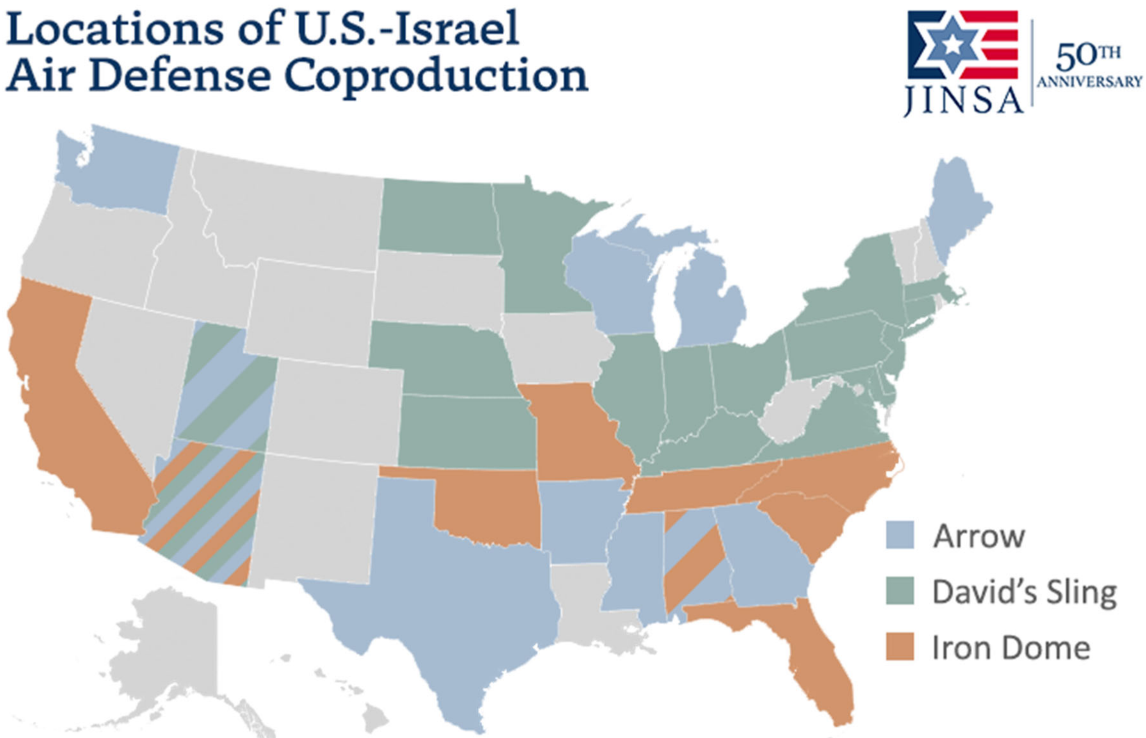
Iron Dome's design emphasizes continuous adaptation, allowing the system to evolve as threats change rather than remain fixed against a single mission set. Since its initial deployment against short-range rockets, Israel has repeatedly upgraded Iron Dome to improve performance against denser salvos, more complex trajectories, and emerging threats. Those upgrades have expanded Iron Dome's mission set from rockets to drones and cruise missiles, and more recently added the ability to intercept some short-range ballistic missiles. The result is a flexible, upgradeable architecture that can absorb new capabilities over time without requiring wholesale replacement.

Similarly, buying Arrow now would lower the cost, friction, and risk of acquiring next-generation interceptors later. Procuring Arrow-class systems would anchor U.S. acquisition within an interceptor family designed from the outset to support future systems. Israel and the United States codeveloped Arrow-3 as a new interceptor layered onto existing Arrow infrastructure rather than as an entirely new platform. Reporting suggests that Arrow-4, which Israel expects to deploy in the coming months, will counter more advanced ballistic and maneuvering threats, improving performance against complex trajectories and countermeasures, while Israeli officials have described Arrow-5 as a future interceptor addressing longer-range and more sophisticated threats beyond Arrow-3.[64] Both will likely build on the same Arrow family architecture, easing transitions to next-generation capabilities and reducing integration and sustainment risk over time. Israel's April 6, 2026, decision to approve a major acceleration of Arrow interceptor production during active combat, the second such expansion since December 2025, demonstrates the rapid industrial scaling that Golden Dome requires and that U.S.-Israel coproduction is uniquely positioned to deliver.[65]

B. Leverage Longstanding U.S.-Israel Air Defense Coproduction

The United States already has a long-standing air defense coproduction partnership with Israel with proven systems, established joint production lines, and a large U.S. manufacturing footprint. Through this relationship, the United States has funded more than $14 billion to research, develop, and coproduce some of the world's most proven and cost-effective air-defense systems, yielding a high, proven return on U.S. funding.[66] This investment uniquely enables near-term purchases of fielded air defenses by fully utilizing existing production capacity and expanding it, rather than relying on new programs that require years to mature. Integrating Israeli systems into Golden Dome would allow the United States and Israel to expand their defense industrial bases together, creating shared efficiencies that accelerate Golden Dome's growth while lowering the cost of sustaining missile defense at scale.

Although the United States is already a core partner in the development and coproduction of these Israeli defense systems, it has yet to fully leverage this partnership. Today, U.S.–Israeli air defense coproduction spans more than 102 companies across 34 states, supporting a nationwide network of manufacturers that embed allied missile-defense cooperation within the American defense industrial base.[67] Acquiring these systems for American use would strengthen U.S. defenses while expanding manufacturing across the country, and further investment to enlarge both production and acquisition would generate substantial benefits for U.S. workers. Continued cooperation offers both countries an opportunity to expand their defense industrial bases, build long-term production resilience, and maintain a technological edge against evolving missile threats.



Each year, Congress appropriates $500 million in funding for joint U.S.–Israeli missile defense based on the 2016 Memorandum of Understanding (MOU) between the two governments.[68] The program divides funding between research, development, testing, and evaluation (RDT&E) and procurement/coproduction. U.S. contributions to RDT&E are matched annually by Israel, while the governing MOU requires that half of procurement spending occur in the United States. The program typically allocates roughly $300 million for RDT&E, with Israel matching the U.S. contributions, and $200 million for procurement and coproduction.[69]

Arrow, David's Sling, and Iron Dome are prime examples of the ongoing missile defense collaboration and joint production efforts between the United States and Israel. Since Israel joined the Reagan administration's Strategic Defense Initiative (SDI), the first U.S. foray into comprehensive global air defense, through a 1986 agreement, the United States has contributed over $4.7 billion for Arrow, including $1.5 billion for Arrow-3, more than $3.8 billion for David's Sling since FY 2006, and upwards of $6 billion for Iron Dome since 2011.[70] These partnerships have established joint manufacturing facilities in the U.S., such as interceptor production for Arrow and David's Sling Stunner in Arizona, with Iron Dome production lines added in Arkansas.[71] As a result, bilateral investment has expanded America's defense industrial base, diversified supply chains, and deepened cooperation in radar, electronics, and propulsion technologies, providing strategic deterrence and adaptability for both nations' operational needs.

The U.S. Army's purchase of two batteries for $373 million, later leased back to Israel in 2023, and Israel's delivery of the first batch of Tamir interceptors to the Marine Corps for its Medium-Range Intercept Capability (MRIC) program in May 2026, illustrate the mutual benefits of joint manufacturing and the adaptability of Israeli-developed systems for U.S. operational use.[72] Rafael has also joined a Lockheed Martin, Boeing, and Anduril-led team competing for the U.S. Army's second increment of the Indirect Fire Protection Capability (IFPC Inc 2) program, extending Israeli industry's role in U.S. counter-rocket, artillery, and mortar defense procurement.

Building on this foundation, the United States should treat Golden Dome as part of the next phase of ongoing MOU discussions with Israel rather than a separate or parallel effort. The current U.S.–Israel MOU, which runs through 2028 and already includes substantial missile-defense funding, has prompted active conversations in both governments about how future agreements should adapt to evolving threats, including air and missile defense requirements tied to homeland protection. Golden Dome provides a natural organizing framework for those discussions. A refreshed MOU with Israel that includes folding it into the Golden Dome could formalize pathways for rapid procurement, expanded coproduction, and joint upgrades aligned explicitly with Golden Dome needs, building on proven programs rather than starting anew.

C. Enhances Regional Air Defense with America's Global Partners

Including Israel in Golden Dome would create a mechanism to formalize regional air defense frameworks that still rely too heavily on discrete, unconnected systems and case-by-case coordination. The United States already maintains strong bilateral air defense ties with Israel, but Golden Dome could help translate that bilateral strength into more routine regional integration with partners that operate alongside U.S. forces and share exposure to the same missile and drone problem set.

Beyond its technological contributions, Israel could serve as a forward operational and intelligence hub that strengthens U.S. and allied air defense architectures over time. Its frequent exposure to rocket, missile, and drone attacks would provide continuous real-world test cases to refine air defense concepts, engagement practices, and technologies for the Golden Dome, allowing U.S. planners to learn from live threat behavior rather than simulations alone.

Beyond Israel's geographic benefits, its expanding role as an air defense supplier to U.S. partners creates new opportunities for cooperation because Israeli air defense systems increasingly operate in the same regions where U.S. forces plan, deploy, and defend. As Israeli air defenses enter service with allies in the Middle East, Europe, and the Indo-Pacific, they create practical avenues for integration with U.S. sensors and air defense launchers, as the U.S. Marine Corps showed by testing the Iron Dome-derived MRIC in Guam during July 2026.[73] This approach would strengthen regional air defense integration, improve shared denial across theaters, and allow Golden Dome to scale through partner investments rather than relying solely on U.S. purchases. In doing so, Golden Dome could use these overlapping U.S., Israeli, and partner inventories to harden what would otherwise remain a patchwork of national solutions among America's global partners.

D. Challenges to Including Israel

Deepening U.S.–Israel integration within Golden Dome would offer substantial operational benefits, but it would also raise potential frictions. Even among close partners, concerns over security, intellectual property protection, and technical compatibility have repeatedly constrained data sharing, co-development, and system integration, pushing cooperation toward looser, hub-and-spoke models rather than fully networked defenses. Addressing these barriers will be essential if Golden Dome is to move beyond ad hoc coordination toward a durable, integrated architecture, making governance of security, industry incentives, and technical standards the decisive challenge for successful U.S.–Israel integration.

i. Security Vetting

Sharing sensor data can raise concerns among partners about exposing sensitive intelligence, enabling intellectual property (IP) theft, or creating vulnerabilities if shared information is misused by partners or compromised by third parties. For these reasons, the United States has faced challenges developing multilateral integrated air and missile defense architectures with true common operating pictures, and even a close partner like Israel does not share all of its IP for air defenses like Iron Dome.

U.S. export controls and technology-sharing regulation, like International Traffic in Arms Regulations (ITAR), play a critical role in protecting sensitive U.S. technologies and preventing unauthorized transfer, but also potentially constrain greater U.S.–Israel coproduction in their current form. Case-by-case licensing requirements slow technical data sharing, complicate supply-chain coordination, and discourage early-stage joint development, often pushing integration later in the production cycle and increasing cost and risk. For high-volume air and missile defense systems, this friction limits scale and delays surge capacity. Even when an item isn't ITAR-controlled, it can fall under the Export Administration Regulations (EAR), especially dual-use technologies relevant to Golden Dome like advanced electronics, artificial intelligence (AI) software, autonomy algorithms, sensors, and high-performance computing. EAR licensing can still restrict transfers of source code, technical data, or manufacturing know-how and can create parallel compliance burdens when systems mix ITAR- and EAR-controlled components.

The United States already operates within several regional air and missile defense architectures that illustrate different forms of partnered defense. North America offers the most mature model through U.S.–Canada cooperation under NORAD, while Europe links U.S. and allied sensors, interceptors, and command structures through NATO frameworks. In the Middle East, a U.S.-led hub-and-spoke architecture in which the United States fuses partner sensors and intelligence demonstrated a remarkable level of integrated air and missile defense against Iran's April 2024 attack on Israel, as the United States and Israel collaborated in real time across intelligence, command-and-control, and operational launchers to defeat the vast majority of Iranian missiles and drones.[74] In the Indo-Pacific, air and missile defense also relies on hub-and-spoke arrangements centered on Japan and South Korea, but also faces challenges from the region's vast geography stretching sensing and interceptor coverage, while needing to address both North Korean and Chinese threats.

ii. Industry Incentives and Intellectual Property (IP) Rights

Beyond the security concerns, deeper integration would also run up against strong incentives for defense firms and both governments to protect proprietary technology in order to preserve profit and market position. Companies may be reluctant to share software, algorithms, seeker performance data, or manufacturing processes with other firms or foreign governments if doing so risks enabling competitors or eroding future sales. Both governments will also likely favor arrangements that allow their own national industries to capture production, sustainment, and export revenue rather than transferring value to foreign suppliers. Without carefully structured IP protections, licensing terms, and co-production agreements, firms may resist integration that blurs ownership or allows competitors to benefit from their innovations, even when the operational case for integration is strong.

iii. Integration and Technology Standards Alignment

Integrating Israeli systems into Golden Dome would require precise technical alignment at the core of how defenses function, not just high-level interoperability. Systems would need to share common intercept coordinates, engagement timelines, fire-control logic, and coding standards so that sensors, battle-management software, and interceptors can cue and hand off targets seamlessly across national architectures. Differences in software architectures, data formats, latency tolerances, and kill-chain sequencing would have to be reconciled to ensure that an Israeli interceptor or sensor can operate as a native component of a U.S. defensive layer. Without agreed-upon standards for coding, interfaces, and engagement logic, integration risks becoming additive rather than truly networked, limiting the benefits of a shared architecture.

V. Benefits to Israel of Joining the Golden Dome

Golden Dome offers a framework to expand both countries' defense industrial capacities through larger production runs, deeper supply chains, and predictable demand, while giving Israel a pathway to scale its proven systems beyond episodic crisis procurement. At the same time, this production expansion would incentivize Israel to meet the requirements of a shared architecture, including interoperability, production transparency, and selective openness on intellectual property to enable greater coproduction. If structured around these industrial and operational realities, Golden Dome can transform U.S.–Israel cooperation into a more durable partnership that expands security for both sides.

A. Expanded Industrial Base Capacity

This evolution would also strengthen Israel's own security and industrial resilience by tying Israeli air and missile defense systems to the scale and durability of U.S. defense spending. Integration into Golden Dome would give Israel access to substantially larger and more predictable U.S. procurement streams, enabling sustained high-volume production, workforce growth, and long-term investment in facilities and tooling that Israel could not support independently.

Expanded coproduction with U.S. industry would allow Israeli firms to draw on a far deeper pool of manufacturing labor, engineering talent, and supply-chain capacity, while spreading production across a broader industrial base. At the same time, embedding Israeli systems within a U.S.-led architecture would give Israel lasting influence over how air and missile defense standards, technologies, and operational concepts evolve globally, reinforcing Israeli security through scale, manpower, and strategic relevance rather than reliance on episodic demand.

Israel would also benefit from the United States' far larger purchasing power for the raw minerals, materials, and other industrial inputs required for air and missile defense manufacturing. By aggregating demand at U.S. scale for propellants, energetics, specialty metals, electronics, and other constrained inputs, U.S. procurement could lower unit costs, ease supply bottlenecks, and stabilize production lines that Israeli firms currently sustain at far smaller volumes. This would allow Israel to concentrate limited domestic capacity on higher-value integration, innovation, and final assembly while relying on U.S. purchasing capacity to secure the upstream materials needed for sustained and surge production.

B. Overcoming Lingering Integration Challenges

Although gaps in U.S.-Israel integration remain due to the lack of full IP-sharing, the 12-Day War demonstrated that meaningful integration is achievable. Established tools such as Link-16 and other data-sharing technologies enabled effective real-time coordination among U.S., Israeli, and partner forces. That experience showed a workable near-term integration model that surpassed existing regional capacity and reduced friction during high-tempo operations.

The 12-Day War proved that U.S.-Israel integration is both practical and effective.[75] U.S. long-range radars, like the AN/TPY-2, gave Israel early warning and better tracking, which improved air defense responses. Arrow used Link-16 to connect directly with U.S. forces, enabling coordinated command and successful interceptions. This cooperation showed that Israeli air defenses are advanced and interoperable with U.S. technology, increasing decision time and engagement efficiency for interception operations.

These benefits also clarify why Israel has a strong incentive to expand IP sharing as part of Golden Dome. Deeper IP openness would not dilute Israel's technological edge. Instead, it would lock that edge into the largest, most durable air and missile defense architecture in the world, backed by long-term U.S. funding, production scale, and global reach. By shaping system interfaces, data standards, and production pathways alongside the United States, Israel can ensure its technologies integrate as core components rather than peripheral add-ons, preserving relevance as architectures evolve. Expanded IP sharing would also accelerate coproduction, reduce integration friction, and unlock sustained demand that stabilizes Israeli industry, grows U.S. manufacturing and manpower, and embeds Israeli designs across allied networks. In that context, IP sharing becomes a lever to secure influence, scale, and longevity—transforming Israeli innovation into a foundational element of U.S. and global security rather than a set of nationally bounded capabilities.

Over time, this approach allows the U.S.–Israel relationship to mature in step with changing strategic realities. Using Golden Dome to guide elements of future MOUs would anchor cooperation in shared responsibility, joint production, and mutual contribution to defense at home and abroad. In that context, Israel's willingness to expand coproduction and open select IP reflects confidence in a partnership that enhances U.S. security, strengthens Israel's defense industrial base, and positions Israel as a central contributor to global stability rather than a passive recipient of assistance.

VI. How to Build an Effective Golden Dome with Israel

Including Israeli systems allows the United States to build a comprehensive air and missile defense architecture while continuing to invest in future technology and production. Israeli launchers make it possible to deploy more defensive coverage at scale and at lower cost, which frees resources for advanced sensors, next-generation interceptors, and expanded manufacturing capacity. That balance matters because true comprehensiveness depends not only on the number of systems fielded today, but also on sustained investment in the technologies and industrial base that will define future conflicts.

Integrating U.S. and Israeli air and missile defense systems creates clear advantages in capacity, coverage, and affordability, but those advantages will not materialize automatically. Whether Golden Dome delivers meaningful defensive capability will depend on how funding is structured, which systems are procured at scale, how near-term capacity is sequenced with future modernization, and whether production can expand fast enough to sustain operations. Building Golden Dome around U.S.–Israel integration requires a strategy that fuses defense and offense, doctrine for sustained operations, protected funding for medium- and short-range defenses, greater use of scalable Israeli systems alongside U.S. capabilities, deliberate sequencing of proven and next-generation technologies, and cooperation to expand the joint defense industrial base.

A. Include Golden Dome in the Next U.S.-Israel MOU

Israel's inclusion in Golden Dome would support an ongoing evolution in the U.S.–Israel security relationship from one centered primarily on foreign military assistance toward one increasingly defined by shared responsibility for security outcomes. Prime Minister Benjamin Netanyahu has publicly signaled Israel's intent, over the next decade, to reduce reliance on U.S. military aid as Israel's economy and defense industrial base mature.[76] In parallel, the current U.S.–Israel Memorandum of Understanding (MOU), which runs through 2028, has already prompted discussions in both governments about how future cooperation should adapt to changing threats, capabilities, and industrial realities. Golden Dome provides a practical mechanism to translate those discussions into a more reciprocal and operational form of partnership.

Incorporating Golden Dome into future MOUs would align cooperation around jointly delivering capability at scale. Golden Dome requirements of sustained interceptor production, integrated sensing, scalable command-and-control, and persistent operations map directly onto areas where U.S. and Israeli strengths overlap. Framing elements of future MOUs around these needs would allow both governments to shift resources toward joint procurement, coproduction, and long-term industrial planning, reinforcing a model of cooperation based on shared investment rather than one-directional assistance.

Through this structure, Israel would increasingly function as a contributor to U.S. homeland defense and allied security, not solely a beneficiary of U.S. support. Israeli air and missile defense systems, operational concepts, and industrial output would help sustain interceptor depth, manage cost curves, and enable continuous defense against missile and drone threats relevant to the United States. Expanding coproduction and selectively opening IP would allow Israeli capabilities to integrate fully into U.S. architectures while preserving Israel's technological edge.

B. Allocate Specific Medium- and Short-range Golden Dome Funding

To ensure sufficient short- and medium-range air defense acquisitions, Golden Dome needs a budget structure devoted to buying limited area air defense systems. Congress should appropriate protected funding lines for medium- and short-range air defenses that explicitly support the acquisition and co-production of Israeli launchers, interceptors, and sensors, and that remain insulated from reprogramming to cover overruns in strategic or space-based programs. Since the FY2026 NDAA already directs the Pentagon to produce a standalone Golden Dome budget justification book starting in FY28, Congress should require that book to break out medium- and short-range funding as its own line rather than fold it into an undifferentiated total. Funding should focus on systems that can integrate well with U.S. air defenses through technologies like Link-16. While the Trump administration's SHIELD program is an important step to push the defense industry toward innovative air defense technologies, the Department of Defense should also establish a program awarding bids specifically for medium- and short-range air defense systems. Absent these protections, the higher fixed costs of homeland and space layers will likely attract more industry attention and consume available funding, preventing Golden Dome from establishing comprehensive coverage.

C. Acquire Proven Israeli Defenses While Budgeting for the Next Generation

While Trump's effort to push the Golden Dome forward over the next three years is admirable, the architecture would benefit substantially from longer-term funding and a more expansive budget to ensure comprehensive coverage. Using CBO's roughly $831 billion estimate, U.S.–Israel integration could simultaneously strengthen long-term affordability and readiness much more than potential U.S.-only architectures.[77]

i. Add Long-, Medium-, and Short-range Defenses

A U.S.–Israel Golden Dome provides the strongest overall capability mix because it not only avoids steep near-term reductions but also enables real future growth. Within the same $831 billion budget, a U.S.-only strategic baseline would enable fielding the most long-range systems to defend the homeland against the most dangerous threats. Adding limited-area coverage of specific high-value sites against shorter-range threats would leave funding for fewer long-range systems, and layering in future technology would field still fewer long- and medium-range systems. By contrast, the U.S.–Israel option reverses this pattern, enabling the United States to field more long- and medium-range systems and delivering net growth rather than continued tradeoffs.

Example of Golden Dome System Capability Area Options Within CBO's $831 Billion Estimate

Options	U.S.-only Strategic		U.S.-only Strategic & Limited Area		U.S.-only Strategic & Limited Area with Future Tech		U.S. and Israel	
Layer	Quantity	Cost (Billions USD)	Quantity	Cost (Billions USD)	Quantity	Cost (Billions USD)	Quantity	Cost (Billions USD)
Future	0	$0	0	$0	TBD	$6.2	TBD	$12.2 (+96.8%)
Command-and-Control	2	$3.05	2	$3.05	2	$3.05	2	$3.05
Long-range	534	$827.67	292 (-45%)	$752.98 (-9%)	280 (-4%)	$751.7 (-.2%)	290 (+4%)	$752.6 (+.1%)
Medium-range	0	$0	7,079	$74.69	5,079 (-28%)	$70.04 (-6%)	8,545 (+68%)	$60.58 (-14%)
Short-range	0	$0	0	$0	0	$0	2,520	$2.25
Total	**$830.72**		**$830.7**		**$830.99**		**$830.98**	

ii. Add Launchers, Interceptors, and Sensors

A U.S.–Israel Golden Dome delivers a superior architecture by expanding capabilities across the necessary components of air defense while improving cost efficiency. Within the $831 billion budget estimate, a possible U.S.-only strategic option would concentrate resources unevenly across launchers, sensors, and interceptors, expanding one component only by cutting into another or adding cost. The U.S.–Israel option would avoid that tradeoff entirely, expanding launchers, sensors, and interceptors together while holding costs roughly flat or lower across each category, producing a more balanced and resilient architecture at essentially the same topline cost.

Each U.S.-only architecture option undermines its own effectiveness by trading capacity in one component for another while failing to improve cost efficiency. A U.S.-only strategic-only architecture would lead to the purchase of relatively few launchers, interceptors, and sensors, since these are more expensive and designed to address less frequent threats than medium- and short-range air defenses. Moving from this baseline to a U.S.-only architecture that covers both strategic and limited-area defense would substantially increase total launcher and interceptor quantities, but only by cutting deeply into long-range defenses and the total number of sensors, trading one vulnerability for another. Adding funding for the research, development, and acquisition of future technologies on top of that would cut sensor and interceptor quantities again while offering little cost relief.

The U.S.–Israel option would reverse this for launchers, sensors, and, in particular, interceptors, where it would deliver the largest relative quantity increases compared to other architecture options by adding substantial medium- and short-range depth, while also reducing cost. Incorporating Israeli-designed systems would similarly increase launcher quantities while lowering cost, adding the medium- and short-range capacity the U.S.-only paths lack. For sensors, it would substantially expand quantities, including a large increase in medium-range sensors, enabling the United States to spend on these technologies due to savings in launcher and interceptor purchases.

Example of Golden Dome Category Options Within CBO's $831 Billion Estimate

Options		U.S.-only Strategic		U.S.-only Strategic & Limited Area		U.S.-only Strategic & Limited Area with Future Tech		U.S. and Israel	
Layer/Range		Quantity	Cost (Billions USD)	Quantity	Cost (Billions USD)	Quantity	Cost (Billions USD)	Quantity	Cost (Billions USD)
Command-and-Control		2	$3.05	2	$3.05	2	$3.05	2	$3.05
Launcher	**Long**	10	$85	6 (-40%)	$51 (-40%)	6	$51	6	$51
	Medium	0	0	26	$37.34	26	$37.34	36 (+38%)	$31.47 (-16%)
	Short	0	0	0	0	0	0	20	$2
	Total	10	$85	32 (+220%)	$88.34 (+4%)	32	$88.34	62 (+94%)	$84.47 (-4%)
Sensor	**Long**	118	$44.67	40 (-66%)	$21.74 (-51%)	28 (-30%)	$20.46 (-6%)	38 (+36%)	$21.36 (+4%)
	Medium	0	0	3	$0.39	3	$0.39	9 (+200%)	$0.9 (+130%)
	Total	118	$44.67	43 (-64%)	$22.13 (-50%)	31 (-30%)	$20.85 (-6%)	47 (+52%)	$22.26 (+7%)
Interceptor	**Long**	406	$698	246 (-39%)	$680.24 (-3%)	246	$680.24	246	$680.24
	Medium	0	0	7,050	$36.95	5,050 (-28%)	$32.3 (-13%)	8,500 (+68%)	$28.21 (-13%)
	Short	0	0	0	0	0	0	2,500	$0.25
	Total	406	$698	7,296 (+1,697%)	$717.2 (+3%)	5,296 (-27%)	$712.54 (-0.7%)	11,246 (+112%)	$708.7 (-0.5%)
Future Technologies		0	0	0	0	TBD	$6.2	TBD	$12.2 (+96.8%)
Total		$830.72		$830.71		$830.99		$830.7	

iii. Save for Future Technologies

A U.S.–Israel Golden Dome architecture would allow the United States to more than double investment in future technologies without sacrificing near-term defensive capacity. Israeli systems would mitigate that tradeoff by freeing resources through lower-cost procurement and more efficient layering, opening budget for sustained investment in advanced capabilities without cutting fielded capacity. This structure would make it possible to expand coverage immediately while simultaneously accelerating development of next-generation interceptors and energy-based defenses, ensuring Golden Dome evolves without repeating the tradeoffs that limit defenses in U.S.-only architectures.

A sustainable approach would expand near-term coverage by scaling proven, cost-effective lower-tier systems, while deliberately preparing to incorporate next-generation Israeli capabilities that complement U.S. defenses. Near-term investment should focus on expanding launcher and interceptor capacity using fielded systems to build coverage and magazine depth without prohibitive marginal costs. At the same time, Golden Dome should reserve protected funding for future technologies, including Arrow-4 and Arrow-5 for ballistic missile threats. Golden Dome should also deliberately balance acquiring systems that can be fielded quickly against investments that prepare the next generation of production lines, avoiding a future gap between today's defenses and tomorrow's capacity. Purchasing cheaper Israeli systems enables both expanding capacity beyond any of the U.S. options while also reserving funding for next-generation capabilities, including Arrow-4, Arrow-5, and future non-kinetic means, particularly microwave technologies that could provide wider area coverage than lasers but have not proven widely effective yet. Early investment that focuses on fielding scalable Israeli systems can hedge against immediate threats, while remaining resources support research and development that reduces long-term costs and improves engagement efficiency.

The Department of Defense should grow limited-area defense capacity early by fielding scalable Israeli systems to hedge against near-term threats, while pacing investment in higher-risk future concepts to avoid hollowing out existing defenses. With modular architectures that enable later generations of technology to build on earlier systems, acquiring systems like Arrow and Iron Dome would allow the United States to field available defenses now while adding new capabilities later without replacing the underlying launchers. Funding should also seek to develop technologies that promote better integration between existing air defenses. Building on systems like Iron Beam would further allow the United States to explore mobile applications of directed energy, including lasers and high-power microwaves mounted on aircraft, extending non-kinetic defenses beyond fixed sites while leveraging a common technological base. Together, this approach would strengthen homeland defense while preserving the limited-area air defenses that underpin deterrence, escalation control, and sustained military operations.

D. Cooperate to Expand the U.S.-Israel Defense Industrial Base

To enable larger and faster acquisitions, Golden Dome should pair procurement funding with explicit steps to expand U.S.–Israel coproduction capacity. The Department of Defense should use existing U.S.–Israel defense programs to scale production of interceptors, launchers, and supporting systems by issuing multiyear procurement contracts, providing advance purchase commitments, and funding production-line expansion at U.S. and Israeli facilities.

The new multiyear procurement authorities for certain U.S. air defense systems mark a positive step by signaling sustained, predictable demand, but extending similar authorities to Israeli systems would allow Washington and Jerusalem to coordinate regular purchases more effectively and avoid boom-and-bust cycles. These steps would allow Golden Dome to sustain higher output over time rather than relying on short-term surge production once a crisis begins, better matching the high-volume drone, rocket, and missile threats the architecture is designed to defeat.

U.S.–Israel defense production should expand beyond coproduction of individual systems to focus on deeper integration and earlier mitigation of IP concerns. By working with Israel on future technologies at the earliest stages of research and development, the United States can shape how next-generation sensors, interceptors, and command-and-control elements plug into shared architectures, rather than relying on secondary retrofitting integration. Embedding these rules into production and development from the outset would reduce friction, protect sensitive technologies, and ensure that future capabilities align with Golden Dome requirements while preserving U.S. and Israeli equities.

The United States should treat this expanded coproduction as a permanent effort to build and maintain defense industrial base capacity, not something activated only after a crisis begins. Expanding shared industrial capacity would reduce the need for repeated emergency procurements and lower the risk that conflicts in one region divert U.S. resources from others.

Beyond current defense production, Golden Dome should also catalyze long-term strategic partnerships across both defense and commercial industries. Sustained collaboration in areas such as munitions manufacturing, artificial intelligence, autonomy, advanced sensing, and resilient communications would strengthen the broader industrial ecosystem underpinning air and missile defense while reinforcing U.S.–Israel technological leadership. These partnerships would help ensure that critical dual-use technologies evolve in ways that directly support future defense requirements rather than diverging from them.

Expanded coproduction should also include robust U.S. oversight of the full supply chain, with Israeli participation, to ensure security and integrity from raw materials through final assembly. Joint visibility into suppliers, components, and production processes would reduce vulnerability to disruption, manipulation, or tampering. In particular, promoting trusted chip and microelectronics manufacturing within U.S.–Israel frameworks would help safeguard sensitive systems, ensure hardware integrity, and anchor Golden Dome in a secure, transparent industrial base.

E. Build the Network Together

The United States and Israel should approach Golden Dome as a shared, networked architecture from the outset, not as a collection of independently developed systems stitched together after the fact. Modern air and missile defense depends less on any single interceptor or sensor than on the ability to connect sensors, command-and-control nodes, and shooters into a coherent whole. Effective defense at scale requires sensor data, track information, and engagement decisions to move quickly and reliably across the entire architecture. For Golden Dome to meet its objectives, the United States and Israel should collaborate from the beginning to build a fully integrated network with defined mechanisms for sharing data, software, and system interfaces that preserve security while enabling interoperability, including embedding the most stringent U.S. security standards and oversight into any foreign production supporting the architecture.

Building the network jointly offers clear operational advantages. Israel brings deep experience integrating diverse air defense systems under sustained threat, while the United States contributes unmatched scale in space-based sensing, long-range detection, and global command-and-control infrastructure. Designing Golden Dome together allows these strengths to reinforce one another, enabling faster cueing, more resilient communications, and smoother handoffs between layers of defense within an architecture that incorporates U.S. security requirements, vetting processes, and compliance controls throughout joint and foreign manufacturing pipelines.

i. Jointly Develop Integration Technologies

The United States and Israel should also prioritize joint development of integration technologies that allow existing air and missile defense launchers to operate more seamlessly together in real time. Even with improvements in connectivity and data sharing, friction will continue to exist across systems built around different fire-control logics, engagement timelines, and intercept calculations. These differences can slow cueing, complicate handoffs, and force parallel engagement solutions against the same threat. Investing together in shared data-translation layers, common engagement frameworks, and interoperable battle-management tools would not eliminate these challenges entirely, but it would reduce their operational impact by allowing sensors and shooters from both countries to exchange track data and intercept solutions without repeated launcher-specific recalculation. Accelerating this kind of technical convergence would improve engagement speed, reduce redundancy, and help Golden Dome function as a more coherent defensive system rather than a collection of nationally distinct intercept solutions operating side by side.

ii. Streamline Technology Transfers and Export-Controls

Early collaboration also mitigates many of the integration challenges that have plagued past defense efforts. Developing common standards, interfaces, and governance mechanisms from the start reduces reliance on third-party technologies that often introduce IP vulnerabilities, data-sharing barriers, and costly workarounds. By embedding U.S. security controls, access management, and supply-chain assurance requirements directly into network design and foreign production arrangements, the United States and Israel can expand cooperation while reducing the risk of foreign penetration, unauthorized technology transfer, or compromise of sensitive systems. Jointly built connectivity would allow both countries to safeguard critical technologies while retaining the flexibility to evolve Golden Dome over time.

To support this level of integration, Congress should also establish tailored legislative authorities to streamline technology transfer and export controls for Golden Dome–related systems. Narrowly scoped ITAR and EAR exemptions or an expedited technology-transfer review process—paired with strict eligibility criteria—could allow precleared development and production of network-connected components without repeated case-by-case approvals. This framework should include whitelisting of vetted U.S.-based affiliate companies and approved supply-chain partners, with advance authorization to build systems designed to plug directly into the Golden Dome network. In exchange, participants would operate under enhanced U.S. oversight, auditing, and access controls to preserve security while maintaining trusted access to the Golden Dome industrial and supply-chain ecosystem.

F. A Model for Building Security Partnerships

Golden Dome has the potential to serve not only as a domestic defense effort, but as the anchor of a broader framework that brings America's closest partners into deeper strategic alignment. With Israel as the test case, Washington can use Golden Dome to demonstrate how partner capabilities, operational experience, and shared threat perceptions can integrate into a coherent architecture that strengthens both forward defense and protection of the U.S. homeland. Done correctly, this approach would allow the United States to pull partners closer across multiple domains and theaters, reinforcing collective security abroad in ways that directly reduce risk at home and bolster global supply chains.

The United States should begin by using Israel's inclusion in Golden Dome to deliberately strengthen integrated air and missile defense cooperation in the Middle East. Rather than treating existing cooperation as episodic or crisis-driven, Washington should use Golden Dome to institutionalize routine planning, interoperability, and shared defensive concepts across the region. This model—built around persistent integration rather than ad hoc coordination—would also provide a template for expanding cooperation into adjacent challenges, including maritime security, cyber defense, and counterterrorism.

Israel's integration into Golden Dome should then serve as a foundation for incorporating other partners into regional missile defense networks that connect to a broader global architecture. In Europe, NATO allies could adapt the model to strengthen collective air and missile defense against Russian threats, while in the Indo-Pacific, existing U.S. cooperation with Japan and South Korea to defend against North Korean missile and rocket attacks offers a natural extension. Using Israel as the initial case would allow Washington to refine how Golden Dome integrates partner capabilities, enabling partners to help fund and field regional defensive layers, while reserving uniquely global systems for the United States alone. This approach would avoid fragmented, case-by-case integration and instead build a scalable network of regional defenses linked by U.S.-led global capabilities.

Japan's March 2026 decision to formally join the Golden Dome initiative demonstrates that allied demand for integration is already materializing. Japanese officials indicated they anticipated Washington would seek Japanese help with missile production as U.S. stocks came under pressure from the Middle East conflict. Japan's potential manufacturing contribution reflects the same industrial logic that applies to Israel, where allied production capacity can directly backstop U.S. stockpile depletion but also highlights that Golden Dome's partner integration framework remains ad hoc. The absence of a clear template for how partners join, contribute, and gain access to Golden Dome capabilities makes each new participant a one-off negotiation rather than a step in a scalable system.[78]

As the United States deepens operational and industrial cooperation with Japan and South Korea to counter North Korean missile and rocket threats, similar IAMD-specific MOUs could enable allies to help fund and field regional defensive layers while connecting them to U.S.-led global capabilities. Anchoring Golden Dome within these ongoing MOU conversations would replace ad hoc cooperation with a deliberate architecture for allied burden-sharing, industrial resilience, and scalable air and missile defense at home and abroad.

Beyond defense operations, a U.S.-led Golden Dome network could also strengthen supply-chain security by organizing demand for critical raw materials, components, and industrial inputs around a trusted, integrated framework. Aggregating procurement across allied participants would give the United States greater leverage to secure access to energetics, specialty minerals, and electronics, while aligning partners' incentives to protect the physical and geopolitical nodes on which those supply chains depend. By anchoring long-term defense demand to existing U.S. critical-minerals initiatives—such as the Pax Silica framework for artificial intelligence and supply chain security, in which Israel already participates—Golden Dome could reinforce parallel efforts to diversify sourcing, expand trusted processing capacity, and reduce reliance on adversarial suppliers.[79] In this way, Golden Dome could help translate shared defense requirements into shared interests in safeguarding key production centers and transit routes, most notably in the Indo-Pacific, where the security of Taiwan and regional chip manufacturing is inseparable from the resilience of U.S. and allied defense industries.

Appendix: Example of Golden Dome Systems Options Within CBO's $831 Billion Estimate

Options	U.S.-only Strategic-focused		U.S.-only Strategic & Limited Area		U.S.-only Strategic & Limited Area with Future Tech		U.S.-Israel	
System	Quantity	Cost (Billions USD)	Quantity	Cost (Billions USD)	Quantity	Cost (Billions USD)	Quantity	Cost (Billions USD)
Aegis Ashore			5	$9.5	5	$9.5	2	$3.8
AIM-120			1,000	$1.6	500	$0.8	1,000	$1.6
AIM-260A			1,000	$3.4	500	$1.7	1,000	$3.4
AIM-9X Sidewinder			1,000	$0.6	500	$0.3	1,000	$0.6
AN/TPY-2	6	$7.86	4	$5.24	4	$5.24	4	$5.24
Arrow Battery							20	$14.4
Arrow-2 Interceptor							1,500	$4.5
Arrow-3 Interceptor							2,500	$7.5
Boost-phase SBI	1	$278	1	$278	1	$278	1	$278
David's Sling Stunner Interceptor							200	$0.2
David's Sling Battery							5	$1
EL/M-2080 Green Pine							2	$0.17
EL/M-2084 Multi-Mission Radar Enhanced							2	$0.04
Future Air Defense Technologies						$6.20		$12.2
Glide-phase SBI (3,100 Interceptors)	1	$295.6	1	$295.6	1	$295.6	1	$295.6
Golden Dome Command Center	1	$2.55	1	$2.55	1	$2.55	1	$2.55
Ground-based Midcourse Defense	10	$85	6	$51	6	$51	6	$51
Integrated Battle Command System	1	$0.5	1	$0.50	1	$0.5	1	$0.5
Iron Dome Battery							20	$2
Iron Dome Tamir Interceptor							2,500	$0.25
Long Range Discrimination Radar	3	$2.85	2	$1.9	2	$1.9	2	$1.9
Low Earth Orbit Missile Tracking Satellites	70	$6.3	20	$1.8	10	$0.9	20	$1.8
Lower Tier Air and Missile Defense Sensor			3	$0.39	3	$0.39	3	$0.39
Medium Earth Orbit Missile Tracking Satellites	35	$6.58	12	$2.26	10	$1.88	10	$1.88
Midcourse-phase SBI	1	$80	1	$80	1	$80	1	$80
MIM-104 Patriot			15	$16.5	15	$16.5	6	$6.6
Next-Generation Interceptor	400	$44.4	240	$26.64	240	$26.64	240	$26.64
Over-the-Horizon Radar	2	$4.92	1	$2.46	1	$2.46	1	$2.46
PAC-3 / PAC-3 MSE			2,000	$7.4	1,500	$5.55	600	$2.22
Sea-Based X-Band Radar	2	$16.16	1	$8.08	1	$8.08	1	$8.08
Standard Missile-3			350	$9.77	350	$9.77	100	$2.79
Standard Missile-6			1,000	$5.30	1,000	$5.30	300	$1.59
Super Green Pine / Great Pine							2	$0.3
THAAD Battery			6	$11.34	6	$11.34	3	$5.67
THAAD Talon Interceptor			700	$8.89	700	$8.89	300	$3.81
Total	**536**	**$830.72**	**7,373**	**$830.71**	**5,361**	**$830.99**	**11,357**	**$830.7**

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