



# Mobilizing Private Capital for Defense

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## Tactics and Recommendations

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# Executive Summary

America's capital markets are the largest and most sophisticated in the world, a major force driving the development of new technologies and the expansion of U.S. industrial capacity. For the U.S. defense industrial base (DIB) and dual-use sectors, private capital is a critical source of financing and investment; available indicators suggest roughly \$440B in private capital activity from 2020 to 2024.<sup>1</sup> However, the global context is challenging: as a share of GDP, China sustains an economy-wide investment rate roughly twice that of the U.S., supporting its growing industrial capacity. With the appropriate combination of policy and process changes, the Department of Defense (DoD) could engage even more investment, bringing more resources to bear on DoD priorities.

DoD's levers for engaging private capital fall broadly into three categories: providing demand signal, catalytic capital, and a healthy business environment. These levers are most effective when combined. Stronger demand signals reduce the amount of catalytic capital required to encourage investment, and a healthy business environment makes the sector more attractive to investors overall. Interviews and case studies from this research report show that major opportunities exist to engage private capital: for example, DoD's Critical Chemicals Pilot leveraged a 25:1 ratio of private-to-public dollars (about \$177M in private capital) by aggregating its demand signal with commercial chemical buyers.

Despite its essential role, private capital is a complement of, and not a replacement for, an adequate and predictable defense budget. A strong DIB depends on industry, the investment community, and the Department working collaboratively on shared objectives.

## Key Findings

- **Private capital flows into the defense sector are large and diverse:** Available indicators suggest roughly \$440B in private capital activity from 2020 to 2024. There are many sources of investment capital, including performing firms themselves, venture capital firms, commercial banks, non-bank lenders, and private equity firms. This diversity enables defense companies to move from start-up through growth and commercialization—all to serve the warfighter.
- **The DoD has a rich existing toolkit to build upon:** The DoD has many proven mechanisms it uses to encourage investment in the DIB, including industrial base programs (e.g., the Defense Production Act) and the buying power of its large procurement budgets. Congress has recently expanded many of these mechanisms, providing DoD with an opportunity to build its investment toolkit out even further.

- **The business environment matters just as much as the budget:** Interviews with firms and investors show that challenging payment policies, complex rules surrounding communicating with government customers, and a lack of prioritization by the acquisition community all act as major inhibitors to investment. Conversely, case studies demonstrate that the DoD market can prove very appealing to investors when packaged appropriately.

## Recommendations

- **Portfolio Acquisition Executives (PAEs) Communicate Stronger Demand Signals:** DoD should identify and institutionalize best practices for communicating its potential future demand, such as publishing technology development roadmaps, and track PAE performance in applying them.
- **The Office of the Under Secretary of Defense (Comptroller) to Consolidate Guidelines on Use of O&M Funds:** The Comptroller should issue new guidance on when O&M can be used for goods and services, enabling faster obligation and more financeable, recurring payment terms for firms.
- **Congress to Expand the Use of Multi-Year Procurement:** DoD and Congress should streamline and broaden criteria and approvals, using alternative metrics such as time-to-production and demonstrated industry investment.
- **Defense Pricing, Contracting, and Acquisition Policy (DPCAP) to Incorporate Commercial Demand Aggregation into Acquisitions Process:** DPCAP should provide guidance for aligning solicitations with commercial specifications and incorporating the maturity of commercial buying communities into evaluation criteria to create larger total addressable markets for firms.
- **Congress to Increase Budget Flexibility to Expand Total Addressable Markets:** Congress and DoD should consolidate budget line items and pilot reprogramming flexibility to reduce fragmentation and allow DoD to fund rapid commercialization when prototypes succeed.
- **PAE to Pilot Sharing Controlled and Classified Information with Investor Community as Part of Demand Signaling:** DoD should pilot a mechanism to share appropriate classified threat and product demand context with vetted investors and companies to promote competition.

<sup>1</sup> See Appendix 2 for the methodology underlying this proxy metric.

- **Office of the Assistant Secretary of Defense for Industrial Base Policy (OASD(IBP)) to Create an Always-On Portal to Apply for DoD Catalytic Capital:** OASD(IBP) should create an always-on “front door” for applications for catalytic capital and other industrial base mechanisms.
- **OASD(IBP) to Publish an Annual National Security Private Capital Scorecard:** DoD should publish an annual scorecard with standardized metrics (e.g., total private investment mobilized, ROI, default rates) to improve coordination, oversight, and public understanding of industrial policy tools.
- **OASD(A&S) to Build Capital Planning Expertise Within DoD:** DoD should stand up a dedicated “capital planning cell” to advise the acquisitions community on structuring transactions to incorporate private capital, including appropriate financial and risk analyses.
- **OASD(IBP) to Expand the Availability of Privately Financed, Leasable Facilities to Firms:** OASD(IBP) should assess and expand the use of privately financed, leased facilities.
- **OASD(IBP) and the Chief Data and Artificial Intelligence Office to Provide Market Intelligence to Assist with Acquisition Planning:** DoD should provide the acquisitions community with access to commercial and government-only market intelligence and analytics tools to track key financial and industry trends.
- **PAE to Improve Payment Terms for Small Businesses:** DoD and Congress should pilot a high-frequency payment option for contracts with small businesses to reduce financial risk and lower costs of capital.
- **Congress to Increase Resourcing for OASD(IBP)’s M&A Office:** DoD should expand OASD(IBP)’s M&A review office to provide improved review capacity and greater insight for DoD leadership into industry M&A trends.
- **DAU to Increase Acquisition Workforce Capacity for Engaging the Investment Community:** Defense Acquisition University (DAU) should expand training on contemporary investment business practices.
- **Congress and DoD to Reduce Disincentives for Raising Equity Capital:** Congress and DoD should address the set-aside “benefits cliff,” which deters equity investments in small businesses, by updating past-performance rules and providing a set-aside transition period after an M&A transaction.

## Introduction

Private capital is a major source of Research and Development (R&D) and capital investment dollars in the DIB. This report discusses the tactics the DoD uses to encourage private investment and provides recommendations for how the investment community could be even better engaged.

Key decision-makers in the DoD view the capital markets as essential stakeholders in enhancing and expanding the DIB. DoD’s 2025 Acquisition Transformation Strategy (“Rebuilding the Arsenal of Freedom”) sets a goal for “increased private capital investment to accelerate the creation of new companies, expand current factory production rates, and improve innovation.”<sup>2</sup> In accompanying remarks, Secretary of Defense Hegseth noted that defense companies “must invest in [themselves] rather than saddling taxpayers with every cost.”<sup>3</sup>

In written testimony for his confirmation hearing, Deputy Secretary of Defense Steve Feinberg noted that he believes “private equity and venture capital can bring significant resources to bear in support of U.S. national security priorities and can offer insight into market dynamics, opportunities and risks that affect DoD’s mission.”

The challenge is certainly urgent. By one metric—gross capital formation, a proxy for investment across an economy—China sustains an investment rate roughly twice as high as the United States.<sup>4</sup> If DoD is to achieve its long-term strategic goals, it must draw upon a defense and dual-use industrial base of comparable scale to China’s. Increased private investment can help the U.S. keep pace. The analysis that follows describes the investment landscape, DoD’s tools for engaging it, and offers practical recommendations for DoD and Congress.

2 U.S. Department of War, Office of the Under Secretary of War for Acquisition & Sustainment, *Rebuilding the Arsenal of Freedom: Acquisition Transformation Strategy* (Washington, DC, 2025), 6.

3 Pete Hegseth, “Hegseth at National War College” (speech at the National War College, Washington, DC, November 7, 2025), YouTube video, 1:19:15, posted by PBS NewsHour, November 7, 2025, <https://www.youtube.com/watch?v=wt4pJn0Q0KY>.

4 World Bank, “Gross Fixed Capital Formation (% of GDP),” China and United States, World Development Indicators, accessed December 9, 2025, <https://data.worldbank.org/indicator/NE.GDI.FTOT.ZS>. This is an economy-wide measure of fixed investment, not a defense-specific metric; it is cited here as context for overall industrial capacity buildup.

# National Security Investment Landscape

## Benefits of Private Investment

Private investment in the DIB carries a number of distinct benefits. First, DIB companies invest in R&D to develop new capabilities for the warfighter. Then, while DoD funds some R&D in federal labs, and indirectly for existing defense contractors through Independent Research and Development (IR&D) reimbursement, many companies use internal investment dollars to support R&D. Similarly, company capital expenditures (“CapEx”) are used to build new factories, buy machinery, and scale up production. This is critical to strengthening DoD supply chains.

Private capital is also used to provide a financial payout (or “exit”) for owners of firms who wish to retire, realize a return on their investment, or transfer management of their enterprises. Without a strong exit market, few firms will wish to enter the defense industry in the first place. This capital is typically raised through an initial public offering (IPO) or via mergers and acquisitions (M&A). Capital invested through the M&A process can also assist companies with commercializing their products and services for DoD end users.

DoD supply chains are strengthened when companies have greater access to capital. Well-capitalized companies find it easier to secure financing from regulated institutions such as commercial banks, which is often a prerequisite for participation in certain DoD programs. By contrast, companies with limited access to capital are more vulnerable to liquidation or acquisition by adversarial entities.

Private investors are often commercialization experts. DoD often struggles to transition novel technologies to warfighter use, something that private investors often excel at. With private capital, which can typically be allocated much more rapidly than government dollars, firms can accelerate a product from research through fielding to production, allowing the government to understand its applications and make necessary modifications.

Moreover, private dollars can help diversify funding streams for companies, allowing them to continue their work during DoD funding gaps. Private investors can serve as an alternative source of capital for firms whose leadership and business strategies demonstrate strong market potential. Considerations of market potential are often underemphasized in DoD source selection processes relative to private investment decision-making.

It should be noted that private capital cannot substitute for DoD funding for many core responsibilities. Many capabilities may be unprofitable but strategically indispensable.

## Investment Trends in the U.S. Defense Industrial Base

The U.S. DIB benefits from its access to capital markets under U.S. jurisdiction, which are widely acknowledged as the largest, most liquid, and most sophisticated in the world: In 2025, the U.S. constituted 49% of global equities and 40% of fixed income by value.<sup>5</sup> Because so many firms around the world make use of U.S. financial services, U.S.-based investment firms have become highly specialized, offering uniquely tailored financial products, from venture capital to sophisticated debt and derivative tools. Access to such financing is in turn highly valuable to companies, often making the difference between growth and bankruptcy.

A robust body of scholarly literature links the strength and stability of relevant U.S. legal institutions, such as contract law, disclosure requirements, and law-enforcement capabilities, to its dominant position in global capital markets.<sup>6</sup> The U.S. financial services sector also benefits from the U.S. dollar’s status as the most commonly used global currency, as well as the overall size of the U.S. economy.

By promoting economic growth, America’s vibrant financial markets provide a strategic advantage for the U.S. Access to these markets also directly benefits DoD: Available indicators suggest that defense and dual-use-related private capital activity totaled roughly \$440B from 2020 to 2024 (about \$88B per year), reflecting a combination of public-company investment, private financings, and M&A transaction activity.<sup>7</sup>

Investment in the DIB is provided through a variety of financial mechanisms, also known as “asset classes,” tailored to companies with different needs and risk profiles:<sup>8</sup>

- Publicly traded securities markets provide capital to defense companies from individual and institutional investors. The largest publicly traded U.S. defense contractors have, on average, invested \$21B of their own dollars in CapEx or R&D each year from 2020 to 2024.

5 SIFMA, *2025 Capital Markets Fact Book*, (New York: SIFMA, 2024), <https://www.sifma.org/wp-content/uploads/2024/07/2025-SIFMA-Capital-Markets-Factbook.pdf>.

6 Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny, “*Law and Finance*,” *Journal of Political Economy* 106, no. 6 (1998): 33-35.

7 See Appendix 2.

8 See Appendix 2 for an explanation of the different sources of capital and how they are measured.

- Venture capital is focused on early-stage and high-risk technology companies. Venture capital firms are now investing an average of \$30B in dual-use companies each year.
- Debt is typically used by companies with stable and predictable future cash flows. In the defense sector, debt is typically provided by commercial banks or non-bank lenders such as private credit or asset-based lending companies.
- Private equity and strategic acquisitions can provide growth capital and an exit to earlier investors via the M&A process. From 2020 to 2024, defense and aerospace M&A transaction value has exceeded \$30B, on average.

Private capital is drawn into the defense sector for a variety of reasons: investment returns are relatively stable compared to the commercial sector, and defense budgets are growing worldwide. In addition, DoD uses a range of tactics to engage private capital and encourage investment in the sector. Although the tools are varied, they can be grouped into three broad categories:

- 1. Demand Signal:** tactics that help companies and investors forecast a path to profit
- 2. Catalytic Capital:** government-provided financial tools that directly subsidize private investment into companies
- 3. Business Environment:** the organizational processes, skills, and tools that allow DoD to structure investable transactions and act as a responsive customer

Each of these categories plays a distinct role in allowing DoD to productively engage private capital. These categories are not mutually exclusive and are most effective when used in combination, as the case studies later in this paper demonstrate.

While this report focuses on DoD's locus of control, many of the most powerful levers shaping private investment lie outside DoD's authority. Broader macroeconomic and regulatory factors, such as tax policy (e.g., R&D and CapEx expensing, or investment tax credits), M&A enforcement trends, financial-sector regulations, and tariff regimes, all strongly affect the investment environment. One of the most important factors is the interest rate, which determines the overall cost of capital across the economy. As of 2025, interest rates have risen sharply due to factors outside of DoD's control.

Not all investments are desirable. Adversarial investors, or those from hostile nations, can introduce strategic risk into the DIB. Successful use of these tools depends on the protections built into the federal acquisition system, financial market regulations, as well as alignment with the Committee on Foreign Investment in the United States (CFIUS) and export-control requirements.

The sections that follow present the specific tactics within each category, describe how they function, where they've been applied, and how they can be combined.

# Tactics for Engaging Private Capital



## Demand Signal

The primary way that DoD stimulates private investment is by providing a demand signal. Companies and investors will only invest if they can be assured that there is a reasonable chance of recouping their capital, plus a profit or "return on investment" (ROI). It is no surprise that, in a recent industry survey, 65% of defense industry executives agreed that it is important for DoD to "provide a clear, consistent demand signal through contract vehicles."<sup>9</sup> (See box, "How Investors Evaluate Demand," for more details.)

DoD's demand signal is chiefly tied to its role as a buyer of products and services through programs of record. As a result, these tactics typically involve stakeholders in PAEs, program offices, and end-user communities.

### How Investors Evaluate Demand

Professional investors, as well as companies, use several rigorous analytical approaches to evaluate demand and calculate potential future returns, including the potential ROI. Investors focus heavily on the amount of dollar revenue that a given demand signal represents. For example, this can be calculated as the number of anticipated unit sales multiplied by an expected per-unit sales price.

Beyond revenue, investors require profits and cash flow. They must therefore assess costs (e.g., cost of goods sold, overhead, R&D) to estimate profit margins and ROI.

<sup>9</sup> National Defense Industrial Association, *Vital Signs 2025: The Health and Readiness of the Defense Industrial Base* (Arlington, VA: National Defense Industrial Association, 2025), [https://www.ndia.org/-/media/sites/ndia/policy/vital-signs/2025/vitalsign\\_2025\\_final.pdf](https://www.ndia.org/-/media/sites/ndia/policy/vital-signs/2025/vitalsign_2025_final.pdf).

In the commercial technology investment sector, the starting point for analyzing demand is typically called the “total addressable market,” or TAM, which provides an estimate of the total potential market for a product or service. Larger TAMs are more appealing to investors, because they suggest greater scope for growth.<sup>10</sup> To create a realistic sales forecast, a TAM estimate is typically translated into a more attainable near-term forecast (often called a “serviceable obtainable market,” or SOM) by incorporating factors such as competition, production capacity, switching costs, scale-up challenges, and other barriers to growth.

Reducing the time it takes for a company to obtain sales can also have a very significant impact on the calculated demand signal through a financial mathematical principle known as the time value of money: the value of money that arrives sooner is worth more to investors than money that arrives later, because that money has an opportunity cost.<sup>11</sup> One commonly used formula known as “net-present value” allows investors to compare the financial value of different investments which return money on different timelines.

Since investors typically have many competing opportunities for investing their capital, they have a strong incentive to invest in opportunities that present the greatest possible ROI.

## Public Reports:

DoD communicates to the public through a variety of channels, and investors often carefully review these channels to estimate TAMs for products they might invest in.

Because resourcing decisions are typically made years in advance through the Planning, Programming, Budgeting, and Execution (PPBE) process, demand can often be partly inferred from internal planning documents such as the Future Years Defense Program (FYDP) and the Program Objective Memorandum (POM). However, because many of these documents are not publicly available, companies and investors must rely on less detailed public versions.<sup>12</sup>

This information is often extended and reinforced in rhetoric from a range of DoD stakeholders, most notably senior acquisition executives for the services, and others in the acquisition

community. Multiple constructs are used by DoD to communicate pre-solicitation information to industry, such as Advanced Planning Briefings for Industry (APBI), industry days, proposer’s days, requests for information (RFIs), and Technical Exchange Meetings. Although ethical rules about pre-solicitations apply, there is little standardization concerning how these events are carried out and how much information is conveyed.

Unfortunately, key contextual information (such as warfighting doctrine and adversarial threat analysis) is typically classified, and specific TAM-focused information, such as unit sales forecasts and unit prices, is difficult to infer. As a result, DoD is often unable to communicate beyond the small circle of stakeholders who possess security clearances with existing need-to-know for related technologies.

DoD personnel sometimes do choose to communicate clear metrics or specifications tied directly to long-term strategies that address DoD needs. For example, the U.S. Navy PEO Digital publicized a highly detailed strategic roadmap containing organizational goals, outcomes sought, and specific metrics targeted (e.g., “reduce network downtime”), as well as an overview of the portfolio of 138 technology offerings overseen by the PEO.<sup>13</sup> In addition, PEO Digital supplies clear criteria that will be used to engage with any company, such as “support 10% of users uniquely in the [Department of the Navy].” This allows the private sector to create evidence-based TAM forecasts.

While industry values the contextual information provided in public DoD reports, there is a perception that DoD leadership generally lacks the ability to make firm commitments for purchases in future years. Especially during times of strategic turbulence, such as during a presidential transition, even senior-most DoD leaders may not have accurate perceptions of future demand.

## Test and Experimentation Events:

Test, experimentation, and demonstration events provide venues for companies and investors to receive detailed feedback on their products or prototypes. Most importantly, such events provide an opportunity for stakeholders in the DoD acquisitions and end-user communities to rapidly inform their concepts of operation for using products and services, and refine the relevant requirements. In a recent survey of the defense industry on the value of DoD prototyping, respondents ranked “ability to communicate with government customer on requirements” as the most valuable element of a prototyping project, ahead of other elements such as “time to award.”<sup>14</sup>

10 Ivelina Dineva, “How Investors Use TAM, SAM, SOM to Evaluate Startups,” *GoingVC*, July 3, 2025, <https://www.goingvc.com/post/how-investors-use-tam-sam-som-to-evaluate-startups>.  
 11 Jason Fernando, “Time Value of Money: What It Is and How It Works,” *Investopedia*, August 21, 2024, <https://www.investopedia.com/terms/t/timevalueofmoney.asp>.  
 12 These include agency and service-level reports, public statements from senior defense and military leaders, and official budget documents (e.g., the President’s Budget Request, budget justification materials [“J-Books”], and the annual Defense Appropriations Bill).  
 13 U.S. Navy, Program Executive Office Digital, *From Pitch to Partnership: A Guide to Industry Engagement* (Washington, DC: U.S. Navy, 2024), <https://www.peodigital.navy.mil/Industry/>.  
 14 Arun Seraphin and Stephanie Halcrow, *From Breakthroughs to the Battlefield: Best Practices for Tapping into the Power of Prototyping* (Arlington, VA: NDIA, 2025).

## Test and Experimentation Event Case Study: Joint Fires Network

In Spring 2023, the Joint Fires Network (JFN) initiative was launched by then-INDOPACOM commander Admiral Aquilino to create a C2 capability to coordinate joint fires. In collaboration with DoD's Rapid Defense Experimentation Reserve (RDER), a series of demonstration events was launched focusing first on modeling and simulation, followed by technical demonstrations, and finally full integration in-theater at a limited scale—all in just 12 months.<sup>15</sup>

Rapid iteration within this series of test and experimentation events enabled the companies involved, such as SAIC and Anduril Enterprises, to deploy products and services quickly and with a high degree of information about product-to-market fit.<sup>16</sup> The program has recently transitioned to a Program Executive Office for further development with a goal of larger scale production and deployment.<sup>17, 18</sup>

Personalized feedback from government personnel during test and experimentation events can help companies understand the purchase outlook, allowing them to forecast a more credible TAM, and reduce uncertainty about their product-to-market fit.

### Non-Binding Purchase Commitments:

Purchase commitments such as non-binding memoranda of Understanding (MOUs) are used by DoD to add specificity and credibility to demand signals. In simple terms, an MOU formalizes intent, outlining clear paths for future purchases. MOUs have been used at different levels of DoD to coordinate with specific private firms, or even other offices within DoD (e.g., DARPA), to justify investing resources.<sup>19</sup>

One approach is for an MOU to quantify the DoD market for a product or service in development, such as by listing the platform,

program of record, or specific program office which will integrate or acquire the product. Such MOUs typically state a commitment for such offices to seek resources in the POM, and are signed by relevant individuals such as Service acquisition leadership, science and technology executives, or other senior leaders.

As a condition for receiving SBIR Phase II awards, the Air Force AFWERX Small Business Innovation Research (SBIR) program has typically required firms to receive MOUs signed by representatives of both the acquisition and end-user communities. Other AFWERX MOU signers can include representatives from government offices that will be essential for enabling the acquisition in practical terms, such as finance, contracting, small business offices, legal, information assurance/cybersecurity, engineering, public affairs, and security (e.g., to supply CAC cards).

While MOUs are most commonly provided privately to specific firms, they could in principle be shared with the public, or select groups of firms or investors. This approach signals demand while preserving the government's flexibility to select a vendor.

### Offtake Agreements:

Commonly used as part of project financing deals in capital-intensive private sector industries, such as mining, offtake agreements are long-term commitments from a buyer to purchase a pre-agreed volume of something, typically at a pre-agreed price or using a pricing formula. In the commercial sector, offtake agreements are usually defined in carefully negotiated contracts containing formalized success criteria and termination clauses to control risk for buying parties.<sup>20</sup>

Aside from DoD, many federal stakeholders, including the Department of Energy (DOE), Development Finance Corporation (DFC), and Export-Import Bank (EXIM) make use of offtake agreements. In DoD, the Defense Production Act (or "DPA," 50 USC 4533) explicitly authorizes binding purchase guarantees, and it has been used regularly to carry out offtake-type agreements since its inception.<sup>21</sup> In 2025, Congress expanded the authorities of the Industrial Base Fund (10 USC 4817) to include long-duration purchase commitments.<sup>22</sup>

15 Wilson Miles, Arun Seraphin, and Bryan Clark, "The Value of Experimentation, Not Demonstration," (Arlington, VA: NDIA, November 2024).

16 Mark Pomerleau, "Joint force, international partners, contractors test command and control capabilities in Pacific exercise." *DefenseScoop*, July 19, 2024. <https://defensescoop.com/2024/07/19/valiant-shield-joint-force-partners-contractors-test-command-control-capabilities/>

17 Sydney J. Freedberg Jr., "Joint Fires Network Will Complete Transition from R&D to Acquisition Program Oct. 1," *Breaking Defense*, September 24, 2025, <https://breakingdefense.com/2025/09/joint-fires-network-will-complete-transition-from-rd-to-acquisition-program-oct-1/>.

18 See, for example, P.L. 119-21, S. 20005 (FY25 Budget Reconciliation Act).

19 Kathleen Harger, former Deputy Assistant Under Secretary of Defense for Innovation and Technology Transition, interview by author, December 19, 2024.

20 Troy Segal, "What Is an Offtake Agreement in Project Financing?" *Investopedia*, last modified August 26, 2025, <https://www.investopedia.com/terms/o/offtake-agreement.asp>.

21 U.S. Government Accountability Office, *Defense Production Act: Foreign Involvement and Materials Qualification in the Title III Program*, GAO/NSIAD-94-74, March 1994, <https://www.gao.gov/assets/nsiad-94-74.pdf>.

22 National Defense Authorization Act for Fiscal Year 2026, Pub. L. No. 119-60, § 867 (2025).

### Offtake Agreement Case Study: MP Materials

In July 2025, MP Materials and the DoD entered into a multi-part transaction to create a domestic rare-earth mining and magnet-production supply chain.<sup>23</sup>

A key part of this transaction was a long-term offtake agreement for the production of rare-earth magnets at MP's planned "10X Facility," structured to provide a clear demand signal and catalyze private investment to build the facility. Using Title III of the Defense Production Act, DoD agreed to purchase 100% of the rare-earth magnets produced at the 10X Facility for 10 years, with a pre-agreed rate of EBITDA (earnings before interest, taxes, depreciation and amortization) serving as an incentive to increase production.

In addition, DoD provided a \$110/kg price guarantee for any commercially sold neodymium-praseodymium (NdPr), a \$400M DoD purchase of convertible preferred stock in MP Materials, as well as a \$150M loan from DoD's Office of Strategic Capital.

As a result of these incentives, MP Materials was able to raise \$1B in private debt in a deal syndicated by JP Morgan.

As seen in the case study, offtake agreements are commonly narrow, firm-specific arrangements, meaning that competition is not available once the deal is closed. They are particularly effective for scaling a single supplier, but not for cultivating a large, competitive market. This approach can be contrasted with open mechanisms such as advance market commitments, price guarantees, feed-in-tariffs, or prizes, which are broadcast to the public.

While DoD has not made major use of these alternatives (with the exception of prizes, discussed below), they have advantages worthy of consideration. Open mechanisms preserve competition, incentivizing a broad sectoral focus on investment and cost reduction. From a private investment perspective, the government's choice among these mechanisms may determine whether capital flows to many firms or only to a pre-selected firm.

### Demand Aggregation:

DoD often requires products that are similar or the same as those purchased by commercial buyers. In these situations, DoD can partner with these commercial buyers to project a larger, aggregated demand signal.

Demand aggregation also diversifies potential product sales, reducing a risk of a total loss for a company.<sup>24</sup> Even when government funds are in the POM and FYDP, DoD sales may be blocked by continuing resolutions, changes in priorities, unexpected cuts, or other risks. DoD personnel can therefore diversify and aggregate demand by finding potential additional government buyers, such as other program offices or joint offices.

### Demand Aggregation Case Study: MCEIP Critical Chemicals<sup>25</sup>

Under DoD's Critical Chemicals Pilot, the Office of the Assistant Secretary of Defense for Industrial Base Policy (OASD(IBP)) Manufacturing Capability Expansion and Investment Prioritization (MCEIP) Directorate has leveraged \$177M in private capital to create domestic supply chains for 12 essential chemicals for DoD. By aggregating its demand signal with U.S. commercial industry buyers, DoD increased the TAM for chemical producers.

This project began with a critical problem for DoD: Many critical chemical supply chains were sourced from companies in high-risk nations. MCEIP addressed this challenge using three tactics:

- Demand Aggregation: identifying chemicals of critical importance to both DoD and commercial buyers
- Commercial Market Adaptation: supporting the certification of a lower-cost, commercially-available material for use in place of an existing, domestically unavailable, and more exacting military specification
- Process Innovation: developing a modern production process to enable future domestic production for multiple critical chemicals<sup>26</sup>

MCEIP first exhaustively catalogued DoD chemicals demand by convening the DoD Critical Energetic Materials Working Group, comprising experts from the

23 MP Materials Corp., *Current Report on Form 8-K*, filed July 10, 2025, <https://www.sec.gov/Archives/edgar/data/1801368/000119312525157310/d43796d8k.htm>.

24 Army Applications Laboratory, Performance Report, 2024, <https://aal.army/assets/files/pdf/aal-performance-report.pdf>.

25 Christopher Zember, Senior Advisor and Portfolio Manager, Manufacturing Capability Expansion Pathfinders, interview by author, 2025.

26 ACMI Group, "ACMI Awarded Contract Extension on Successful Critical Chemical Pilot Program," press release, February 8, 2024, <https://acmigroup.com/2024/02/08/acmi-awarded-contract-extension-on-successful-critical-chemical-pilot-program/>.

defense laboratories, the acquisition community, joint warfighting, and interagency communities. The group developed an initial list of critical chemicals for which DoD had potential supply chain vulnerabilities. MCEIP also drew from a list of chemicals restricted from foreign import in the 2023 National Defense Authorization Act (NDAA), as well as solicitations prepared by the Defense Industrial Base Consortium (DIBC).

In parallel, MCEIP built a network in the relevant commercial chemicals production and buyer communities. At industry associations like the Society of Chemical Manufacturers and Affiliates, MCEIP learned that several large commercial chemical buyers had overlapping supply chain vulnerabilities with DoD and also wished to shift purchases to U.S. domestic production companies.

Working with the lead performer on the program, the American Center for Manufacturing and Innovation (ACMI), MCEIP conducted workshop events bringing together the industry and government stakeholders involved. Critically, these in-person workshops enabled the chemical production companies to understand the combined commercial and government market and justify the use of their own private capital to create domestic production facilities.

MCEIP developed a pilot project, launched in July 2022, setting a target of mobilizing \$50M in private investment against \$5M in DoD funding (10:1), focused on onshoring 8 critical chemicals to U.S. chemical production companies.<sup>27</sup> To be selected, the chemical production companies were required to show an investment level of 10:1, private to public, before contract award, with the ability to stimulate additional capital during execution.

During execution, MCEIP required monthly reporting on private capital leveraged for the project, and prospects on generating new investment. Production companies were also held to these goals. For example, Lacamas Laboratories, a commercial contract manufacturer of high-quality pharmaceutical intermediates and fine chemicals in Portland, Oregon, used a combination of MCEIP funding and private capital to develop a fully

domestic supply chain for 1,3,5-Trichlorobenzene (TCB), which is the first domestic U.S. production of this critical chemical in 15 years. Lacamas has since acquired a production facility valued at \$110M to be used to support scaling production of TCB and other critical chemicals.<sup>28</sup>

The companies ultimately exceeded the \$50M goal, with \$80M in private investment secured. The program expanded to additional critical chemicals and by January 2025 achieved a remarkable 25:1 leverage ratio, translating to \$177M in private capital to address barriers to domestic production of 12 critical chemicals.<sup>29</sup>

### Fixed-Price Contracts:

Fixed-price contracts, even if budgeted at the same dollar level as cost-plus contracts, can sometimes create a more attractive demand signal for companies and investors.

This is the result of several factors. First, fixed-price contracts often raise profit margins for companies, because they can involve lower administrative costs, including tracking of costs and labor hours using the government-specific CAS accounting system. Most importantly, if a company is able to reduce the average unit costs it incurs for product delivery significantly below the price of agreed unit prices, it can retain any cost savings as profits. Therefore, companies aiming to reduce future production costs will perceive fixed cost arrangements as more valuable than cost-based arrangements.

Fixed-price contracts are not appropriate in all situations. For projects involving significant technical risk or scope uncertainty, cost-based contracts may be appropriate.

### Prizes:

Like fixed-price contracts, prizes provide a fixed payment to a company in exchange for pre-agreed success criteria and are generally less burdened with administrative complexity than other contracting approaches. Prizes differ by broadcasting the opportunity to the general public or some subset of pre-selected companies. If a prize is of sufficient size, it can induce companies into investing private resources into a project.

Because prizes remain open and competitive, they can strengthen the investment prospects for an entire segment of companies when compared to firm-specific arrangements.

27 U.S. Department of Defense, "Defense Department Launches Innovative Manufacturing Pilot Program," Press release, August 29, 2022, <https://www.defense.gov/News/Releases/Release/Article/3143134/defense-department-launches-innovative-manufacturing-pilot-program/>.

28 "Lacamas Laboratories Purchases Albany Fine Chemicals Facility," *Chemicals Knowledge Hub*, January 15, 2025, <https://www.chemicalsknowledgehub.com/news/lacamas-laboratories-purchases-albany-fine-chemicals-facility/>.

29 ACMI Group, "ACMI Awarded Contract Extension on Successful Critical Chemical Pilot Program," press release, February 8, 2024, <https://acmigroup.com/2024/02/08/acmi-awarded-contract-extension-on-successful-critical-chemical-pilot-program/>.

DoD possesses several prize authorities which can be tailored to specific types of projects. Prize awards can be cash or other inducements, such as contract awards.<sup>30</sup>

### Multi-Year Appropriations Authority:

Funding gaps caused by a lack of appropriated funds create risk and uncertainty for investors. However, Congress can choose to authorize and appropriate funds for multiple years, or until expended. This latter approach, commonly called non-expiring or “no year” funding, alleviates investor and company concerns about funding gaps.<sup>31</sup> A common source of no-year dollars is the Defense Production Act (DPA) Title III program (which requires an express Presidential determination), as well as dollars allocated through the congressional reconciliation process.

### Advance Procurement:

Advance procurement contracting authority allows DoD to provide funds to companies for major components before delivery of final products for which the appropriation exists. Advance procurement must be authorized for a procurement program in statute. Per DoD 7000.14-R, advance procurement is restricted to specific scenarios: either for products with long lead times, or for situations where buying in bulk can bring down unit costs (referred to as Economic Order Quantity procurement).

### Multi-Year Procurement:

Multi-year procurement is a contracting tactic provided by statute that allows the government to contract for product purchases across multiple years (generally up to five, and in some cases longer).<sup>32</sup> Specifically, multi-year procurement provides a planned set of product purchases for up to five years. While each year of payments under the contract depends upon annual appropriations from Congress, a cash payment “cancellation ceiling” is provided to compensate companies in the case of government deferral from its procurement obligation.

Under current processes, multi-year procurement is complicated to implement, must be tied to programs of record, and meet specific statutory and regulatory requirements, including demonstrating expected savings, stable end-user requirement, and a stable product design.<sup>33,34</sup>

### Project Finance and Leasing:

Guaranteed, or near-guaranteed, revenue streams for statutorily qualifying large and reliable projects allow companies to raise capital at very attractive terms. For example, DoD regularly accesses facilities, housing, or solar energy installations using long-term leases authorized under 10 U.S.C. § 2667 (Enhanced Use Leases), 10 U.S.C. § 2871–2885 (Military Housing Privatization Initiative), or agreements structured through Energy Savings Performance Contracts.

These lease and performance contracts provide highly secure, legally enforceable payment guarantees that may extend for 25 years, or even beyond 50 years in some circumstances. Companies are therefore able to finance capital expenditures for these projects with bonds, typically the lowest cost form of financing available to companies.

### Summary:

Demand signals are essential for private capital to invest in the DIB, and stronger signals can induce more investment. Demand signal can be strengthened by paying companies sooner, reducing real or perceived uncertainty about future payment, and providing higher quality context about future purchases.

Creating meaningful demand can be burdensome for DoD and can involve legal and regulatory hurdles. A key challenge for DoD is navigating the trade-off between offering narrow, firm-specific signals (such as MYP) and broad and competitive signals (such as prizes). While narrow demand signals can strongly induce investment, they also necessarily shrink the TAM available to other firms who might otherwise be candidates to compete in the market in question.

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30 Richard Dunn, “Prize Authority – From Prize to What?” *Strategic Institute for Innovation in Government Contracting*, September 18, 2019, <https://strategicinstitute.org/other-transactions/prize-authority/>.

31 Congressional Research Service, “*Appropriations Duration of Availability: One-Year, Multi-Year, and No-Year Funds*,” R48087, (Washington, DC: Congressional Research Service, June 7, 2024), <https://www.congress.gov/crs-product/R48087>.

32 10 U.S.C. § 3501 (2021).

33 Defense Acquisition University, “Acquipedia: Multiyear Procurement,” 2025, <https://www.dau.edu/acquipedia-article/multiyear-procurement>, accessed November 20, 2025.

34 National Defense Authorization Act for Fiscal Year 2026, Pub. L. No. 119-60, § 804 (2025).

## Recommendations

### PAEs Communicate Stronger Demand Signals

NDIA's research showed that several PEOs and PAEs, such as PEO Digital, have established strong reputations in industry for communicating consistent, strong, and meaningful demand signals which enables industry to justify investments. On the other hand, many DoD employees continue to express uncertainty about the acceptable modes of communicating about future purchases with industry.

DoD, in partnership with industry, should identify best practices for signaling demand to maximize investment while maintaining full compliance with the legal and ethical requirements of the acquisition system. Based on these best practices, an office in DoD, such as the Office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD(A&S)) could craft guidelines for PAEs and program offices codifying best practices. Additionally, DoD could implement metrics to track PAE success in putting these tactics into practice.

### The Office of the Under Secretary of Defense (Comptroller) to Consolidate Guidelines on Use of O&M Funds

DoD frequently uses Operations and Maintenance (O&M) dollars to lease capital goods and property. Many commercial businesses, such as software as a service (SaaS) businesses, find annual recurring revenue (ARR) forecasts that can be generated from these arrangements to be familiar and thus potentially easier to invest against.

One barrier to broader use of O&M funds for lease-type arrangements is that financial guidance provided by DoD is complex.<sup>35</sup> The Office of the Under Secretary of Defense (Comptroller), through the Deputy Comptroller (Budget), could create consolidated guidance regarding which goods and services may be bought with O&M funds. The guidelines could list which categories of services and operating leases are appropriate for O&M obligation (e.g., software, services, equipment leases) and provide sample contract language.

Congress could reinforce the initiative by directing the Comptroller to provide briefings on permissible uses of O&M funds. Congress could also clarify that O&M funds are a suitable appropriation for time-bounded, outcome-based digital services and operating leases when appropriate protections are provided to the government, such as cancellation clauses.

### Congress to Expand the Use of Multi-Year Procurement

Given the strength of commitment provided, Multi-Year Procurement (MYP) has the potential to become a more powerful tool for DoD to encourage private capital investment into the DIB. Because it is costly for the government to withdraw from awards, this approach is only appropriate when there is a high level of certainty about government needs, where capacity investment is a very high priority, or high switching costs would hinder competitors. While historically underutilized—in many years there are zero Congressional authorizations for either—recent legislative changes have targeted more normalized use of these mechanisms.<sup>36</sup>

Currently, the use of MYP is limited by law, regulation, and policy, as well as Congressional precedent. In terms of process, MYP typically involves multiple layers of review by service acquisition executives, PAEs, CAPE—and ultimately the Secretary of Defense and Congressional armed services committees. Each stakeholder may require a distinct justification package, satisfying the many requirements placed on MYP by law, regulation, and policy.

To expand the use of MYP, DoD and Congress should consider creating simplified and expanded justification criteria for the use of MYP: Congress has begun reducing the savings threshold, and DoD should now institutionalize alternative threshold metrics such as “time-to-production” or “level of industry investment (R&D or CapEx).” DoD should rapidly execute the fast-track approval mechanisms for Congress recently provided to critical industries such as hypersonics.

DoD should consider creating a mechanism such as a review body to run assessments of MYP proposals that are justified on the basis of forecasted R&D and CapEx commitments. MYP generally follows a simpler approval process for procurements below \$20M total; DoD should consider piloting several MYPs below that threshold and gathering lessons learned to support a business case for expanded use of MYP.

### DPCAP to Incorporate Commercial Demand Aggregation into Acquisitions Process

DPCAP should implement guidance to align solicitations with commercial specifications in support of the commercial preference established by the FY2026 NDAA.<sup>37</sup> During implementation, DoD should ensure market research incorporates not only the availability of commercial products themselves, but also the size and type of the relevant buying community. This approach would go beyond identifying successful commercial firms and instead allow DoD to intentionally align its purchases with commercial specifications, expanding TAMs available to vendors.

35 U.S. Department of Defense, *DoD Financial Management Regulation (DoD FMR) 7000.14-R*, vol. 2A, chaps. 1–3 (Washington, DC: U.S. Department of Defense, 2023).

36 National Defense Authorization Act for Fiscal Year 2026, Pub. L. No. 119-60, § 804 (2025).

37 National Defense Authorization Act for Fiscal Year 2026, Pub. L. No. 119-60, § 1822 (2025).

Additionally, DoD should encourage the acquisition community to develop solicitations that recognize evidence of mature commercial markets. Programs should conduct “commercial market fit” analysis before finalizing acquisition strategies, and tailor manufacturing readiness level (MRL) scoring to accept commercial-equivalent quality evidence. Solicitations should also allow firms to be evaluated on aggregated-demand pathways (e.g., commercial offtake, letters of intent), if available.

### **Congress to Increase Budget Flexibility to Expand Total Addressable Markets**

Currently, the Pentagon’s procurement budget is mainly organized into distinct program elements and budget line items, and major administrative burden is associated with reprogramming funds among them during a fiscal year. This structure fragments demand, capping the TAM for companies and investors. Within a program, color of money and reprogramming constraints slow “scale-up” when prototypes succeed.

Some organizations, like DARPA, have already begun piloting portfolio-style authorizations and appropriations.<sup>38</sup> These pilots should be monitored and evaluated for potential scale-up in other areas within the DoD. In line with recommendations from the PPBE Reform Commission, Congress should consider a multi-year push to consolidate budget line items within appropriations accounts to allow for more rapid movement of funds among related systems and projects.<sup>39</sup> Additionally, Congress should experiment with frameworks for enabling rules-based reprogramming flexibility among RDT&E, Procurement, and O&M dollars within a program, so funds can be allocated toward maturing technologies.

Such an approach would require spending transparency for Congress, industry, and the public. For these portfolios, DoD could publish Government Reference Architecture and MOSA/open interface standards so, when applicable, firms are able to integrate into an entire portfolio of technologies instead of competing for one narrowly scoped program of record.

### **PAE to Pilot Sharing Controlled and Classified Information with Investor Community as Part of Demand Signaling**

Currently, much of the context that companies and investors require to evaluate DoD demand signals is constrained by security requirements and classification concerns. Because need-to-know determinations are usually based on official job-related duties, access is typically limited to individuals performing a government contract—not a potential ability to complete future work. As a result, key information sharing mechanisms—such as industry day publications—often contain classified or controlled annexes only

viewable by incumbent contractors. This creates an information advantage that is neither transparent nor consistently governed.

In certain scenarios, DoD and other security-minded agencies have created frameworks to proactively share sensitive information with individuals and institutions outside of government. For example, in response to EO 13691, “Promoting Private Sector Cybersecurity Information Sharing,” the Department of Homeland Security (DHS) created the Classified Critical Infrastructure Protection Program (CCIPP) to share classified cyber threat data with individuals maintaining security of sensitive commercial cyber infrastructure. The program creates a mechanism to share classified or sensitive data with individuals who do not have existing relationships with the federal government. This program allows the USG to inspire action on the part of commercial industry, by selectively providing classified information.

DoD should select a PAE to pilot an analogous program to replace informal, relationship-mediated information flows with a structured, equal-access, auditable mechanism. The PAE could create a Special Government Employee (SGE) or Federal Advisory Committee Act (FACA) board, in consultation with OASD(IBP), to provide richer demand information and threat context to individuals who meet entry criteria (e.g., demonstrated track record of investment in the DIB) and pass background checks. Other mechanisms, such as temporary read-ins for individuals, using SGE appointment, “exceptional circumstances” access, or even “zero dollar” contracts and Cooperative Research and Development Agreements (CRADAs) may be appropriate.

The pilot could focus on sharing declassified capability roadmaps, threat context, and problem statements, with clear criteria for sharing controlled or classified versions of this information when appropriate. To preserve fairness and reduce risk, the pilot should exclude source-selection and vendor-specific details and be operated separately from active source-selection teams. It should use standardized materials, auditable access logs, and it should incorporate strong compliance controls for procurement integrity, organizational conflicts-of-interest (OCI), and insider trading.

Longer term, DoD should direct OASD(IBP) to create a framework, potentially in coordination with DHS, that institutionalizes pre-vetting and standardizes information release to preserve fairness. Since interest in such a program could be large, DoD should evaluate the potential number of investors who could be relevant to such a program and the administration of the program to maximize participation.

Congress should consider directly authorizing such a pilot and providing funding to support pre-vetting relevant portions of the investment community and commercial industry, as well as hosting them in secure settings. Oversight should assess effects on incumbent advantage and non-incumbent participation, as well as any compliance incidents.

38 Vincent Carchidi, “DARPA’s *Advanced Technology Development and Commercialization*,” Defense and Security Monitor, January 14, 2026.

39 Commission on Planning, Programming, Budgeting and Execution Reform, *Final Report* (Washington, DC: Commission on PPBE Reform, March 6, 2024), 82-90, <https://ppbereform.senate.gov/finalreport/>.



## Catalytic Capital

Through the use of catalytic capital, DoD acts as an anchor investor, providing resources that trigger private investors to contribute their own capital to support a project or company. A diverse array of government stakeholders can typically be involved in contributing catalytic capital, which can take the form of grants, contracts, loans, loan guarantees, equity, or other forms of assistance.

### Federal, State, and Local Credit Programs:

The federal government administers many credit programs that provide catalytic capital to “crowd in,” or catalyze the entry of private capital into targeted companies or projects. Examples include:

- DoD Office of Strategic Capital (OSC)
- DoD Industrial Base Fund
- Export-Import (EXIM) Bank of the United States
- U.S. International Development Finance Corporation (DFC)
- Small Business Administration (SBA)
- Department of Energy (DOE) Title 17 Energy Infrastructure Reinvestment Program
- Department of Commerce CHIPS Program Office

Many tools<sup>40</sup> fall under this heading: direct loans to qualifying companies (sometimes at reduced interest rates), loan guarantees for qualifying projects or companies, and subsidies to investment funds focused on qualifying sectors. Similar programs exist at the federal, state, and local levels.

Each of the relevant programs has its own application process. To trigger engagement with a project or company, these government programs typically require a large majority of project funds to be derived from private capital. Letters of intent or other conditional commitments are provided by the private co-investors, which are then triggered when the government delivers its capital infusion. Proposal selection criteria may ask companies to demonstrate that every other source of private capital was exhausted before the government was approached. State and local governments, and economic development agencies, also

frequently provide credit enhancements, especially for projects that create jobs in a particular locale.

The OSC, established in late 2022, has authority to provide a variety of credit enhancements, such as direct loans to companies, and loan guarantees for qualifying investment funds focused on qualifying technology domains.<sup>41</sup> OSC’s unique “accrual debenture” loan guarantee tool provides subsidized debt to small business investment companies (“SBICs”), which in turn invest in qualifying technology companies. The first cohort is expected to catalyze investments of over \$4B into over 1,700 small businesses. For its direct loan program (the “equipment financing” program), OSC received “more than 200 applications totaling \$8.9B in financing requests.”<sup>42</sup> OSC currently has lending capacity of approximately \$200B.

Credit enhancements can be layered, bringing together catalytic capital from the federal, state, and local level alongside private capital. While this expands the available resources, it also adds complexity; multiple stakeholders must be orchestrated and sequenced, often through time-consuming and complex application processes.

### Government Equity Investing:

The U.S. government has been pioneering new approaches to acquiring company equity. At time of writing, the U.S. Federal government has acquired equity in at least eight firms.<sup>43</sup> In one recent example, the DoD acquired stock in MP Materials, a rare earths mine and refinery.<sup>44</sup> This approach requires sophistication on the part of the government to negotiate a reasonable price for shares, as well as deal terms that are appropriate for all parties.

The government has been using a range of authorities and funding types to make equity investments, including Title III dollars and the purchase authority of the Defense Production Act. DPA’s purchase authority to make purchases “for the development of production capabilities” has been used to authorize purchases of shares.<sup>45, 46</sup> The FY2026 NDAA extended a similar authority to the Industrial Base Fund, potentially making those appropriations available for DoD equity or equity-like investments—although the statute does not expressly authorize direct equity purchases.<sup>47</sup>

40 Erin L. Murphy, Cynthia R. Cook, Emily Harding, et al., “Alternative Funding Mechanisms in Review,” *Center for Strategic and International Studies*, November 21, 2024, <https://www.csis.org/analysis/alternative-funding-mechanisms-review>.

41 U.S. Department of Defense, “Office of Strategic Capital Announces First Loan Through DoD Agreement With MP Materials to Secure Critical Materials Supply Chain,” press release, August 10, 2025, <https://www.war.gov/News/Releases/Release/Article/4270722/office-of-strategic-capital-announces-first-loan-through-dod-agreement-with-mp/>.

42 U.S. Department of Defense, “Office of Strategic Capital Receives \$8.9 Billion in Financing Requests for First Domestic Manufacturing Loan Program,” press release, April 1, 2025, <https://www.war.gov/News/Releases/Release/Article/4141755/office-of-strategic-capital-receives-89-billion-in-financing-requests-for-first/>.

43 As of November 2025, these are: MP Materials, Intel, U.S. Steel, Westinghouse, Vulcan Elements, Trilogy Metals, ReElement Technologies, and Lithium Americas.

44 MP Materials Corp., *Current Report on Form 8-K*, filed July 10, 2025.

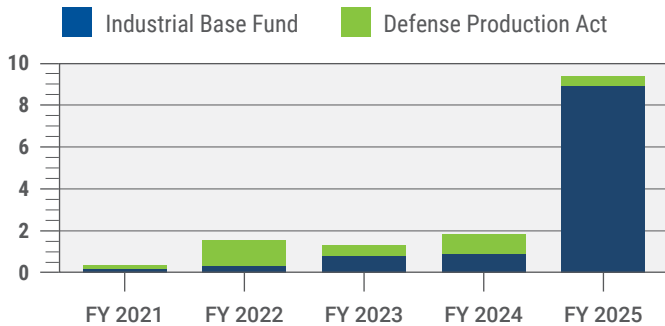
45 50 U.S.C. § 4533(a)(1)(A)-(C) (2026) authorizes the president to “make provision ... for purchases of or commitments to purchase an industrial resource or a critical technology item, for Government use or resale; [and/or] ... for the development of production capabilities.”

46 Peter E. Harrell, “The Legal Bases for Government Stakes in Private Firms,” *Lawfare*, August 28, 2025, <https://www.lawfaremedia.org/article/the-legal-bases-for-government-stakes-in-private-firms>.

47 National Defense Authorization Act for Fiscal Year 2026, Pub. L. No. 119-60, § 867 (2025).

As shown in the chart below, both the Industrial Base Fund and the DPA’s Title III fund have grown significantly since 2020. In particular, the One Big Beautiful Bill Act of 2025 (P.L. 119-21) provided an unprecedented \$8.3B to the Industrial Base Fund of multiyear funds. As a result, DoD now may have the requisite authorities and appropriations to significantly expand the scope of its equity investing activities.

**Funding for Industrial Base Programs** (In Billions of U.S. Dollars)



Another Federal approach to conducting equity investments is exemplified by the intelligence community’s In-Q-Tel (IQT) and the U.S. Army’s OnPoint programs (now defunct), each executed by a non-profit corporation at arms-length from the government. These types of programs typically participate in investment syndicates during equity investments, meaning that the government capital is joined in the investment by additional non-government sources of capital (e.g., private venture capital firms). In these programs, if companies are successful, the government receives a return as any other equity investor would, allowing this capital to be recycled for other investments.

Certain Other Transactions agreements have also been structured to return capital to the government, often in the form of royalty payments. For example, in DoD’s very first (1990) Other Transaction, DARPA awarded \$4M to Gazelle Microcircuits to develop high-speed gallium arsenide (GaAs). In return, DARPA retained “a fair return on its investment and discounts for Government purchases of such products.”<sup>48</sup>

**Investment Matching:** This tactic involves DoD paying companies to raise private capital. Investment matching functions similarly to matching charity donations: The government promises to put dollars into a project or company at a set ratio against every dollar committed by private investors. In practice, this arrangement can be carried out in a variety of ways.

### Investment Matching Case Study: AFWERX STRATFI

In 2023, DoD directly catalyzed the investment of \$27M of private capital into X-Bow Systems, a New Mexico solid rocket company, to advance “rapidly produced, low-cost solid rocket motors (SRMs) using X-Bow’s proprietary advanced manufacturing technology and culminate in a flight test series.”<sup>49</sup>

This arrangement was facilitated by the Air Force Strategic Financing, or STRATFI, program and carried out by the AFWERX office overseeing the Air Force SBIR program. Under STRATFI, for approved topic areas, Air Force SBIR dollars of up to \$15M, combined with up to \$15M Air Force non-SBIR dollars (for a total government funding cap of \$30M), can be matched 1:1 against private investment dollars flowing into private companies. This dollar match provides a strong financial incentive to invest in a company.

The Air Force limits STRATFI awards to companies which have proposed R&D projects of relevance to a list of approved Air Force SBIR topics. Moreover, awards are limited to companies which have secured an MOU from a DoD acquisition office (such as a PEO or PAE) and end user, pledging to purchase and use final products and services, if successful.

Since its STRATFI award, X-Bow has been selected to deliver solid rocket engines to multiple services as well as development contracts for the Mk 72 booster and Mk 104 dual-thrust solid rocket engines. In 2024, X-Bow received contracts totaling \$60M to advance energetics readiness at Naval Surface Warfare Center Indian Head.<sup>50</sup> X-Bow has also gone on to raise another \$70M in private capital to further advance its technology.<sup>51</sup>

The Air Force STRATFI program publicizes clear criteria and thresholds for companies and investors to meet to receive a pre-specified amount of government matching dollars, up to a cap. Because the terms of the investment match are transparent and allow no negotiation, STRATFI has proven to be a highly scalable program. In just one year, AFWERX used this construct to leverage \$332M of private dollars against \$606M in government

48 Richard Dunn, “Origins and Evolution of Other Transactions—Part 3,” Strategic Institute for Innovation in Government Contracting, September 12, 2019, <https://strategicinstitute.org/other-transactions/origins-evolution-transactions-part-3/>.

49 X-Bow Systems, “X-Bow Systems Announces Selection for \$60 Million STRATFI Award,” press release, April 26, 2023, <https://www.prnewswire.com/news-releases/x-bow-systems-announces-selection-for-60-million-stratfi-award-301808692.html>.

50 PR Newswire, “U.S. Navy Selects X-Bow Systems to Modernize and Automate Energetics Industrial Base,” press release, December 3, 2024, <https://www.prnewswire.com/news-releases/us-navy-selects-x-bow-systems-to-modernize-and-automate-energetics-industrial-base-302321127.html>.

51 X-Bow Systems, “X-Bow Systems Announces Selection.”

funds.<sup>52</sup> The AFWERX program has estimated that it has leveraged \$34B since its inception.<sup>53</sup> Similarly, Other Transactions agreements carried out for prototyping require a preset one third of project resources to be contributed by the company in many circumstances (10 USC 4022).

Investment matching can also be conducted on a case-by-case basis. Unlike a typical acquisition plan, where proposals differ on concretely differentiated variables such as technical capability and price, an investment matching arrangement requires complex communication and negotiation at all stages of the acquisition process.

### Investment Matching Case Study: e-VAC

This case study concerns the creation of a \$550M advanced magnets production facility, triggered by only \$94.1M in DoD dollars, constituting 17% of the total, or a 5:1 ratio.

In September 2023, OASD(IBP) awarded \$94.1M to Vacuumschmelze (VAC) a leading German manufacturer of rare earth permanent magnets, to partially assist with the establishment of a large American manufacturing facility (“e-VAC”) to “...acquire and install manufacturing equipment, operationalize technical infrastructure, and engineer production lines.”<sup>54</sup> The magnet production facility produces Neodymium Iron Boron (NdFeB) rare earth permanent magnets, a critical component of many defense products, such as high-performance engines and communications equipment.

The process began with an NDAA provision requiring DoD to develop a “mine-to-magnet” supply chain free from covered nations.<sup>55</sup> This created a credible DoD demand signal for an onshore magnet production facility. OASD(IBP) created a funding announcement for onshore magnet production, requiring at least 1:1 project cost share. VAC submitted a white paper which included contingent commitments from private investors. The award was ultimately made via an Other Transactions agreement using non-expiring Title III dollars.

Because the Sumter County, South Carolina facility is expected to create 300 jobs, the state and local governments provided job development tax credits, plus a total of \$15M in grants to assist with road, worksite, water, and wastewater improvements.<sup>56</sup> In addition, the Department of Energy provided a Qualifying Advanced Energy Project Tax Credit (Section 48c) in March 2024, of \$111.9M. By reducing e-VAC’s future taxes, this credit functions similarly in financial terms to a cash grant or co-investment for the facility.

Finally, a strong commercial demand signal was provided by General Motors (GM), which provided a binding Memorandum of Understanding to e-VAC, agreeing to purchase magnets from the facility to supply GM’s growing fleet of electric vehicles, such as the Chevrolet Silverado and Cadillac Lyriq, for purchases of at least 10 years.<sup>57</sup>

This combination of tactics was sufficient to unlock significant private investment: VAC’s private equity owner, Ara Partners, announced that \$335M in private capital had successfully been raised to complete the construction of the facility, which began production in the fall of 2025.<sup>58</sup> Representatives at Ara Partners remarked that they “are grateful for the support from our local and state governments and the federal initiatives that have made this project possible, and we extend our sincere thanks to General Motors for being a key partner in this endeavor.”

Investment matching need not involve multiple third-party investors or major CapEx. In the simplest scenarios, companies can contribute dollars from their own balance sheets (e.g., dollars retained from past profits) as “cost share” to support the mission engineering, ruggedization, or other costly steps to prepare a product for sale to DoD. When institutionalized into programs such as the Commercial Operations and Support Savings Initiative (COSSI), these types of arrangements have mobilized hundreds of

52 AFWERX, *2023 Annual Report* (Department of the Air Force, 2023), [https://afwerx.com/wp-content/uploads/AFWERX\\_2023-Annual-Report-Final\\_CLEARED\\_AFRL-2024-4054\\_WEB.pdf](https://afwerx.com/wp-content/uploads/AFWERX_2023-Annual-Report-Final_CLEARED_AFRL-2024-4054_WEB.pdf).

53 U.S. Air Force Research Laboratory, *AFWERX, FY2024 Annual Report: Unleashing American Ingenuity* (Department of the Air Force, 2024). Distribution Statement A (AFRL-2025-2954).

54 Department of Defense, “Department of Defense Enters an Agreement to Expand Domestic Manufacturing to Strengthen U.S. Supply Chains for Rare Earth Magnets,” *press release*, September 19, 2023, <https://www.defense.gov/News/Releases/Release/Article/3529874/department-of-defense-enters-an-agreement-to-expand-domestic-manufacturing-to-s/>.

55 Pub. L. No. 115-232, § 871, 132 Stat. 1904–06.

56 South Carolina Department of Commerce, “E-Vac Magnetics to Build First U.S. Facility in Sumter County,” December 13, 2023, <https://www.sccommerce.com/news/e-vac-magnetics-build-first-us-facility-sumter-county>.

57 Eric Onstad, “Germany’s Vacuumschmelze Agrees Binding Deal With GM on Magnet Factory,” *Reuters*, January 30, 2023, <https://www.reuters.com/markets/commodities/germanys-vacuumschmelze-agrees-binding-deal-with-gm-magnet-factory-2023-01-30/>.

58 Ara Partners, “Ara Partners Secures \$335 Million of Non-Recourse Financing for Permanent Magnet Manufacturing Facility,” *press release*, September 6, 2024, <https://www.arapartners.com/news/ara-partners-secures-335-million-of-non-recourse-financing-for-permanent-magnet-manufacturing-facility/>.

millions of dollars of private capital alongside government funds for NRE and testing.<sup>59</sup>

Investment Capital as Pre-Award Criteria: Many steps taken during source selection and pre-award can, directly or indirectly, incentivize private investment. DoD sometimes uses investor participation as selection criteria for award: programs such as AFWERX sometimes score proposals more highly when private investors have invested in the proposing company, as indicated in letters of intent or capitalization tables<sup>60</sup> that can be provided as part of proposal packages.

In addition to influencing evaluation criteria, private investment and financial strength can also factor into pre-award responsibility determinations, where contracting officers assess whether offerors possess adequate financial resources to perform.

DoD's systems for assessing the financial health of companies, such as DCMA financial capability reviews and contracting officer-required financial reviews, further incentivize companies to pursue financial stability by securing private capital. For example, DFARS 232.072 (2025) requires contracting officers obtain financial information from companies, such as balance sheets and income statements, to "perform a financial review" of contractors.

Summary: DoD funding used as catalytic capital can be a powerful tactic to "crowd in" large volumes of private capital to strategic companies and projects. DoD has many resources that can be used in this way, including credit enhancements, equity investments, and investment matching. Successfully deploying catalytic capital is challenging, and can require DoD to orchestrate many stakeholders, such as companies, third-party investors, as well as commercial and government buyers. Transactions may be complex, involving valuations analysis, company due diligence, and negotiations to ensure that government catalytic capital is well spent.

Catalytic capital is more likely to succeed in tandem with other tactics. Investors will not contribute capital without credible demand, and stronger demand signals can induce more private investment with less catalytic capital.

## Recommendations

### OASD(IBP) to Create an Always-On Portal to Apply for DoD Catalytic Capital

Catalytic capital is fragmented among a variety of offices and programs, such as the Industrial Base Fund, Title III Fund, the Office of Strategic Capital, and non-DoD programs such as the Export-Import Bank. Applicants may need to leverage resources

from many of these programs, each with separate criteria and timelines. The opportunity for DoD to catalyze a private capital investment may be fleeting. There is risk that private capital could be lost if DoD does not have an open solicitation while a project is seeking or "soft circling" investors. OASD(IBP) should create a single "always-open" submission portal that allows companies to provide applications to all of these programs on a rolling basis. OASD(IBP) or some other centralizing stakeholder should direct applications to relevant programs.

### OASD(IBP) to Publish an Annual National Security Private Capital Scorecard

The complexity of DoD's growing industrial policy toolkit, and the fragmentation of related authorities across administrators and Congressional committees, makes it difficult for DoD, overseers, and the public to assess impacts. The Department's Acquisition Transformation Strategy ("Rebuilding the Arsenal of Freedom") notes that effective use and oversight of DoD's catalytic capital resources will partly depend on reliable metrics.<sup>61</sup>

DoD has already published an Industrial Base Strategy and Implementation Strategy tracking many important industrial trends. DoD should consider expanding these to include a "private capital scorecard" for industrial policy and catalytic capital programs throughout the federal government. This scorecard would explain how DoD is coordinating with these programs and how they are being applied to support DoD's goals for leveraging private capital and expanding the DIB. The scorecard should include a standardized set of impact metrics—including total private capital mobilized, return on investment (ROI), and default rates—using common definitions to prevent double-counting across programs.

Congress should evaluate whether OASD(IBP) has requisite resources, human capital, and expertise to provide such a thorough reporting mechanism. Congress can use this information to find opportunities to improve such programs and improve oversight.

### OUSD(A&S) to Build Capital Planning Expertise Within DoD

The greatest source of DoD buying power is managed by the acquisition community throughout the services. When specialized knowledge is needed during acquisition planning, negotiation, and other sensitive periods of the acquisition process, program offices often receive support from centralized, expert teams; for example, the IP Cadre advises on intellectual property considerations.

59 U.S. Department of Defense, Office of the Under Secretary of Defense for Acquisition and Technology, Office of Acquisition Initiatives, *Commercial Operations and Support Savings Initiative (COSSI) Handbook: Challenges and Solutions for Success* (Washington, DC: U.S. Department of Defense, 2001).

60 Also known as "cap tables," these internal company documents track equity ownership and can help the government infer how much private capital a company has raised over time.

61 U.S. Department of War, Office of the Under Secretary of War for Acquisition and Sustainment, *Rebuilding the Arsenal of Freedom: Acquisition Transformation Strategy* (Washington, DC: U.S. Department of War, 2025), 6-7, <https://media.defense.gov/2025/Nov/10/2003819441/-1/-1/1/ACQUISITION-TRANSFORMATION-STRATEGY.PDF>.

OUSD(A&S) should build a Capital Planning Cell to maximize use of private capital during the acquisition process while retaining government control where required. This expert cell would actively consult with program managers to develop capitalization plans for new programs; advise during acquisition planning, contract negotiation, and execution; and recommend effective contracting terms for desired DoD outcomes. The cell could apply a variety of financial analytic approaches such as capital-ownership modeling, weighted-average cost of capital (WACC) sensitivities, stress tests, valuations analysis, and cash-flow scenario modeling. Because relevant mechanisms—such as MYP, offtake agreements, loans, and equity—are distributed across OUSD(A&S), OUSD(R&E), and the services—a centralized cell may be necessary to optimally combine their use for a given transaction.

The structure of such a cell could mirror the capitalization teams found in commercial real estate development firms and investment banks. DoD may find it necessary to structure such a cell within a Federally Funded Research and Development Center or University Affiliated Research Center in order to provide the requisite hiring and compensation structures to access the relevant workforce. OUSD(A&S) should form the cell and Congress should appropriate dollars to create this capability.

### 3 Business Environment

Perceptions held by firms and investors of the business environment in a given sector of the economy strongly drive the rate of investment.<sup>62</sup> As the largest and often sole buyer in the defense market, the DoD has strong influence on the overall business environment: the culture, norms, and business terms that dominate the sector.

Among other things, a healthy business environment is characterized by a predictable, competitive, and effectively regulated market; evidence of strong ROI for investors from past successes; available workforce and infrastructure; and engaged customers.

#### Private Capital Ecosystem Development Programs:

DoD has instituted formal as well as informal matchmaking and ecosystem development programs, such as the AFWERX Project Vanguard program, the OASD(IBP) Office of Industry Engagement, and the National Security Innovation Network, that can facilitate interactions between government personnel, defense companies, and the investment community. Many private sector venues of this type also exist.

These activities serve to overcome a lack of knowledge of defense sector dynamics by some potential investors. Lacking awareness of DoD supply chain risks, or classified programmatic and threat information, investors often struggle to understand investment opportunities. Face-to-face communications with relevant subject matter experts (both technical and operational) can also help investors and companies to more deeply understand the demand signals that have already been provided by DoD (e.g., advanced planning briefings to industry).

#### Government-Furnished Assets:

Beyond direct funding, DoD holds other unique assets that can significantly improve the business case for an investment. Example of valuable assets include:

- Nondilutive contracts and grants
- Unique and sophisticated test ranges and laboratories
- High-value datasets
- Experimentation opportunities with end users
- Government-furnished equipment and intellectual property

These assets can function as a form of in-kind catalytic capital and shorten the timeline to acquisitions. When DoD makes these assets accessible on predictable terms, firms are able to justify investment in related capabilities.

#### M&A Regulatory Environment:

One of the main ways that companies return capital to investors is by being acquired or merged into another company, at which time cash is usually paid to existing shareholders. A healthy and predictable M&A market is a critical element of DoD’s business environment.

For an example of how this works in practice, consider Oshkosh’s acquisition of Pratt Miller. After its founding in 1989, Pratt Miller grew into a world-class advanced vehicle research center. When Oshkosh paid \$115M to acquire the company in 2021, the capital was used to pay Pratt Miller’s shareholders in exchange for the company, which was then folded into Oshkosh, serving as an internal “Skunk Works” for the defense company.<sup>63</sup>

OASD(IBP) is charged with collaborating with the Federal Trade Commission (FTC) and Department of Justice (DOJ) as part of the Premerger Notification and Merger Review Process under the Hart-Scott-Rodino Antitrust Improvements Act.<sup>64</sup> The DoD’s role

62 La Porta et al., “Law and Finance,” 33-35.

63 Kelvin Yu, “Mergers, Acquisitions Vital for Defense Innovation,” *National Defense Magazine*, June 1, 2024.

64 Federal Trade Commission, “Premerger Notification and the Merger Review Process,” 2025, <https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrust-laws/mergers/premerger-notification-merger-review-process>, accessed June 2025.

in this process is to assess and provide feedback on potential national security implications of M&A transactions in the defense sector. The FTC and DOJ use this input to determine whether enforcement actions are required, such as blocking a merger, demanding divestitures, or other remedies. The acquisition community may provide technical consultation as part of this process.

While not a direct regulator, this critical regulatory role allows DoD leadership to shape the M&A market by clearly communicating its priorities to companies, investors, and the regulatory community.

A notable example of this influence was demonstrated by the well-known “last supper” dinner meeting, when former Deputy Secretary of Defense William Perry announced his wish for greater defense industry consolidation through M&A to cope with declining defense budgets; industry responded with a historic uptick in defense M&A activity.<sup>65</sup> Conversely, then-Secretary Ash Carter and then-Under Secretary for Acquisition, Technology and Logistics Frank Kendall signaled caution about the increase in industry concentration due to M&A throughout the 2010s, which may have reduced M&A activity.<sup>66</sup>

### Contract Administrative Burden:

As discussed above, when DoD can reduce uncertainty, delay, and lower transaction costs, investors and companies perceive future DoD cash flows as larger and therefore more attractive. At the same time, the warfighter receives goods and services closer to the speed of relevance. There are several tactics DoD can use to mitigate delay and uncertainty, making itself a more appealing customer.

Transactions carried out under an Other Transactions Authority (OTA) are not subject to the Federal Acquisition Regulation (FAR) and other related and derivative DoD regulatory requirements imposed on federal grants and contracts, such as FAR-based competitive procedures, Cost Accounting Standards (CAS) accounting practices, and Bayh-Dole IP frameworks.

Because approval authority under Other Transaction Authority can be delegated to the most relevant government stakeholders, such as program managers or innovation offices, decision-making can be significantly faster than under FAR-based contracts, which typically require formal legal and compliance reviews. Other Transactions Authority also allows for faster and more flexible payment structures, including advance payments, that are often restricted under the FAR. Prototyping Other Transactions

Authority also allow for direct-to-production contracts, reducing the potential time and uncertainty associated with transitioning to a procurement stage.

Other relevant approaches include the Simplified Acquisition Procedures and FAR Part 12—Acquisition of Commercial Products and Commercial Services—which is designed to provide a streamlined contracting process for commercial items. Because this approach was designed to pay companies on near-commercial terms, such as fixed-price contracts, companies are typically responsible for using their own capital to support production and delivery.

### Accelerated Time to Market:

The Adaptive Acquisition Framework (AAF) provides several pathways for qualifying programs to traverse the acquisition process relatively quickly.<sup>67</sup> Pathways such as the Middle Tier of Acquisition and Software Acquisition allow for rapid prototyping, rapid fielding, and iterative delivery of products and services—each of which can allow companies to get products into production more quickly than a traditional path to a program of record that can take seven years or longer.

The payment terms of government contracts can also have a significant effect on the ability of companies to raise capital. Many commercial lenders and investors are accustomed to investing in companies that receive recurring, subscription-based payments from commercial customers. Therefore, companies whose government contracts have lengthy or irregular milestone schedules are often ineligible to borrow from regulated lenders.

### Training and Culture:

When DoD engages private capital, it relies on the acquisition community to assemble investable deals for companies using a variety of appropriate tactics, which may vary depending on the nature of the project. Negotiating with investors and investor-backed companies requires a deep understanding of the typical business practices in the financial services industry, types of investment capital, legal aspects of investing, and commercial accounting practices.

Training and education programs, such as those available at the Dwight D. Eisenhower School for National Security and Resource Strategy or DAU, can help the DoD workforce understand commercial business practices, including private investment.

65 John Mintz, “How a Dinner Led to a Feeding Frenzy,” *Washington Post*, July 3, 1997, <https://www.washingtonpost.com/archive/business/1997/07/04/how-a-dinner-led-to-a-feeding-frenzy/13961ba2-5908-4992-8335-c3c087cdebc6/>.

66 Colin Clark, “Whoa, Lockheed & Co.! Kendall Urges Congress to Protect Innovation,” *Breaking Defense*, October 2, 2015, <https://breakingdefense.com/2015/10/whoa-lockheed-co-kendall-urges-congress-to-protect-innovation/>.

67 U.S. Government Accountability Office, *Defense Production Act: Foreign Involvement and Materials Qualification in the Title III Program*, GAO/NSIAD-94-74 (Washington, DC: U.S. Government Accountability Office, March 1994).

DoD has also used rotation programs to embed government personnel into investment companies, or government innovation offices such as the Defense Innovation Unit, where they can absorb knowledge about innovative tactics for engaging private capital. Many DoD innovation offices have chosen to physically embed their teams into hubs of commercial innovation, such as commercial startup accelerator facilities, allowing government personnel with informal exposure to investors and investor-backed companies.<sup>68</sup> Some offices, such as OSC, have deliberately sought personnel with experience working in financial services.<sup>69</sup>

Beyond specific knowledge and skills, successfully engaging private capital requires empowering individuals with a unique mindset—one that is focused on creatively using government resources to create win-win transactions with industry. For such individuals to flourish inside the government, they must be embedded in an organizational culture that is comfortable articulating why a particular transaction will be profitable to a company, instead of viewing company profit as something to be avoided. Creating attractive investment opportunities in the DIB can take a great amount of time and labor, making it critical for organizational incentives to be established that prioritize private capital engagement.

### Enterprise Tools:

For DoD personnel to effectively engage private capital, they must also be equipped with the appropriate enterprise tools to navigate the financial services and commercial technology industries. Relevant tools include:

- Market intelligence tools to track financial markets, such as fundraising/investment trends, mergers and acquisitions trends, and real-time financial data (e.g., interest rates, valuations data)
- Financial modeling tools to assist with valuations analysis, comparables analysis, and benchmarking of deal terms
- Industry analysis, strategic positioning and technology strength of specific companies, and innovation tracking (e.g., using patent data or company announcements)

- Regulatory tracking and analysis of the complex and evolving financial regulatory environment
- Supply chain risk management (SCRM) platforms to assist with due diligence and risk analysis, including assessment of adversarial capital
- Customer relationship management (CRM) tools to assist with tracking the large volume of stakeholders that can be involved in investment deal-making

These tools are routinely used by private companies and investors, and many DoD personnel do have access to some tools that offer similar functionality, especially industry analyst platforms, CRM tools, and SCRM tools. In particular, SCRM has been an area of increased investment by DoD since the 2020 COVID pandemic disrupted global and DoD supply chains. Market intelligence tools like PitchBook and Preqin are in widespread use in the investment industry, providing analysis on technology companies and the broader investment environment; in recent years, many of these tools have added data on the defense technology industry.

Federally funded research and development centers and open-source intelligence offices, such as the Air Force Office of Commercial and Economic Analysis, often provide analysis to help DoD personnel understand specific technology domains. DoD also acquires a large volume of very detailed data on private companies from a variety of sources, such as Hart-Scott-Rodino M&A and CFIUS reviews and financial data sharing under DFARS 232.072, but this data is often fragmented and difficult to access.

Certain DoD offices also make use of commercial or homegrown market intelligence systems to monitor relevant investment and technology markets. Recently, OSC has focused on creating an analytical toolkit focused on understanding investment, corporate, and technological trends that is “panoramic in scale,” yet with “pinpoint accuracy.”<sup>70</sup> The approach uses a set of homegrown analytical tools, such as network analysis, corporate finance analysis, capital flow mapping, and IP licensing mapping, in combination with data collected from RFIs and structured interviews global financial centers.

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68 Raj M. Shah and Christopher Kirchoff, *Unit X: How the Pentagon and Silicon Valley Are Transforming the Future of War*, (New York: Scribner, 2024).

69 For example, in a 2023 job posting for a Supervisory Loan Specialist, the Department of Defense sought “[e]xperience serving as a credit or risk officer in a reputed financial institution, dealing with highly complex and large-scale (multi-million or billion-dollar) transactions ... [and] developing credit risk models, which may include corporate finance, asset-based lending, and/or project finance transactions.” U.S. Department of Defense, “Supervisory Loan Specialist,” USAJobs job posting, 2023, <https://www.usajobs.gov/job/805507900>.

70 U.S. Department of Defense, *Investment Strategy For the Office of Strategic Capital*, January 2, 2025, <https://media.defense.gov/2025/Jan/02/2003623435/-1/-/1/1/FY25-INVESTMENT-STRATEGY-FOR-OFFICE-OF-STRATEGIC-CAPITAL.PDF>.

IT and data tools can be useful for DoD personnel charged with executing specific programs by helping them understand relevant trends and analyze specific companies and investors. There may be opportunities to widen the availability of tools that already exist through a federated model. If DoD adopts goals or metrics relating to private capital, then market intelligence or dashboarding tools may be required for leadership to track those goals.

### **Leadership:**

As is the case for many innovative acquisition practices, the actions of DoD leadership play a critical role when DoD engages private capital. As discussed above, information provided by DoD is more meaningful when transmitted by DoD leaders perceived as credible and consistent. Because there is high turnover among DoD leaders, who in turn have much discretion over program design, it is easy for leaders to deter private investment by making unexpected changes.

Engaging private capital usually involves forming coalitions of stakeholders both inside and outside the government. Within government, separate institutions may be responsible for creating demand signal, providing catalytic capital, and executing contracts. These activities must be carefully orchestrated to ensure they reinforce each other, and leadership is essential to conducting this orchestration. Senior leaders provide strategic direction, secure buy-in across government, and use their convening power to maintain and grow stakeholder coalitions.

At the highest level, leaders may also be called upon to clearly explain novel business processes to Congress, the President, and interagency stakeholders to gain necessary approvals or resources. Leadership can also create incentives for cultural change, when necessary, deliberately rewarding employees who successfully engage private capital and deliver products and services to support defense missions.

### **Summary:**

The business environment created by the DoD can determine whether an investment is worthwhile or too risky. Investors make decisions based on the speed, predictability, and transaction costs associated with defense contracting. DoD can make investment more attractive by providing access to key government assets and creating a predictable M&A regulatory landscape.

Strong leadership can allow companies to surmount acquisition obstacles, and bring together the resources—such as acquisitions dollars, MOUs, and catalytic capital—necessary to trigger investment. However, the business environment is ultimately created every day at the working level, through the design of the acquisition system, the skills of the workforce, and the quality of DoD's enterprise systems.

## **Recommendations**

### **OASD(IBP) to Expand the Availability of Privately Financed, Leasable Facilities to Firms**

Firms can often reduce their capital requirements, operate more efficiently, and remain more operationally nimble by leveraging leased facilities. Facility developers can often access capital at lower rates through mechanisms such as project financing and institutional real estate investment. Lessees can utilize these facilities without the upfront carrying costs, often derived from a more expensive source of capital. In capital intensive sub-sectors of the DIB, such as munitions production, leasable industrial campus facilities are already reducing contractors' cost of capital and broadening competition; firms can then pass some of those savings back to the government in the form of lower costs.

OASD(IBP) should analyze the potential for the use of leasable facilities to be expanded, especially to subsectors of the DIB that have high capital intensity, long qualification and certification timelines, and high asset specificity. Industrial policy tools such as loans and loan guarantees could be extended to lessors for the purpose of creating or expanding leasable facilities, in syndication with private investment. DPCAP should issue guidance for program offices to explicitly design solicitations to incorporate leased capital and be evaluated with neutrality with respect to ownership form.

Congress should request a report identifying which subsectors are most conducive to a targeted facilities leasing program and any resource needs.

### **OSD(IBP) and CDAO to Provide Market Intelligence to Assist with Acquisition Planning**

Today, the information government employees need to understand financial conditions is scattered across multiple offices and access permissions are not rationalized. DoD should establish a central market intelligence and analytics resource and make it available to the acquisition community. This resource could include commercially available market intelligence data, and also ingest data from existing government sources, such as Office of Cost Assessment and Program Evaluation (CAPE) submissions, contract and administrative data, industrial base program submissions, and Hart-Scott-Rodino reviews, when legally shareable. DoD should also research and track government-furnished property and equipment across the DIB and include those data. Housed by an OSD stakeholder such as the OASD(IBP), in partnership with the CDAO, data would be provided to stakeholders via role-based, auditable access, with appropriate security, ethics, and competition safeguards.

To ensure usability, it should require machine-readable submissions. Such a capability would also allow detailed analysis of

the financial health of key subsectors of the DIB and allow DoD and Congress to analyze the effects of specific policy changes (e.g., the effects of specific PAE behaviors).

Congress should provide resources to DoD to create and sustain this capability. To maximize the benefit of this effort, DoD would also need resources to convert existing market intelligence data collection efforts into machine-readable formats.

### **PAE to Improve Payment Terms for Small Businesses**

Regulated financial institutions, such as commercial banks, offer unique benefits to their clients, such as financial stability and large networks of additional financial services. However, research has shown that many small defense contractors are unable to access services at these institutions due to the payment terms provided by DoD in their contracts.

Small and medium-sized contractors (e.g., SBIR recipients) often face a financing gap: Contracts are typically written as firm-fixed-price or mix cost-plus instruments with payable technical milestones, spaced up to 12 months apart. Because lenders can only be paid after the government accepts each milestone, this arrangement creates both strong performance risk and payment uncertainty. That combination renders many small contractors unfinanceable by traditional and regulated lenders, forcing them to borrow money with a high cost of capital, burdensome terms, or risky personal guarantees from business owners.

Progress payment policies derived from the FAR already permit DoD to negotiate high-frequency progress payments (e.g., 2-week cycles). However, policy also encourages DoD to use firm fixed-price contracts to reduce administrative costs. To close this gap, a PAE should consider piloting a “high-frequency cost-reimbursement” award option for small dollar contracts to small businesses.

Once the pilot concludes, Congress should direct the GAO to analyze the effects of the pilot and create recommendations for possibly scaling the pilot.

### **Congress to Increase Resourcing for OASD(IBP)’s M&A Office**

DoD’s posture toward consolidation or competition in specific defense sectors can significantly affect investor confidence and M&A activity. When DoD’s position is unclear or inconsistently communicated, investors may hesitate to commit capital, fearing that future consolidation moves could be blocked or second-guessed. Conversely, when DoD’s assessments are trusted, transparent, and grounded in economic and industrial analysis,

it helps stabilize expectations and channel investment into strategically important sectors.

DoD should expand the OASD(IBP) capacity for merger assessment to its historical level of expertise from the 1990s, including staff economists, legal experts, and financial analysts capable of conducting independent, data-driven evaluations.<sup>71</sup> DoD should also invest in modern data and analytic tools to assess industry concentration, supply chain interdependencies, and investment trends. DoD leadership should use this data to regularly communicate DoD’s M&A priorities to industry and the investment community. Congress should consider providing resources to DoD for this purpose.

### **DAU to Increase Acquisition Workforce Capacity for Engaging the Investment Community**

For DoD to engage effectively with private capital, the large workforce of contracting officers, program managers, and other acquisition professionals needs a strong understanding of how private investment operates, including how firms assess risk and reward, forecast cash flows, determine cost of capital, and weigh investment incentives across portfolios. These professionals, who manage the day-to-day planning, negotiation, and execution of agreements with industry, are the ones who ultimately translate DoD’s high-level goals for engaging private capital into tangible results. Yet DoD personnel often have limited exposure to private sector investment practices, which advance rapidly.

Without up-to-date understanding of investment practices, acquisition professionals may miss opportunities to encourage co-investment. Conversely, they may underestimate the financial fragility of certain companies that require targeted support.

DoD should expand access to training and rotation initiatives focused on the business of private investment. Educational institutions such as DAU and the Eisenhower School could create accredited training on modern financial concepts and business practices. DoD could enter partnerships with management and business schools to provide training, expertise, and even research capacity in these areas. DoD could expand successful rotational programs with private capital firms and consider broadening these programs to include investment programs within government contractors (e.g., CFO or corporate strategy offices). DoD should also collect proven best practices and case studies for engaging private capital and make these freely available to DoD personnel through mechanisms like the Acquisition Innovation Research Center (AIRC).

71 U.S. Government Accountability Office, *Defense Industrial Base: DOD Needs Better Insight into Risks from Mergers and Acquisitions*, GAO-24-106129 (Washington, DC: U.S. Government Accountability Office, October 2023).

## Congress and DoD to Reduce Disincentives for Raising Equity Capital

Certain benefits for growing small contractors—such as set-aside programs and reduced compliance burdens—create a “benefits cliff” for businesses that graduate from small business status. Since PE, strategic, or internal investments often trigger graduation, this can create a penalty in the acquisition system for businesses that are investing capital for growth.

One way to address these challenges could be to provide a transition period for companies that have graduated due to investments in R&D or capital expenditures above a set threshold. Congress could consider authorizing contracting officers, for a narrow set of purposes and a defined period of months, to extend option years or permit re-compete of such firms’ existing contracts. As part of this time-limited runway, Congress could also consider directing SBA to mitigate the effects of affiliation by allowing firms to count affiliate employees at a partial rate (e.g.,

75%) for size certification purposes during the transition period, rather than fully aggregating across all affiliated entities.

To better represent the past-performance accomplishments of recently graduated businesses, Congress, DoD, and the FAR Council could consider building on prior efforts in statute and regulation including FAR 15.305(a)(2)(iv), SBA’s mentor-protégé and joint venture rules, and direction in Section 824 of the 2026 NDAA—to recognize alternative forms of past performance. This could include more systematically crediting the past performance of teaming partners and key subcontractors, and more routinely incorporating relevant commercial past performance from private sector customers, as DoD develops the guidance on non-government past performance and alternative evaluation methods that Section 824 of the 2026 NDAA requires. To specifically reduce an investment-based graduation penalty, Congress could also consider directing SBA to allow companies to deduct R&D and CapEx expenses from revenue when calculating business size.<sup>72</sup>

# Conclusion

The DoD stands at a pivotal moment in its relationship with the capital markets. With growing interest from senior defense leaders and the investment community alike, DoD has the opportunity to either form a strong, sustainable relationship with the capital markets, or allow private capital to remain underutilized.

In response, DoD has deployed a number of tactics. By enhancing the way it shares demand signal, DoD has helped investors to interpret TAMs in the defense sector. Newly expanded catalytic capital programs hold promise to directly incentivize investment

in defense companies. A focus on acquisition reform has reduced the cost of doing business for contractors. As demonstrated in the case studies, these tactics can mobilize significant amounts of private capital when carefully deployed.

DoD has a powerful set of funds and authorities to expand its engagements with private capital. It now must expand on its recent successes, building the requisite workforce capacity, modern enterprise tools, coordination mechanisms, and reporting and communication practices.

72 U.S. Government Accountability Office, *Federal Contracting: Awards to Mid-Sized Businesses and Options for Increasing Their Opportunities*, GAO-19-523 (Washington, DC: U.S. Government Accountability Office, August 2019), <https://www.gao.gov/assets/gao-19-523.pdf>.

# Appendix 1: Research Methodology

This research is based on interviews conducted with over 40 individuals from the full range of communities involved in defense investment, including:

- Investors representing multiple asset classes within the capital markets, including private equity, venture capital, commercial banking, and others

- Investor-backed companies representing multiple defense sub-sectors
- Government personnel with experience engaging private capital

# Appendix 2: Calculating Private Investment in the Defense Industrial Base

There are multiple sources of private capital that can be engaged in the DIB. This appendix describes the methods used to approximate the volume of capital deployed from each source.

## Public Defense Companies

One of the largest sources of private capital in the DIB is public defense contractors, which regularly conduct R&D and CapEx investments to support their work with DoD. Because the majority of DoD contract dollars flow to recipients that are publicly traded companies, R&D and CapEx trends among those companies are available in the filings they provide to the SEC.

Year	2020	2021	2022	2023	2024
Public Defense Companies	\$19B	\$19B	\$21B	\$23B	\$23B

For this analysis, the methodology used in the National Defense Industrial Association's Vital Signs report was used.<sup>73</sup> For each year, the 20 largest publicly traded U.S. defense firms were identified. Companies which received a majority of revenue from non-DoD sources (e.g., healthcare companies) were excluded. The total R&D and capital expenditure of those 20 companies was summed for each year.

## M&A

Flowing from both strategic acquirers and private equity funds, M&A transactions are one of the major sources of private capital investment in the DIB. However, it is challenging to calculate the amount of dollars invested in these transactions in any given year. Disclosure requirements for private transactions are inconsistent, and most transactions are not required to be reported to the public or government regulators.

Market analysts use a variety of methods to track the amount of M&A activity in a given industry. In certain situations, such as when a transaction may have a material impact on a public company, public announcements are required or made voluntarily. In other instances, transaction data can be inferred from related public filing data.

For M&A transactions above \$1B, investment data tends to be easier to collect. Data on M&A activity in the U.S. aerospace and defense sector, supplied by Capstone Partners, an investment bank, is shown in the table below.<sup>74</sup>

Year	2020	2021	2022	2023	2024
M&A	\$21B	\$37B	\$35B	\$24B	\$35B

This data does not include transactions below \$1B, so it is probable that the total dollars invested in aerospace and defense are substantially higher.

It should also be noted that for a given M&A transaction the purchase price may not strongly correspond to the amount of capital that company will invest in the future. In most instances, the dollars paid in M&A are used to pay shareholders of the company as part of the purchase.

## Venture Capital

Venture capital is typically invested in small business or start-ups with high growth potential. Because venture capital typically targets rapid growth, much of the money invested into companies tends to be used for R&D or CapEx. Although venture investments are typically private transactions, and therefore not typically required to be disclosed, in actuality, both venture firms and companies receiving venture investment tend to publicize their transactions, making the data publicly available, if not comprehensive. The data used in this paper was provided by PitchBook, a market intelligence service.<sup>75</sup>

Year	2020	2021	2022	2023	2024
Venture Capital	\$20B	\$50B	\$36B	\$35B	\$40B

It should be noted that these dollar numbers are inclusive of investments by venture capital in any company deemed by PitchBook to have potential defense applications, including dual-use technologies such as AI.

73 National Defense Industrial Association, *Vital Signs 2025: The Health and Readiness of the Defense Industrial Base* (Arlington, VA: National Defense Industrial Association, 2025), [https://www.ndia.org/-/media/sites/ndia/policy/vital-signs/2025/vitalsign\\_2025\\_final.pdf](https://www.ndia.org/-/media/sites/ndia/policy/vital-signs/2025/vitalsign_2025_final.pdf).

74 Capstone Partners, *Aerospace, Defense, Government, & Security Industry: Middle Market Deal Activity & Outlook* (Capstone Partners, 2025), 11.

75 PitchBook, *Vertical Snapshot: Defense Tech VC Trends, Industry Overview, and Market Landscape* (report preview, published August 5, 2025), 15.



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