



EXCERPT FROM THE
PROCEEDINGS
OF THE
NINETEENTH ANNUAL
ACQUISITION RESEARCH SYMPOSIUM

**Acquisition Research:
Creating Synergy for Informed Change**

May 11–12, 2022

Published: May 2, 2022

Approved for public release; distribution is unlimited.

Prepared for the Naval Postgraduate School, Monterey, CA 93943.

Disclaimer: The views represented in this report are those of the author and do not reflect the official policy position of the Navy, the Department of Defense, or the federal government.



The research presented in this report was supported by the Acquisition Research Program at the Naval Postgraduate School.

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ACQUISITION RESEARCH PROGRAM
DEPARTMENT OF DEFENSE MANAGEMENT
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The Slow Destruction of the Defense Industrial Base

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Abstract

The National Security Innovation and Industrial Base (NSIB) is becoming detached from the greater U.S. economic base. Specifically, in a departure from most of U.S. history, much of the domestic economic engine—private industry—is choosing not to work with the federal government in general, and the Department of Defense (DoD) in particular. At the same time the federal government is losing access to leading commercial solutions, those companies who are committed to remaining in the NSIB are hamstrung by statutes and government policies that inhibit innovation and adaption. Until the federal government looks inward and matches policies to the realization that it cannot dictate to industry the terms of contracts, the DoD will often get what it pays for: less innovation, less access to leading commercial companies, fewer commercial capabilities incorporated into national security capabilities, and a loss of ground in the race for technology overmatch. This article identifies some of the policies and regulations driving these trends and proposes areas ripe for legislation and policy changes that could begin to inject more vitality and innovation into the NSIB.

Introduction

The National Security Innovation and Industrial Base (NSIB) is the bedrock upon which American military strength is built.¹ This national security base draws its strength from the economic powerhouse that is the U.S. economy. In recent years, however, a strange and disturbing trend has emerged. The NSIB is becoming detached from the greater U.S. economic base. Specifically, in a departure from most of U.S. history, much of the domestic economic engine—private industry—is choosing not to work with the federal government in general, and the Department of Defense (DoD) in particular. This drifting of private industry is occurring precisely at a time that the federal government increasingly relies on commercial technologies.

The pace of technological change is accelerating every year, and we have known for decades that the DoD needs to better align business practices with those of the private sector to reap the benefits of commercial innovation. In 1995, the Clinton administration released the policy document *Dual-Use Technology: A Defense Strategy for Affordable, Leading-Edge Technology*, the technology strategy corresponding to acquisition reform outlined in the Federal Acquisition and Streamlining Act of 1994. This strategy ambitiously set out to mirror defense

¹ We use the term National Security Innovation and Industrial Base because we believe that innovation and industrial strength both matter, and the term defense industrial base does not capture the full gamut of national security—to include intelligence services and other agencies that support national security.



business processes around commercial practices to make it easier to incorporate commercial technology into defense programs. Then Under Secretary of Defense for Acquisition and Sustainment Paul Kaminski (1995) detailed the need for the DoD to “place greater reliance on the commercial sector to reduce costs, shorten acquisition cycle times and retain technologically advanced defense equipment.” More recently, the 2018 National Security Strategy noted that “Technologies that are part of most weapon systems often originate in diverse businesses as well as universities and colleges” (The White House, 2018, p. 21).

Many DoD purchases incorporate or depend on commercial technologies such as cloud computing, software, and other information technology (IT) capabilities. In 2022, the DoD’s list of 14 critical technology areas vital to national security identified only three that are defense-specific (hypersonics, directed energy, and integrated sensing and cyber). The vast majority of critical technologies on this list are either the result of “existing vibrant commercial sector activity” (Under Secretary of Defense for Research and Engineering, 2022, p. 4) or emerging technologies being developed in the private sector or in collaboration with the DoD. Some of the commercial technologies identified are artificial intelligence, autonomy, microelectronics, space technology, advanced computing and software, and human-machine interfaces (pp. 3–6).

Despite this reliance on commercial capabilities, defense acquisition and business processes continue to become more complex, more heavily regulated, and out of synch with the private sector. The consequences of this trend for U.S. military strength are considerable. The DoD and other national security agencies are not leveraging the most advanced technologies and capabilities the commercial markets have to offer – but many of our competitors and potential adversaries are. Start-ups have access to global capital and markets, innovation is diversifying across borders, and technology development in areas relevant to the military is proliferating. The U.S. failure to leverage commercial industry is a recipe for losing our military, cyber, and intelligence advantages.

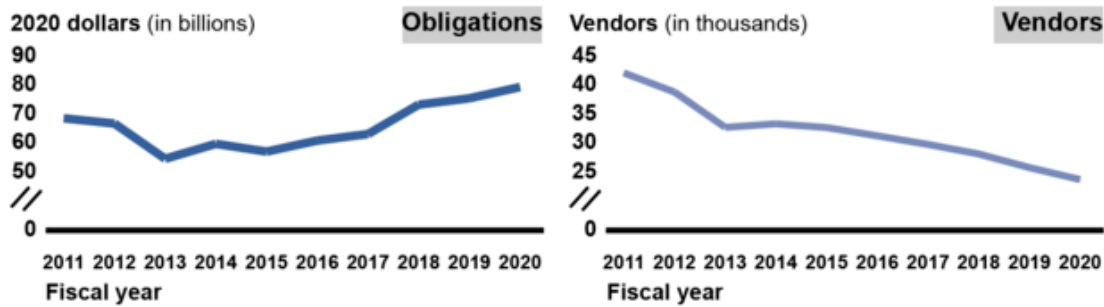
But the situation is perhaps even more dire. At the same time the federal government is losing access to leading commercial solutions, those companies who are committed to remaining in the NSIB are hamstrung by statutes and government policies that inhibit innovation and adaption. Members of the NSIB (such as traditional defense contractors) are at a severe disadvantage when competing with industry for high-skill talent critical to innovation, dedicating resources to R&D, and staying ahead of the technology and innovation curve. In some cases, the United States is behind the technology curve and needs innovation and R&D in the NSIB to catch up to potential adversaries, such as in hypersonics. Gen. David Thompson, vice chief of space operations, admitted at the Halifax International Security Forum in October 2021, “We’re not as advanced as the Chinese or the Russians in terms of hypersonic programs” (Erwin, 2021).

This article identifies some of the policies and regulations driving these trends and proposes areas ripe for legislation and policy changes that could begin to inject more vitality and innovation into the NSIB. The issues identified in this paper are but a sample—and a good starting point of attack—to address the numerous policies that, as currently being implemented, are unnecessarily harming the long-term vitality of the NSIB. We expounded on only a few of the examples below, and glossed others, due to space constraints.

The Incredible Shrinking NSIB

The NSIB is shrinking. According to a recent report by the U.S. Government Accountability Office (GAO), from FY2011 to FY2020, the number of small businesses receiving DoD contract awards decreased by 43% (dropping from 42,723 to 24,296), even as obligations to small businesses increased by approximately 15% (GAO, 2021).





Source: GAO analysis of Federal Procurement Data System data. | GAO-22-104621

Figure 1. DoD Small Business Contract Obligations and Vendors, FY2011–2020 (GAO, 2021)

This phenomenon extends to *all businesses*, as companies of all sizes are choosing not to work with the DoD. As the GAO (2021) pointed out, “The number of larger businesses receiving contract awards fell by 7.3 percent per year on average from 2011–2020, while the number of small businesses receiving contract awards fell by 6 percent per year” (p. 9). Analysis from Bloomberg Government (2021) shows this trend continuing in FY2021. By their count, the number of prime vendors declined from 142,000 to 97,000 in the past decade. As they point out,

I tried to work for the federal government for five years and then gave up because it is just not worth it. In the commercial sector, time to market made it more worth my while.

– Small business CEO

The federal industrial base is shrinking even as contractors are asked to respond efficiently to increasingly complex requirements and crises ... A decade-long, 23% increase in contract spending since fiscal 2012 means larger and fewer contracts are going to larger and fewer companies while agencies rationalize burdensome portfolios to keep pace with urgent priorities such as pandemics, cyberattacks, wars, climate change, and infrastructure modernization. (Bloomberg Government, 2021)

The past decade has seen variability in defense topline, averaging a 10% decline from 2011 to 2020 (adjusted for inflation). However, this decline does not align with the 31–36% drop in vendors (Duffin, 2021).

The decline in industry participation in the government marketplace also stands in sharp contrast to the overall U.S. economy. U.S. GDP grew by 34% from 2011 (\$15.6 trillion) to 2020 (\$20.9 trillion; The World Bank, 2022). The total number of businesses in the U.S. economy also grew, increasing 7% from 2010 to 2019 (U.S. Census Bureau, 2021).



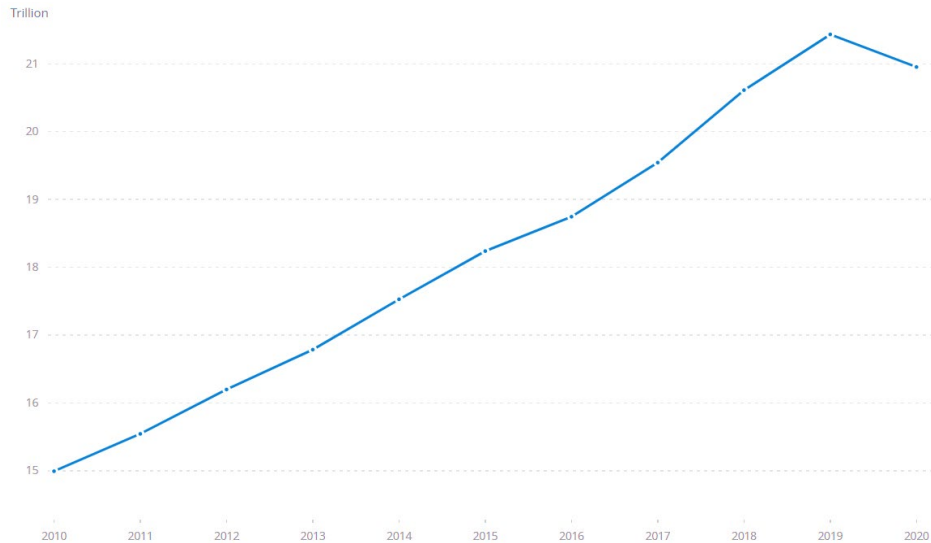


Figure 2. U.S. Gross Domestic Product, 2010–2020
(The World Bank, 2022)

As the above data indicate, even increased defense and government spending is not a sufficient enough incentive to persuade companies to work with the DoD.

How to Reverse the Trends in the NSIB

The DoD, to its credit, recognizes the need to expand the base. In its February 2022 report, *State of Competition Within the Defense Industrial Base*, the Office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD[A&S]) stated:

To counteract the trend of overall shrinking of the DIB, DoD should endeavor to attract new entrants to the defense marketplace by reducing barriers to entry. This will be accomplished through small business outreach, support, and use of acquisition authorities like other transaction (OT) authority and commercial solutions opening (CSO) that provides DoD the flexibility to adopt and incorporate commercial best practices to reduce barriers and attract new vendors. (OUSD[A&S], 2022, p. 2)

Unfortunately, “outreach” is not the problem, and other proposed DoD solutions do not address the root causes of what is happening. As the largest buyer in the United States, companies of all stripes are well aware of the buying power of the DoD. More importantly, they are well aware of the challenges working for the Department. Increasing the use of different contracting vehicles like Other Transactions, while a positive step, is not a solution. And as the DoD slowly puts more regulation and bureaucracy on OTs, Middle Tier Authorities, and other flexibilities, the value proposition of these contracting vehicles decreases.



There is much blame to go around as to the current state. Congress, the DoD, industry, and the oversight organizations share responsibility. But the first and most important step to strengthen, expand, and revitalize the NSIB is for the DoD (and Congress) to understand that it has the largest impact on the NSIB and marketplace behavior. Secretary of Defense Lloyd Austin (2021) articulated this issue at the Reagan Forum, stating, “for far too long, it's been far too hard for innovators and entrepreneurs to work with the department.”

We are still moving unbelievably slow...We are so bureaucratic, and we are so risk-averse...When you have a competitor...like China...you have to be able to move fast, and we still move way too slow.

General Hyten, chairman of the Joint Chiefs of Staff

But while the DoD's rhetoric hits the right notes, its actions are different and are the driving force behind the troubling NSIB trends. Companies eschew working with the DoD for several reasons, but based on our research and experience, some of the primary factors are

- Intellectual property (IP) rights
- Cash flow and risk return alignment
- Bureaucracy that slows down both acquisition timelines and transitions to scaling up contracts
- Policies that inhibit good-business decision-making
- Failure to structure meaningful follow-on procurement opportunities

Some of these factors also inhibit traditional defense contractors from being more innovative; delivering capabilities quicker, more efficiently, and at better price points; and attracting top tier workforce talent to work in the NSIB. Additional factors inhibiting current members of the NSIB from being more innovative include being unable to compete with the private sector for highly skilled workers and adhering to poorly thought-out and developed requirements. In the following pages, we discuss some of the policies creating these barriers to innovation.

Barriers to Increasing Innovation and Efficiency in the NSIB

Workforce – A barrier for Innovation and Efficiency in the NSIB

In 2017, the Section 809 Panel commented on the need to make the DoD a more attractive customer in the new, dynamic defense marketplace by transforming rules and regulations and supporting the workforce to attract the best and brightest the country has to offer (Advisory Panel, 2017). We believe this extends to the federal contractor workforce as well. Employee salaries of the NSIB have failed to keep pace with those offered by the private sector in large part due to the laws, regulations and contracting policies of the federal government.

Skilled workers are increasingly choosing not to work in the NSIB for a variety of reasons, including salary caps fueled by Cost Accounting Standards (CAS), continuing resolutions that put programs (and jobs) at risk, regulatory requirements applied only to federal contractors, and bureaucratic contracting and security clearance rules that make it difficult for contractor employees to begin work with government clients. Collectively, these government- and defense-unique practices are making the NSIB a less attractive place for individual employees to work. And in today's economic environment, skilled employees have options.

We recommend that Congress and the DoD take steps to make it easier for the NSIB to recruit and retain a skilled workforce and more quickly onboard contractor personnel to support agency missions, some of which are highlighted below.



Offering Competitive Salaries to Top Tier Contractor Talent

Government contractors are unable to match the salaries offered by industry for top tier talent. While paying less may reduce costs in the short term, we believe that cost savings are outweighed by the effects of losing top tier contractor talent in the long term. When successful, innovative, and capable employees leave the NSIB for private industry, innovation suffers, continuity of service is disrupted, timelines for delivering solutions can be delayed, and costs associated with replacing the departing workers are accrued. Two drivers of this phenomenon are the CAS and the continued prevalence of Lowest Price Technically Acceptable contracting.

The way CAS rules operate, wages and related costs are capped, disincentivizing companies from competing with commercial industry for top tech talent. CAS-covered companies could choose to compete for such talent and offer salaries above the allowable cost cap, but doing so would require the companies to accept lower profits.

Cost Accounting Standards – A Case Study

Congress created Cost Accounting Standards in 1970 to safeguard against potential overcharges on government contracts. These standards stipulate how contractors should allocate costs on defense cost-type and certain fixed-price contracts. Under CAS, allowable contractor costs are charged to the government under the contract; unallowable costs are not. Government oversight, accountability, and audit processes are aligned to ensure CAS standards are met. If a contractor or a business has CAS-covered contracts that in the aggregate exceed certain thresholds, all related business systems must be CAS compliant. So far so good. However, in today's markets and the way CAS is structured and executed, CAS is causing more harm than good.

The negative impact of CAS as currently structured will be discussed at various points in this paper.

Skilled workers with STEM specialties remain in high demand across the American economy, as there is a growing gap between the need for workers with technical expertise (such as cybersecurity and engineering) and the relevant number of workers in the United States. The DoD's *2020 Annual Industrial Capabilities Report* noted a shortage of skilled workers across numerous defense-specific industries, noting particular specialties such as software engineering, manufacturing of missiles and munitions, nuclear weapons, space capabilities, and electrical engineering (OSD[A&S] Industrial Policy, 2021, pp. 86–109). In 2020, the median income for computer and information technology occupations exceeded \$90,000 (U.S. Bureau of Labor Statistics, 2021). Online job posting sites list the current average salary for a cybersecurity engineer at over \$100,000, with higher paying positions approaching the \$150,000 range (Glassdoor, 2022). And Apple reportedly paid bonuses of \$200,000 to top software and hardware engineers (Gurman, 2022).

These wage figures do not encompass full compensation packages that top-tier, highly skilled, and sought-after employees frequently command in the private sector field. The most highly skilled and sought-after experts in IT and cybersecurity are being offered multiples of the average. According to companies we have interviewed, employees have been lured away for salaries and compensation packages that defense contractors simply cannot match under the CAS rules. But it is these innovators that are critical to delivering advanced capabilities.

CAS should also be revisited to allow companies to recruit and retain top technology and STEM talent critical to innovation and maintaining a highly qualified and in-demand workforce who are heavily recruited by, and often leave for, private sector jobs.



To enable the NSIB to compete for top talent, Congress should

- Amend 10 U.S.C. 3744(a)(16) to increase the cap for specified STEM positions and
- Redefine “HCE” under the IRS to provide flexibility for employers to develop and implement innovative compensation structures and practices to enable better competition for, attraction of, and retention of critical STEM talent whose skills are vital to our national security.

Lowest Price Technically Acceptable Contracting

Even when CAS is not a concern, the prevalence of Lowest Price Technically Acceptable (LPTA) contracts makes it difficult for government contractors to build a workforce that has the necessary skills. As the Congressional Research Service noted, oft-cited criticisms of how LPTA is being used include that

[t]he use of LPTA conditions the government market to offer potentially less desirable goods and services because the incentive structure encourages firms to reduce their prices as long as their product remains above the threshold of technical acceptability. Further, critics argue that LPTA contracts are not always the most effective and efficient approach to ensuring quality and performance in the long term; these analysts argue that the use of LPTA may sacrifice long-term value for short-term savings. (Peters, 2021, p. 2)

Yet the DoD still uses LPTA in instances where quality matters. According to a GAO study of federal contracts using LPTA source selection processes in FY2018, the top four DoD contracting components used LPTA for 25% of competitive contracts over \$5 million. These included contracts for services, including IT services, professional support services, and research and development on defense systems—despite the legislative prohibition against using LPTA for such specialized service. (See Section 813 of the FY2017 NDAA). In contrast, civilian agencies used LPTA for only 7% of the same type of contracts (GAO, 2019, pp. 14–16).

In conversations with the GAO researchers, the civilian agencies explained why they were less likely to use LPTA. In one example,

GSA officials told us their agency often procures services where it is beneficial for industry to propose solutions to a stated need, rather than GSA dictating the solution, such as professional services or information technology systems for a secure network solution. In these cases, officials said they would not have the technical specifications that an LPTA process would require. (GAO, 2019, p. 15).

Based on the GAO’s research, civilian agencies appear more willing than the DoD to let industry collaborate on the structure and cost of service contracts to ensure a quality deliverable.

Security Clearance Reform – Getting Contractors Cleared and Working

The security clearance process creates hurdles for the defense industry to hire and retain the workforce it needs to operate efficiently and meet defense demands. In response to the 2022 *Vital Signs* survey of defense contractors, 63% of respondents said that the availability of cleared labor presented a moderate or significant problem (NDIA, 2022, p. 21). In 2021, the average time to complete an initial top-secret review was 176 days, or six months. It took about the same time for reinvestigations, an average of 170 days (Office of Management and Budget, 2022, p. 12).

In Maryland, home to many defense contractors, a 2019 study estimated that about 5% of all jobs requiring a security clearance were unfilled (9,187 vacancies compared to 161,379 filled positions; Irani et al., 2019, p. 20). One Virginia-based IT service provider for the federal government admitted, “we have upwards of 120 plus offers pending a clearance process at any



given time—these are people who have accepted an offer and are waiting to go in. ... I would say we probably lose 20-30 percent of placements by the time they are cleared” (Greater Washington Partnership, 2019, p. 16). Adding to this challenge is that an increasing number of STEM students at American universities are foreign born, creating a population unable to acquire security clearances—further restricting the pool of qualified workers (OSD[A&S] Industrial Policy, 2021, p. 102).

All of this means there is increased competition for the same small pool of technically skilled workers who are eligible for a security clearance. In such a tight labor market, workers are less likely to wait 6–8 months to begin working when they can be employed more quickly by a commercial company that does not require a security clearance – particularly when such companies often pay more than government contractors whose billing rates are determined by government labor categories. The dearth of new employees receiving clearances creates shortages of technically skilled labor in the cleared workforce. To fill positions, government and industry compete for existing talent, thereby driving salaries up and creating shortages on classified projects elsewhere.²

Amazon is recruiting individuals with security clearances in the National Capital Region (NCR) with starting salaries of \$120,000 for holders of TOP SECRET clearances with no relevant experience or degree, a rate that exceeds the General Schedule rates for similar work. According to a 2018 survey conducted by Eagle Hill Consulting (2022), 71% of Washington, DC, Metro Area tech employees would leave their job for Amazon for a better salary and 33% would do so for a better workplace culture. The recent tightening of the job market and the increased number of people quitting jobs exacerbates these trends.

The government must make drastic improvements in the time required to investigate and clear new employees. Otherwise, cleared industry will be unable to hire adequate numbers of STEM experts, which will cause staffing disruptions and cost increases throughout the cleared workforce.

Regulations and Policies Affecting the NSIB Workforce

Laws, regulations, and policies that uniquely impact government contractors drive skilled members of the national security workforce away, including continuing resolutions and government shutdowns that suspend or delay programs or require employees to go on unpaid or paid leave (often at the expense of the company), bid protests that often leave employees waiting weeks or even months on end to begin work on a project, or efforts to use the government procurement system to promote public policy. These combine to make it difficult for NSIB companies to recruit and retain a skilled workforce. One prime recent example is the effort to impose a vaccine mandate on the workforce.

In September 2021, President Biden issued Executive Order (EO) 14042 requiring defense contractors to adhere to COVID-19 protocols, including mandatory vaccination, masks, and physical distancing. This EO translated into a contract clause, FAR 52.223-99, Ensuring Adequate COVID-19 Safety Protocols for Federal Contractors, which was scheduled to go into effect on December 8, 2021. Defense contractors scrambled to mitigate the impact on their workforce with only a few months’ notice. More importantly, thousands of employees notified their NSIB companies that they planned to quit and leave for the private sector instead of complying with the government contractor-unique requirement (Isidore & Langmaid, 2021).

Numerous defense contractors reacted to the mandate by hiring new employees in an attempt to offset the predicted loss of unvaccinated workers. In October, Raytheon was in the

² Poaching is a common challenge cited by many human resources professionals at defense contractors. See, for instance, Greater Washington Partnership (2019, p. 16).



process of hiring more workers, anticipating the potential loss of “several thousand” employees (Insinna, 2021). The impact of the mandate would be felt more intensely by smaller businesses. Wes Hallman, senior vice president for strategy and policy at NDIA, shared in October that these smaller companies “have specific employees that have specific skillsets and specific security clearances to perform on contract. So even if they lose onesies and twosies, that’s going to have a real impact on their ability to deliver on contracts and in some cases, may prevent them from delivering on contracts” (Insinna, 2021).

Ultimately, in response to several court injunctions preventing the mandate from being carried out, the DoD told contracting officers to stop enforcing the vaccine mandate on December 8, 2021 (Thompson Hine, 2022). We do not take a position on the vaccine mandate and do not believe that the vaccine mandate, *in and of itself*, would have necessarily caused irreversible, irreparable long-term harm to the NSIB that outweighed the public policy value of an effective mandate. Rather, we use this as but one example of how government actions, when taken in the aggregate, combine to push employees out of the NSIB.

Another CAS Obstacle – Inhibiting R&D Investment

Purely commercial companies invest in R&D and risk their capital for the promise of financial reward and profit. In 2018, U.S. businesses invested \$452.1 billion of their own money in R&D. Of that investment, only \$17 billion—4% of the total—went toward defense R&D goods or services provided to the federal government. (In the same year, the DoD invested \$15 billion in federally funded R&D performed by companies; National Science Foundation, 2020).

A risk-reward construct incentivizes companies to invest in R&D and to pay higher salaries to recruit top tech talent. And profit they do. Private sector companies enjoy healthy profit margins. CAS-covered companies are not offered this same risk-reward opportunity. Their profit is essentially capped, which is the essence of cost and certain fixed-price contracts. Companies with cost contracts accept lower reward because of the lower risk—capital is not risked because costs are covered by the contract.

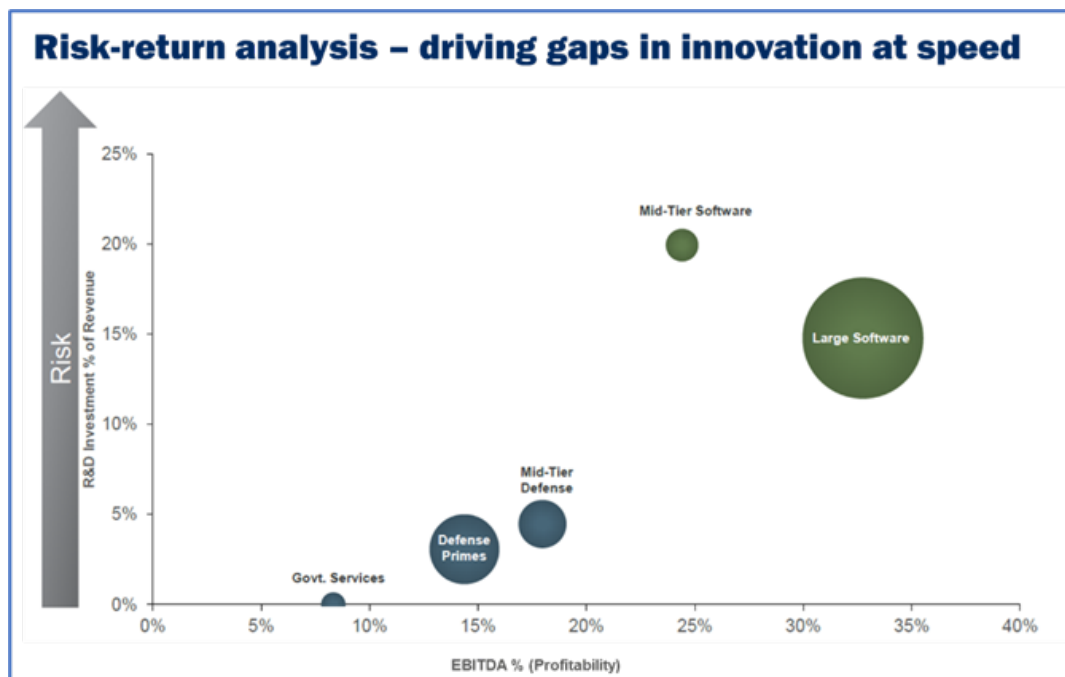


Figure 3. Risk-Return Analysis – Driving Gaps in Innovation at Speed (ManTech, 2019)



The way CAS rules operate, the allowability of R&D and related costs are capped, disincentivizing companies from investing in R&D beyond the allowable cost limit.

As the DoD and the NSIB strive to be faster, more nimble, and more flexible, traditional CAS standards should be revisited to promote the ability of defense-focused firms to innovate or identify best available commercial products and facilitate integrating innovation and commercial products into a solution before traditional requirements-based RFPs are issued.

Contracting at the Speed of Relevance

According to a Bloomberg government-wide analysis, “[T]he time it takes between the release of a final solicitation to the award of a contract—procurement acquisition lead time, or PALT—rose 72% in five years” (Murphy, 2021). While the DoD performed better than most agencies, with an average PALT of 63 days, prime contracts with estimated values of more than \$100 million—including weapon and IT systems—averaged 308 days (Murphy, 2021). Some particularly delayed programs include the Air Force’s Enterprise Cyber Capabilities at over 790 days, the Army Common Hardware Systems-6th Generation (640+ days), the Air Force’s Mission Partner Cmd/Ctrl/Intel Infor Sharing (630+ days) and the Army’s TADSS Maintenance Program 2 (280+ days). These delays cost money and delay delivery of capability. But such delays are not always necessary.

According to a recent report conducted by the National Defense Industrial Association (NDIA), when asked, “What is the most important thing the federal government can do to help the Defense Industrial Base?”, the top answer from industry members was “streamline the acquisition process” (NDIA, 2022, p. 54). In business, time is money, and the delays in awarding contracts and executing agreements is a strong disincentive to work for the DoD. Such delays also increase costs to contractors (which are ultimately passed on to the DoD) and delay capabilities from getting to warfighters.

A similar challenge occurs in the effort to recruit industry to conduct prototypes. Companies are generally not interested in prototype contracts for the prototype itself, but for the potential for follow-on production. Yet a common complaint heard from industry and senior DoD officials is that successful prototypes often fail to get to production due to budget and funding gaps—the valley of death. Too many experiences conducting prototypes that succeed in achieving benchmarks but fail to move to production in any reasonable timeframe (sometimes years, if at all) due to bureaucratic or funding failures will eventually dissuade companies from undertaking the prototypes in the first place. When successful prototypes do transition to production, the DoD often chooses inefficient contracting paths that cost more money and take more time than necessary. In recent years, the DoD has opted to use FAR-based contracts for follow-on production for successful OT prototypes even though the statutory OT authorities allow for quicker and less costly transitions to follow-on production.

Congress and the DoD, working with industry, should take on this challenge to increase the speed of delivering capabilities. While there are many possible ways of doing so, we propose three specific approaches:

- Increase the use of follow-on production authorities offered by Other Transactions,
- Increase the use of price-based offers, and
- Allow contracting officers to forego submission of certified cost and pricing data when recent purchases for the same product or service have already established price reasonableness.



Price-Based Offers

In the case of the Columbia Class Submarine, both the Navy and their prime contractor, Electric Boat, recognized a need to utilize a different approach following the extended negotiations concerning the Virginia Block V submarines. Although the Navy initially released a traditional request for proposals, following conversations with the contractor, this approach was amended to develop a priced offer along with an understanding on terms and conditions. Under such an approach, the government drew on past data on the Columbia and other submarine programs to initiate an offer to the contractor.

This approach allowed the contractor to avoid the costs associated with developing a proposal and sped up the negotiating process. The contractor did not spend time developing a bid and proposal, and the government did not spend time and resources to evaluate that proposal. Instead, both parties were able to leverage existing data to establish a deal, resulting in an award several months earlier than what was originally planned. We emphasize that for this to work, both parties need to be aligned and empowered to make decisions, and a level of trust and good faith must exist. (Developing trust and good faith could be the subject of its own paper.)

Pre-Established Price Reasonableness

The DoD often spends more than a year negotiating a price for a “lot” of products. Negotiations for the next “lot” often start immediately after prior negotiations complete. In these instances, little has materially changed from the prior negotiation, no new information has surfaced, and no new insights have been gleaned. Yet, the DoD often begins the new negotiations from scratch, wasting time and squandering both government and industry resources—with no appreciable improvement in contract cost or performance.

To improve the efficiency of negotiations, we believe a contracting officer should be encouraged to consider recently negotiated prices *if they are satisfied that the previously negotiated price remains a valid reference*. If they are not so satisfied, they retain the option of rejecting the previously negotiated price.

Expanding the NSIB

The ability for companies to earn a fair and reasonable profit is important to the success of the NSIB and our national security. If companies do not believe that the NSIB is a viable marketplace to succeed and flourish, they will choose—in fact they are choosing—to compete in the more lucrative commercial marketplace and spurn the NSIB.

It is the promise of profit that motivates companies to invest, develop new capabilities, and compete in the marketplace. Profit is the down payment for the next generation of solutions to satisfy the requirements of tomorrow. For example, Pfizer reported gross profit of 27% for 2021, largely due to revenue from the COVID-19 vaccine (Richter, 2022). In an accompanying statement, Pfizer Chairman and Chief Executive Officer Dr. Albert Bourla explained how his company entered the pandemic with the ability and willingness to invest for the collective good:

We committed to use all of the resources and expertise we had at our disposal to help protect populations globally against this deadly virus ... We put billions of dollars of capital on the line in pursuit of those goals, not knowing whether these investments would ever pay off. (Richter, 2022)

The pharmaceutical industry is one example of an industry that applies healthy profit margins to future R&D efforts that can benefit national welfare and security. However, the U.S. federal government does not fully utilize profit to incentivize defense contractors to make investments in R&D, information technology modernization, and cyber security, resulting in lost opportunities.



Too often, the DoD pursues policies that seek to save money in the short term at the expense of driving companies out of the marketplace, with the long-term ramifications of disincentivizing industry. Another example is the way the DoD misunderstands the value of intellectual property (IP) rights.

Intellectual Property and Data Rights

Nothing is going to drive a company away from the DoD faster than fear of losing control over its IP. Chapter 275 of Title 10, *Proprietary Contractor Data and Rights in Technical Data*, opens with a simple principle, written as a requirement for the secretary of defense, that recognizes this simple truism: “The Secretary of Defense shall prescribe regulations to define the legitimate interest of the United States and of a contractor or subcontractor in technical data pertaining to an item or process.”

The interests of the United States in proprietary and technical data are straightforward—the more the DoD owns and has access to such data, the easier it is for the DoD to ensure technology can be sustained over its life cycle, either in-house or by a contractor who competes for and gains access to these rights from the DoD. What seems to be less recognized is that it is in the long-term interest of the DoD to protect industry’s rights in proprietary and technical data. The most recent NDIA report on the health of the industrial base stated, “Intellectual Property rights are essential to the health of the DIB. The perception of risks to IP rights shapes investor’s willingness to invest in research and development and commercialization activities” (NDIA, 2022, p. 36).

IP rights represent the crown jewels of industry and the lifeblood of company competitive advantages. The DoD seems to fail to recognize this, too often seeking broader IP and technical data rights, and not wanting to pay for such rights.

The Regulatory Morass

Companies seeking to enter the NSIB must contend with a multitude of laws and regulations that are cost- and time-prohibitive, disrupt established supply chains, and require implementation of new systems, processes, and procedures. And in return for this effort, the promise is sometimes profit margins lower than those available in the private sector, plus threats to maintaining control over IP.

Just to give some examples, companies operating in the private sector who wish to work for the DoD as a traditional contractor must

- Prepare for cybersecurity standards on Cybersecurity Maturity Model Certification (CMMC);
- Abide by Section 889 requirements that prohibit the federal government from entering into or extending or renewing contracts with any entity that “uses any equipment, system, or service that uses covered telecommunication equipment or services as a substantial or essential component of any system, or as critical technology as part of any system;”
- Adhere to Buy American requirements that can disrupt supply chains and hurt cost competitiveness in the commercial market;
- Install costly IT and Cost Accounting Systems; and
- Build out a compliance capability to deal with government-unique requirements and potential government audits or congressional investigations and hearings.



Cost Accounting System as a Barrier to Entry

According to the GAO (2017),

...a number of companies chose not to develop products for DOD due to contract terms and conditions that would be expensive to implement, including establishing a government-unique cost accounting system that would be needed to comply with the standards. (p. 15)

To ease the CAS limitations on industry, Congress included section 820 in the FY2017 National Defense Authorization Act, which required the Cost Accounting Standard Board to conform CAS, where possible, with Generally Accepted Accounting Principles (GAAP). We believe the effort has not gone far enough to reverse the impact on CAS of purely commercial companies.

These are but some of the challenges facing companies who consider joining the NSIB. And the reward for overcoming these hurdles can be profit margins below those offered by commercial markets.

Margins That Do Not Compete With Commercial Markets

Under the Truthful Cost or Pricing Data Act (formerly known as the Truth in Negotiations Act, or TINA), government contractors and subcontractors must submit certified cost or pricing data (TCoPD) for negotiated contracts, subcontracts, or modifications above the threshold, if the government contract is awarded without “adequate price competition.” The contractor must provide “accurate, complete, and current data” about costs to ensure that the negotiated price is “fair and reasonable.” Contracting officers can also request a “price adjustment remedy” if a contractor did not previously provide sufficient data (FAR 15.4).

This requirement often delays the contracting process (Adjei & Hendricks, 2021, p. 24). It also is sometimes used to squeeze margins from contractors, making the DoD a less lucrative—and therefore unappealing—customer.

The recent case of TransDigm demonstrates a tendency to object to what is considered excess profit in the case of sole-source contracts. The DoD Office of the Inspector General (2021) considered any profit over 15% to be excessive and suggested the contractor voluntarily refund profits above that range. Coca-Cola, by contrast, reported gross profit margins of 60.3% in 2021, up from 59.3% in 2020 (The Coca-Cola Company, 2022). And as mentioned above, Pfizer’s commitment to protecting the health of global populations—a mission comparable to defense contractors supporting national security—resulted in a 27% profit margin in 2021.

Conclusion

The DoD recently issued the report, *State of Competition Within the Defense Industrial Base*. We believe that the DoD got it backwards. The question is not, what are companies doing to compete for the DoD’s business? It should be, what is the DoD (and Congress) doing to compete with commercial market buyers to induce industry to work with the DoD?

Until the federal government looks inward and matches policies to the realization that it cannot dictate to industry the terms of contracts, the DoD will often get what it pays for: less innovation, less access to leading commercial companies, fewer commercial capabilities



incorporated into national security capabilities, and a loss of ground in the race for technology overmatch.

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