



**HOW THE US DEFENSE INDUSTRIAL  
BASE STAGNATED AND HOW  
STARTUPS CAN HELP**

BY MEGHAN FONG

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The present United States defense industrial base (DIB) was forged amid a post-Cold War peace dividend and dramatic defense budget cuts that elevated production efficiency over innovation. Consolidation around major defense contractors—called the “Last Supper”—was seen as essential for the US defense industry to survive capital constraints, effectively [reducing the number of prime contractors from 51 to five by the early 2000s](#). Simultaneously, the globalization of supply chains pushed commercial manufacturing to cost-efficient overseas sources, shifting the production base for defense assets outside US borders and creating reliance on single, or even adversarial, suppliers. The aftermath was a contracted and exported US DIB.

Despite the emerging post-war DIB's bureaucratically sluggish and risk-avoidant nature, defense production could support the requirements of the United States' Global War on Terror and 20 years of counterinsurgency campaigns in the Middle East because the conflict involved intermittent, protracted engagements against non-state adversaries with non-peer capabilities. But the international security environment has changed. Eruption of global crises, including in Ukraine and Gaza, has driven a surge in security demands that have strained the DIB's

capacity to scale production and meet partner requirements.

Consequently, wavering US response to crises in the Middle East and Europe raises international concerns as to the United States' ability to simultaneously contend with an increasingly capable and assertive China—[its most consequential strategic competitor](#). China's ongoing efforts to push the limits of peaceful norms in the Indo-Pacific sparks regular flashpoints in the South China Sea and raises the urgency to prepare for a potential cross-Strait crisis. The US Department of War anticipates publication of a [2025 National Defense Strategy](#) that may further elevate China as the primary threat to US security, echoing concerted efforts to pivot military focus that began even before the Afghanistan pullout.

But how can an already taxed DIB successfully rebalance its commitments to other regions while addressing the growing China threat? Although this challenge will require a complex whole-of-government response interweaving all instruments of national power, an acute indicator of US ability to pivot lies in the simple yet consequential count of munitions. The world is watching as US legacy munitions production and surge capacity struggles to meet the demand of modern warfare. If left unaddressed, shortfalls could quickly force high-risk tradeoffs that jeopardize US global strategic interests.

### **Manufacturing innovation**

The recent passing of the [One Big Beautiful Bill Act](#) includes \$156.2 billion additional appropriations for national defense funding for fiscal year 2026, presenting opportunity for the DoD to resolve long under-resourced priorities outlined in the [US Indo-Pacific Command's fiscal year 2025 unfunded priorities list](#)—including [\\$2.6 billion for munitions](#). But while increased funding is a means for addressing depleted US munitions stockpiles, it doesn't provide the ways. Even with significant capital injections, the DIB's legacy manufacturing and procurement structure cannot rapidly scale munitions production to meet modern warfighter needs, let alone deliver new capabilities at pace to address a rapidly advancing peer competitor. Drawing from basic economic theory

that articulates the diminishing returns of capital injections on growth, the DoD should focus on promoting industrial innovation as the transformative driving factor for scaling munitions production capacity.

The first-ever [National Defense Industrial Strategy](#) (2022) calls for expansion and diversification of the DIB through the inclusion of and investment in small businesses. Specifically, it outlines a role for new players to “move aggressively towards innovative, next-generation capabilities while continuing to upgrade and produce, in significant volumes, conventional weapons systems already in the force.” In fact, the benefit of integrating startups in the DIB is a relatively nascent yet well-championed initiative within defense circles. Centers of excellence such as the DoD’s Defense Innovation Unit (DIU) and component-level programs (AFWERX, SpaceWERX, Army Futures Command, NavalX, Marine Corps Warfighting Lab, and SOFWERX) endeavor to accelerate disruptive defense-related manufacturing technologies by bridging the fast-paced and fragile startup community with the bureaucratic and entrenched DIB through the flagship [Small Business Innovation Research and Small Business Technology Transfer](#) (SBIR/STTR) program and others.

Successful acquisitions, such as [Elementum 3D’s selection](#) for the US Air Force’s Enterprise-Wide Agile Acquisition Contract (EWAAC) indefinite delivery/indefinite quantity (IDIQ) vehicle initiative in May 2025, showcase the DoD’s ability to rapidly modernize defense production through the incorporation of startups. Like SBIR/STTR, EWAAC IQID represents an accession pathway connecting startups seeking government contracts with the DoD’s imperative to rapidly meet weapons production requirements. Through this contract, Elementum 3D will employ its extensive metal additive manufacturing and high-performance materials expertise to support the Air Force’s modernization of weapons systems development through the “[Digital Trinity](#)”—the integration of agile software development, open architecture, and digital engineering.

Disruptive manufacturing practices—including additive and subtractive manufacturing, artificial intelligence/machine learning predictive maintenance, advanced materials sciences, and robotics—provide the DIB the ability to pivot from traditional manufacturing shortfalls. Modern production technologies integrate well into the DIB’s prioritization of cost effectiveness, often reducing maintenance expenditures, offering inexpensive scalability, and lowering training requirements. At the same time, they facilitate a more resilient architecture, allowing the DIB to capitalize on US-based industry that can be easily replicated and distributed across a network of micro-factories with a lower overhead price tag. And importantly, this offers new capabilities development through advanced techniques and materials, and rapid innovation through accelerated prototyping and flexible customization. The result is a more timely, dynamic, resilient, scalable, and capable production base.

### **The imperative for change**

The increasingly volatile international security environment and strained US responses to global crises underscore the imperative for rapid and transformative DIB modernization to meet the munitions production demand of future conflict. Foremost among these is the potential for conflict with China in the Pacific Theater—an engagement that would constitute large-scale multi-domain operations against a peer competitor with whom we share deep economic interdependence. Innovation is required to meet a pacing peer challenger; supply chain credibility is required to exclude dependencies on adversarial entities; and rapid scalability is required to meet the munitions demand of large-scale combat operations. Broadening the integration of startup enterprises can provide a critical pathway to DIB modernization necessary to meet the needs of a shifting US defense strategy to address present challenges.

The imperative for munitions production modernization is clear, the value of startup contribution is codified, acquisitions pathways for partnership exist, and efforts to adapt further are underway. Yet significant barriers to entry for fast-

paced, fragile small businesses into the bureaucratically entrenched and sluggish US DIB still preclude partnership at a scale necessary for transformative modernization. In fact, Elementum 3D's recent contract award was a result of [nine years of government defense partnership](#) to incorporate its manufacturing advantages into US defense production. Most startups, regardless of how disruptive their technology is, cannot sustain operations in the process of aspiring for a federal government [program of record](#). The largest hurdle is referred to as the “Valley of Death”—the period between receiving initial government funding and achieving commercialization—through which [less than 16% of SIBR-funded companies were able to traverse over the last decade](#).

Part II identifies the structural barriers preventing meaningful startup participation in the DIB, to examine pathways for contracting the gap between evolving US national defense strategies—which increasingly prioritize readiness for a potential Pacific conflict—and legacy US defense production capabilities. It presents four US government recommendations for harnessing startup-driven innovation to revitalize the industrial base and strengthen US competitiveness in an era of great power rivalry.

*PacNet commentaries and responses represent the views of the respective authors. Alternative viewpoints are always welcomed and encouraged.*