

Reindustrialization and Great Power Competition

Deterrence by Capacity

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THE ISSUE

- Deterrence is ineffective when adversaries—such as the People’s Republic of China (PRC), Russia, Iran, and North Korea—know the United States cannot sustain a long war. Low munitions stockpiles and constrained industrial capacity change the time horizon adversaries use to assess U.S. staying power and weaken U.S. capability, credibility, and communication.
- Capacity therefore acts as a fourth deterrence variable by making U.S. combat power more replenishable, repairable, and resilient over time.
- The U.S. Department of War and Congress should align industrial policy, mobilization, and deterrence planning to further incentivize reindustrialization and revitalization of the defense industrial base.

INTRODUCTION

There is a deterrence problem at the core of U.S. efforts to revitalize the defense industrial base. Recent conflicts are consuming high-end strike munitions and air-defense interceptors faster than the current defense industrial base can replace them. At the same time, these capabilities are key to **conventional deterrence** and changing how adversaries assess the costs and benefits of launching major wars short of nuclear exchange. Worse still, major rivals including the **PRC**, **Russia**, and **North Korea** are all at or near a wartime footing, producing and stockpiling munitions for future contingencies. Even Iran has proven capable of sustaining the production of **ballistic missiles** despite sustained attacks by the United States and Israel. As a result, in a major regional conflict, U.S. use of munitions would likely exceed current stockpiles, with some long-range precision-guided munitions potentially exhausted in **less**

than a week in a Taiwan Strait conflict.

While numerous studies have drawn attention to the challenge of “**empty bins**,” researchers have yet to explore how munitions shortages relate to deterrence theory and the implications for **reindustrialization** and **revitalization of the defense industrial base**. Deterrence depends on the proverbial “**three Cs**”: capability, credibility, and communication. Capability concerns hardware and whether a state has the exquisite capabilities to deny gains or impose costs. Absent an industrial base capable of sustaining a protracted conflict, adversaries discount even the most exquisite weapons as they know they can win by attrition. Credibility is behavior demonstrating resolve. Absent deep munitions stockpiles, adversaries will discount the U.S. reputation for resolve, calculating they might lose the opening salvo exchange but prevail in a protracted, attritional struggle. Communication is signaling intentions,

thresholds, and consequences. Low inventories, especially when they are publicly known, signal that an adversary can assume risk and challenge U.S. interests.

Capacity is therefore a missing coefficient in most deterrence discussions, both conventional and nuclear. States including the PRC, Russia, and Iran discount the United States' **ability** to impose costs, deny benefits, and encourage restraint when stockpiles are low. The ghost of game theory analyst Thomas Schelling still looms over U.S. strategy and guides how military planners and defense officials develop **campaign plans** alongside flexible deterrent and response options subject to rational cost calculations. Those options, though, become limited when there are too few munitions to confront a protracted conflict.

This brief seeks to connect defense analysis of U.S. weapons stockpiles and reindustrialization debates with deterrence literature, and in doing so, creates a new strategic framework to guide both public and private sector reforms designed to accelerate munitions production. It introduces the concept of a "capacity coefficient" that alters deterrence calculations. The Department of War and Congress should move from broad concern about the industrial base to specific tests of wartime staying power: how fast weapons can be produced, how quickly damaged systems can be repaired, how many suppliers can absorb shocks, and how much allied capacity can be mobilized in a crisis.

BACKGROUND

Washington's response to the empty-bins problem has moved through several phases over the last three presidential administrations, yet it still has not sufficiently addressed the underlying challenge. The first administration under President Donald Trump issued **Executive Order (EO) 13806**, which directed a review of manufacturing and supply chain resiliency for national security. The administration under President Joe Biden broadened that diagnosis through **EO 14017**, which framed resilient supply chains as a national and economic security requirement. It then added implementation tools: the **Office of Strategic Capital**, the **Foreign Military Sales (FMS) tiger team**, the

Replicator initiative, the **Regional Sustainment Framework**, and the **National Defense Industrial Strategy**. The second Trump administration pushed for increasing acquisition speed, reforming foreign defense sales, and finding better ways to enhance public-private partnerships, including addressing bottlenecks in second-tier suppliers, through multiple executive orders, including **EO 14265** and **EO 14383**. Table 1 provides an overview of these initiatives and how they relate to increasing capacity.

With these initiatives, money has started to flow. Both the Biden and Trump administrations increased funding for munitions. The FY 2024 request included an estimated \$30.8 billion for missiles and munitions, with \$5.6 billion for ammunition, \$17.3 billion for tactical missiles, \$7.3 billion for strategic missiles, and \$600 million for technology development. Adjusted to FY 2026 dollars, this is about \$32.3 billion. The FY 2026 submission requested \$35.7 billion in procurement and research, development, test, and evaluation (RDT&E) funding for missile and munitions programs. That is a sizable increase from the post-Cold War baseline. It is also close to a return to late-Cold War levels. Historical outlay data shows missile procurement plus ammunition outlays of about \$12.8 billion in FY 1985, or roughly \$33.5 billion in FY 2026 dollars. The same series shows about \$16.9 billion in FY 1990, or roughly \$37.8 billion in FY 2026 dollars. By contrast, FY 2000 missile procurement plus ammunition outlays were about \$6.0 billion, or roughly \$10.8 billion in FY 2026 dollars.¹

Yet, there are challenges beyond spending. First, precision weapons typically have lower rates of production that can drive up costs. More promising are recent announcements about ramping up long-term production through multiyear deals. For example, in February 2026, the Pentagon **announced** major new seven-year production deals to scale up production of Standard Missile-6 (SM-6) (e.g., growing from 125 per year to over 500), Tomahawk cruise missiles (e.g., growing from 60 to 1,000 per year) and major air defense systems such as the Advanced Medium-Range Air-to-Air Missile (AMRAAM) (e.g., ramping up to 1,900 missiles per year), **Terminal High Altitude Area Defense**

1 Comparing missile and munitions expenditures requires shifting assumptions due to category changes across budgets. FY 1985, 1990, and 2000 data uses Aerospace Industries Association/Department of Defense missiles plus ammunition procurement outlays but exclude RDT&E. FY 2010 data uses the "munitions and missiles" category, whereas FY 2024 uses the munitions request. FY 2026 uses munitions and missile procurement plus RDT&E. As a result, the numbers reflect a trend over time—the post-Cold War dip—rather than an accurate comparison between fiscal years.

Table 1: Executive Initiative Breakdown

Initiative	Administration	Capacity mechanism	Why it matters for deterrence
EO 13806 and 2018 Defense Innovation Board (DIB) review	Trump 1.0, 2017–18	Industrial base diagnosis	Made surge capacity, manufacturing resilience, and supply chain risk part of defense readiness.
EO 14017	Biden, 2021	Supply chain resilience	Reframed resilient, diverse, and secure supply chains as national security requirements.
Office of Strategic Capital	Biden, 2022	Capital access for critical technologies	Created a tool to connect critical-technology firms with private capital and bridge the transition from lab to production.
FMS tiger team	Biden, 2022–23	Foreign sales execution and allied demand planning	Targeted technology release, contracting timelines, industrial base capacity, multiyear contracts, and partner demand forecasting.
Fiscal year 2024 munitions and multiyear procurement push	Biden/Congress, 2023–24	Larger demand signal for munitions	The FY 2024 request included \$30.6 billion for munitions, \$5.8 billion above FY 2023, with more than \$1 billion for the munitions industrial base.
National Defense Industrial Strategy and implementation plan	Biden, 2024	Industrial strategy	Organized DIB policy around resilient supply chains, workforce readiness, flexible acquisition, and economic deterrence.
Replicator	Biden, 2023–24	Rapid scaling of attritable systems	Aimed to field thousands of attritable autonomous systems across multiple domains and test a faster scaling model.
Regional Sustainment Framework	Biden, 2024	Distributed repair and maintenance to increase the number of ready forces forward	Sought to build regional maintenance, repair, and overhaul capacity closer to operational theaters in a bid to address force generation concerns.
Partnership for Indo-Pacific Industrial Resilience (PIPIR)	Biden launch/Trump continuation, 2024–26	Allied industrial resilience in the Indo-Pacific	Created a multilateral forum for supply chain resilience, coproduction, co-sustainment, sustainment hubs, and policy barrier reduction.
Australia-UK-U.S. (AUKUS) International Traffic in Arms Regulations (ITAR) exemption	Biden interim rule/Trump final rule, 2024–25	Trusted defense-trade integration	Created a defense-trade exemption among the United States, Australia, and the United Kingdom to reduce licensing friction for eligible transfers.
EO 14265	Trump 2.0, 2025	Acquisition speed and commercial solutions	Directed accelerated procurement, broader use of commercial solutions, and greater acquisition flexibility.
EO 14383 and America First Arms Transfer Strategy	Trump 2.0, 2025–26	FMS reform and arms transfers as industrial policy	Linked foreign sales to partner capability, U.S. production capacity, industrial base health, exportability, and backlog reduction.
Defense Production Act (DPA) Title III solid rocket motor investments	Biden and Trump 2.0, 2024–26	Sub-tier supplier expansion	Directed public investment toward solid rocket motor components, including nozzles, insulation, ablatives, precursor materials, and manufacturing modernization.

Source: CSIS.

(THAAD) (e.g., quadrupling production to 400 per year) and **PAC-3** (e.g., increasing output to 2,000 per year). These levels will only accelerate with new long-term contracts that change the economics of restocking empty bins, both by adding the predictability industry needs to invest in expanding production and changing the cost per missile over time. Furthermore, there have been initiatives to lower the cost of precision strike munitions and systems, including the **Low-Cost Uncrewed Combat Attack System (LUCAS)**, **low-cost cruise missiles**, and **low-cost containerized missiles**. These initiatives mainly fall under the new **Family of Affordable Mass Missiles (FAMM) program**.

Second, the way the United States approaches military strategy is consuming munitions faster than they can be replaced. The war in Ukraine has seen the United States transfer large stockpiles of key systems such as Patriot air defense interceptors and tactical missiles and rockets such as Army Tactical Missile Systems (ATACMs), which have real deterrent value against non-Russian rivals including the PRC. There also appears to be a new era of gunboat diplomacy emerging, in which the United States uses long-range strikes to both pursue counterterror objectives (e.g., in West Africa) and contain regional rivals such as Iran and its proxy network. **Operation Epic Fury** and, before it, **Operation Rough Rider** have both been large consumers of key missiles and munitions. This consumption undermines deterrence by capacity in exchange for near-term regional gains. The current era sees operational destruction that struggles to translate into political end states, thus creating an insatiable demand to constantly rearm fleets and air wings for future strikes.

Third, surging capacity requires deep industrial policy and attention to supply chains. As seen in the wide range of initiatives put in place under the last three presidential administrations, the production bottleneck is often linked to supply chains, workforce, continuing resolutions, and the structure of contracts. Even when market demand is clear, this bureaucratic friction can reduce incentives for industry to invest in expanding manufacturing capacity and create production delays.

Furthermore, intellectual property and diplomacy cast a long shadow. The larger the number of producers and markets, the more likely the system is to have a lower cost. That extends to coproduction and licensing foreign suppli-

ers. If industry can tap into foreign markets through coproduction agreements and foreign military sales, it makes it easier to invest funds into expanding defense industrial output. There are precedents here in relation to **expanding** the production of key air-to-air missiles as announced at the July 2026 NATO Summit.

As a result, it is not enough to throw money at the problem of empty bins. The Trump administration is attacking the problem head-on, both in terms of budget submissions and larger defense reforms, but what is missing is an orienting logic that helps convince Congress and the American people that reindustrialization is part of a larger strategic framework.

TOWARD A NEW LOGIC: DETERRENCE BY CAPACITY

Capacity functions as a coefficient of the three Cs of deterrence. A more robust industrial base, larger stockpiles, faster replenishment, and deeper repair capacity increase capability. Faster production rates, resilient second-source supplier networks that use commercial components, and visible surge pathways increase credibility. Multi-year procurement deals, coproduction agreements, DPA investments, forward sustainment hubs, and trusted defense-trade corridors also strengthen communication. These factors together signal that the United States is prepared for a protracted conflict and will not be knocked out of the first 30 days of a nonnuclear major theater war.

Time is the critical factor. Capacity changes adversary cost-benefit calculations by altering the time horizon they use to assess their options. Traditionally, most military planning applications of deterrence have emerged from the first and second **waves** of deterrence literature. This work is linked to **rational deterrence theory**, which over time has **grown** to factor in incomplete information, learning, and reputation.² This approach, the ghost of Schelling that haunts every plan, explains deterrence in terms of the expected costs and benefits of challenging the status quo. At the core of this framing is often an implicit assumption that the crisis in question is independent and discrete (i.e., a single battle or major operation) as opposed to interdependent and continuous (i.e., a series of campaigns). That is, rational logic tends to focus more on deterring a single crisis

² Of note, the academic literature has added additional waves that discuss **culture**, **psychology**, and other factors that skew otherwise rational expected utility calculations.

than on shaping long-term expectations. Adding a capacity dimension removes this limitation and aligns thinking about deterrence with other initiatives in the Department of War to focus on **competition** and **globally integrated campaigning** as central features of long-term competitive strategy.

Figure 1 illustrates this logic. The chart illustrates how expectations of cost and benefit change over time. When an adversary has a positive net payoff (i.e., it expects more benefits than costs), it sees incentives to launch a major military campaign. When that expected payoff stays beneath the break-even line, those incentives are reduced.

As seen in the dark blue line, when the United States has exquisite capabilities (e.g., **long-range stealth bombers**, **orbital warfare effects**, and **long-range antiship missiles**) but limited magazine capacity, it confronts adversaries with only a short-term (0-30 day) negative net payoff to challenging the status quo. Enemy military intelligence estimates must contend with these systems and setbacks in the opening stages of a campaign, but incorporate the fact that the cost calculus shifts in their favor the longer the conflict lasts. This dynamic makes U.S. threats less credible and undermines efforts to use flexible deterrent options (e.g., deploying a **bomber task force**) to signal the risks of escalation.

Alternatively, when capacity is high (light blue line), the logic shifts. Enemy military intelligence must focus not just on current U.S. capabilities, but also on the U.S. defense industrial

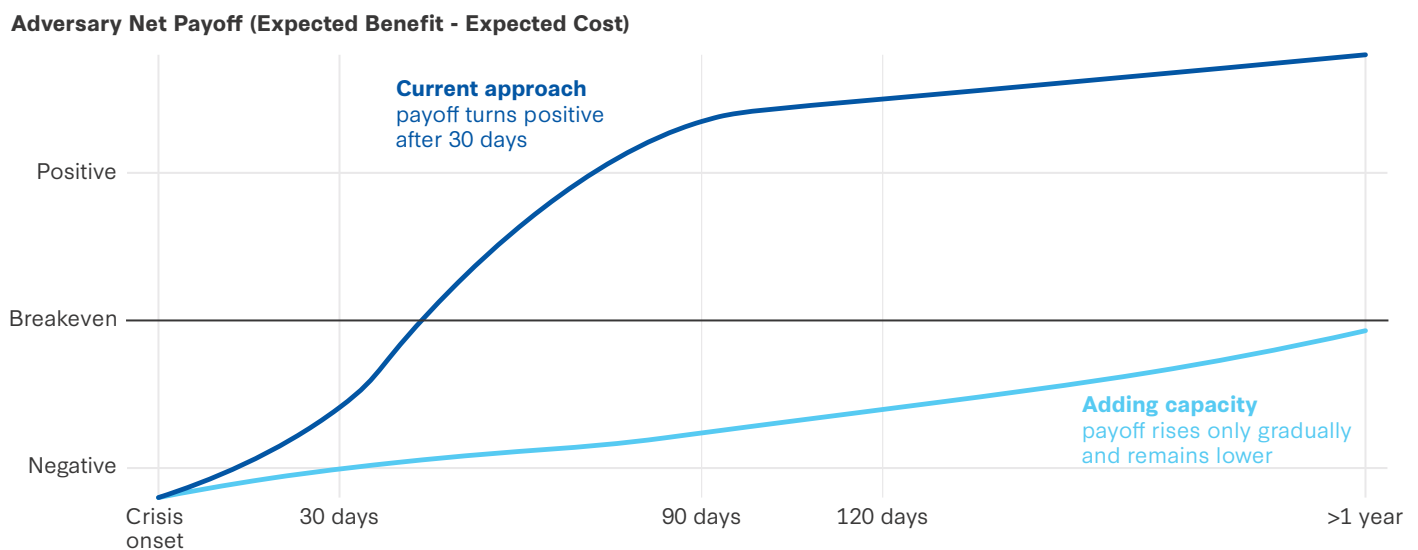
base and stockpiles as measures of its capacity. This reduces the probability that rivals assess a net payoff from challenging the status quo over time. When the United States deploys a bomber task force, adversaries calculate how many sorties and **Joint All-Domain Operations** pulses could be generated in a protracted campaign as opposed to a single battle.

PLACING DETERRENCE AT THE CENTER OF REINDUSTRIALIZATION

If capacity functions as a coefficient of capability, credibility, and communication, the policy task is to make that coefficient visible, measurable, and governable. Industrial capacity should enter deterrence planning before a crisis, with planners assessing how new spending translates into usable wartime output, faster production rates, stronger suppliers, repair throughput, and allied production depth. This will require a shift from measuring inputs to measuring effects. The relevant test is whether U.S. and allied forces can sustain denial, impose costs, and signal endurance after the opening phase of conflict. A deterrence-by-capacity agenda should therefore connect campaign plans, budget choices, industrial incentives, legal authorities, and allied arrangements to shape how an adversary assesses the costs and benefits of aggression over a longer time horizon.

First, the Pentagon should require mobilization plans to

Figure 1: Deterrence by Capacity—Holding Down Adversary Net Payoff



Note: This figure is an illustrative concept and is not based on empirical data.

Source: CSIS.

accompany major war plans.³ The ideal model plan connects campaigning with what are called OPLANs, or major war plans against threats such as the PRC, Russia, Iran, and North Korea. The number of types of plans is currently dictated by the **Joint Strategic Capabilities Plan**, which directs the development of global campaign plans alongside contingency and posture planning guidance by combatant command. The document operationalizes guidance from the National Defense Strategy, National Military Strategy, and Contingency Planning Guidance. Since the Department of War pivoted to globally integrated operations, major war plans have been linked to campaigning and how to set conditions in major theaters of operations. A concept for when and how to mobilize larger forces is now needed, including expanding the size of the military, sending signals to industry, and creating the stockpiles required in a protracted conflict. Every major war plan should include a mobilization annex that identifies expected munitions expenditure, replenishment assumptions, repair capacity, supplier bottlenecks, emergency contracting authorities, allied stockpile access, and industrial actions by phase. The annex should show what must happen at time horizons longer than those found in most major plans.

Second, the Pentagon should treat open architectures and commercial components as key mechanisms to add supply chain depth. The Modular Open Systems Approach (**MOSA**) is directly relevant to mobilization because it uses modular design, open standards, and separable interfaces to make systems easier to modify, compete, and sustain. The Department of War's official MOSA guidance says the department can use modular systems with components that can be completed separately and acquired from independent vendors. **Defense Standardization Program** guidance also notes that MOSA is the preferred method for implementing open systems and is **required by law** for major defense acquisition programs.

Third, the Pentagon should increase secure dual-use and commercial components to add depth and resilience to supply chains. The relevant model is not uncontrolled commercial substitution. It is a vetted component ecosystem. **The Defense Industrial Unit's Blue Uncrewed Aerial Systems (UAS) Framework** provides a useful template because it lists interoperable compliant components and software for government and industry use. The

Department of War should extend this logic beyond small unmanned systems where feasible. Sensors, radios, batteries, processors, autonomy modules, optical payloads, power systems, mission computers, and software-defined subsystems should be screened, cyber-tested, and placed into approved component frameworks. This would give defense primes, startups, and government program offices more substitution options during a crisis. It would also reduce dependence on narrow supplier pools.

Fourth, the United States should fund the supplier layer. The decisive constraint is often not the prime contractor's final assembly line, it is the sub-tier supplier that makes rocket motor nozzles, case insulation, carbon phenolic ablatives, energetic components, fuses, actuators, castings, or other parts that rarely appear in public debate. Recent DPA Title III investments in the solid rocket motor industrial base show the right logic. Between December 2024 and May 2026, the Office of the Assistant Secretary of War for Industrial Base Policy made **nine investments** under the Defense Industrial Base Consortium Other Transaction Agreement totaling \$191 million in DPA Title III funds. In all likelihood, these investments will have to increase as the department looks for creative ways to reduce supply chain bottlenecks. This should become a standing capacity policy. The Department of War and Congress should identify the top 25 sub-tier bottlenecks for priority war plans and fund second sources, tooling, workforce pipelines, strategic inventories, and test infrastructure before a crisis.

Fifth, sustainment should be treated as part of deterrence. A force that cannot repair damaged systems, regenerate aircraft, restore missile launchers, or move components through contested logistics will lose capacity even if stockpiles look adequate on paper. The **Regional Sustainment Framework (RSF)** is useful because it aims to optimize regional maintenance, repair, and overhaul. The Pentagon has also **described the RSF** as a way to build a global network of regionally aligned capability and capacity with Indo-Pacific allies. PIPIR applies the same logic to the Indo-Pacific industrial base. These initiatives should be written into theater plans, with planners exploring how to align major exercises as a way to test RSF and incentivize deeper PIPIR programs.

3 **Joint Publication 4-05** defines mobilization as "the process of assembling and organizing national resources to support national objectives in time of war or other emergencies." It provides guidance for mobilization, demobilization, force expansion, and related planning.

Sixth, FMS and coproduction should be judged by whether they expand total capacity across security alliances and partnerships. Foreign orders can strengthen deterrence if they aggregate demand, finance larger production runs, support deeper supply chains, and create allied stockpiles. They can weaken deterrence if they only lengthen queues for the same constrained output and leave key partners wondering if the United States has the industrial base required to supply key weapons. [EO 14268](#) moves in the right direction by seeking greater FMS transparency, predictable delivery, consolidated decisionmaking, and stronger government-industry collaboration. The [2026 America First Arms Transfer Strategy](#) extends this logic by prioritizing transfers to partners that invest in self-defense, have critical geography for U.S. plans, or contribute to U.S. economic security. The next step is to link major FMS cases to production expansion plans. For priority munitions and air defense systems, foreign sales should incorporate an industrial capacity assessment that shows how the sale can add production, repair, or supplier depth. This assessment should include how other agencies in the U.S. government—including the Department of Commerce, Department of State-aligned entities such as the U.S. International Development Finance Corporation, and the Export-Import Bank of the United States—can support producing capacity across an alliance network. The core mechanism and recommended actions are summarized in Table 2 (see page 8 of this brief).

CONCLUSION

Deterrence by capacity provides the strategic logic needed to move defense reindustrialization beyond episodic concerns over “empty bins.” Capacity acts as a coefficient on capability, credibility, and communication by determining whether U.S. combat power can be replenished, repaired, and sustained after the opening phase of a conflict. Deep stockpiles, resilient supply networks, scalable production, and distributed repair capacity lengthen the period during which the United

States and its allies can deny gains and impose costs. They therefore also alter the time horizon in an adversary’s calculation, reducing the prospect that the enemy can absorb an initial setback and prevail through attrition. Framed this way, revitalizing the defense industrial base is a central component of deterrence, because visible wartime staying power makes U.S. commitments more credible and signals that aggression will not become more advantageous as a conflict continues.

The Department of War and Congress should translate this logic into measurable planning and investment requirements. Major war plans should include mobilization annexes that identify munitions consumption, replenishment timelines, repair requirements, supplier bottlenecks, allied contributions, and emergency authorities across multiple conflict durations. Open architectures, secure commercial components, and stronger data rights should expand the number of qualified suppliers and permit rapid substitution during disruption. Public investment should concentrate on sub-tier bottlenecks, second sources, workforce pipelines, tooling, critical materials, and test infrastructure rather than focusing only on prime-contractor assembly lines. Regional sustainment hubs, allied coproduction, and foreign military sales should be evaluated according to whether they add production and repair capacity rather than merely lengthen existing queues. Above all, the department should measure success in wartime output and endurance with an eye toward how quickly weapons can be produced, damaged systems restored, supply shocks absorbed, and allied industrial capacity mobilized. ■

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Table 2: From Mechanism to Policy Action

Mechanism	What to measure	Policy action
Mobilization plans attached to major war plans	Munitions burn rates, replenishment timelines, repair capacity, industrial bottlenecks, supplier substitution options, shipping constraints, and crisis contracting authorities.	Require every major war plan to include a mobilization annex. The annex should identify what industry, allies, and government must do at variable time horizons as a conflict becomes protracted.
Open standards, dual-use components, and commercial supply depth	Number of qualified vendors, integration time, software update tempo, data rights status, percentage of secure commercial or dual-use components, and availability of second sources.	Treat MOSA, data rights, and commercial component qualification as mobilization requirements. Expand Blue UAS-style frameworks for vetted components in drones, sensors, radios, batteries, processors, autonomy modules, mission computers, and power systems. Integrate more commercial components to reduce supply chain bottlenecks.
Onshore and trusted supplier depth	Number of qualified suppliers for motors, energetics, seekers, fuses, actuators, castings, batteries, chips, magnets, and test equipment.	Use DPA Title III, Industrial Base Analysis and Sustainment, and strategic reserves to fund second sources, tooling, workforce pipelines, critical materials, and test infrastructure before demand spikes. Develop public-private partnerships to create incentives for U.S. firms to work on security and resilience initiatives.
Regional sustainment and repair	Repair cycle time; maintenance, repair, and overhaul throughput; transport distance; spare parts availability; battle damage repair capacity; and allied access to repair hubs.	Make the RSF part of theater deterrence planning. Build forward repair capacity into campaign plans, posture decisions, and allied exercises.
FMS, ITAR reform, and allied coproduction	Allied production share, common configurations, export license timelines, foreign demand aggregation, repair capacity, and crisis allocation rules.	Align FMS and ITAR reform with capacity expansion. Foreign orders should finance additional production, shared stockpiles, common configurations, and allied repair capacity rather than lengthen delivery queues. Align Department of State and Department of Commerce initiatives to build deep supply chains linked to expanded capacity.

Source: CSIS.