

# National Security Acquisition Challenges

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THE NATIONAL security environment for the United States, and most other nations, in the coming years will experience a period of dramatic change. These changes have created urgency for transformation within the defense establishment—most particularly in acquisition. Specifically, three forces are driving this need for change: budgetary challenges, changing security requirements, and a changed military environment.

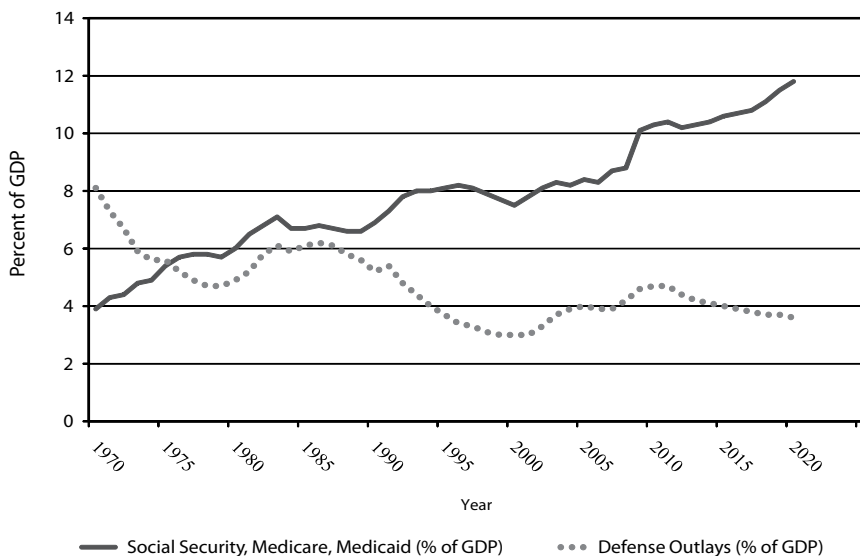
The United States faces several long-term budgetary challenges, and the impact they will have on the domestic economy will directly contribute to the ability of the DoD to modernize and transform for the twenty-first century. Since 9/11 the US defense budget has skyrocketed, reaching around \$700 billion in 2010, including “supplementals.” Perhaps most important will be the projected rapidly increasing mandatory spending on programs such as Social Security and Medicare as baby boomers age. The US Census Bureau projects that by 2020 the number of people in the US population between the ages of 65 and 84 is expected to rise by nearly 50 percent. Since spending on these programs is directly tied to rising cost-of-living and health care costs (see fig. 1), it has outpaced defense spending as a percent of GDP. Although defense spending has increased in real terms since the post–Cold War drawdown, it has been nowhere near

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**Figure 1. Defense and selected entitlement spending as a percent of GDP**  
 (Adapted from *Budget of the United States Government*, Historical Tables, FY-2010.)

historic record levels as a percentage of GDP. Moreover, supplemental funding will likely be eliminated or significantly reduced as early as FY-2011. Given the rising costs of military personnel compensation costs, DoD health care costs, and facilities programs, it is clear that a sizable portion of “defense discretionary” spending is not really available; it is already earmarked for future requirements.

The rising costs of these mandatory entitlement programs, coupled with enduring projected budget deficits and required interest payments on the related debt, will create an inevitable downward pressure on the DoD budget. As Secretary of Defense Robert Gates pointed out, defense budget growth experienced over the last decade is no longer affordable.<sup>1</sup> The Defense Department must now plan to live within a much more resource-constrained environment, despite dramatic changes in security requirements.

Today the United States faces an incredibly broad spectrum of security missions: preparations for potential peer or near-peer competitors, such as China, India, or Russia; missions related to maintaining security against weapons of mass destruction (WMD), including the threats of rogue nuclear states such as North Korea and Iran; and, finally, a wide variety of nontraditional national security challenges such as global pandemics, cyber attacks (including those against the civilian infrastructure), pirates in

critical sea lanes, natural disasters, or energy security dilemmas, all of which could require DoD intervention. Importantly, each of these requires not just a military perspective but also a holistic view of security, combining inputs and capabilities from the DoD, State, Homeland Security, the Director of National Intelligence, and others—using both “hard” and “soft” power. The need for such a coordinated multiagency response has resulted in increasing demands for military involvement in new missions. Since none of these concerns can be addressed on a unilateral basis and often require multinational agreements and actions, future security planning must be done on a multiagency and multinational basis.

One important aspect of today’s “globalized” world is that advanced technologies and industries have spread worldwide, and in many cases the United States is no longer in the lead. As a result, the nation must be able to take advantage of advanced technologies, wherever they come from, and abandon the assumption that it can be self-sufficient. It is essential to recognize that national security, in the broader context, now includes such issues as the global financial crisis, climate change, and the challenge of global demographics. In early 2009, the director of national intelligence (DNI) stated that worldwide instability from the financial crisis was the “number one national security challenge.”<sup>2</sup>

Another major change driving national security in the coming years is the changed military environment itself. As JCS chairman ADM Michael Mullen stated in the *Capstone Concept for Joint Operations*, “The future operating environment will be characterized by uncertainty, complexity, rapid change, and persistent conflict.”<sup>3</sup> Each of these characteristics drives significant change. For example, *uncertainty* means both the forces and the equipment must be capable of adapting to the very broad spectrum of potential operations. Clearly, the nation will not be able to afford a force that is individually designed for each of the broad spectrum of threats from terrorism to peer conflicts. Rather, the force must be designed in terms of personnel and equipment to be fully adaptable, with open architecture and “plug and play” elements to provide the required capability any time. Similarly, the *complexity* of future “war among the people”<sup>4</sup> requires far greater integration among distributed sensors and distributed shooters, paying great care to collateral damage. These integrated “systems-of-systems” will most certainly require a heightened concern for cyber security. Advances in information technology and the proliferation of related products have given a large portion of the world’s population access to

information and advanced technologies. This phenomenon has, however, provided adversaries and potential adversaries increased access to sophisticated technologies and sensitive information. As a result, threats can change rapidly, leveraging the latest global commercial technologies.

The DoD's normal way of doing business, taking up to 20 years to develop new weapon systems, is totally incompatible with adversaries using available commercial technologies in new and different ways. It is also incompatible with the 9–18 month cycle of software changes that adversaries take full advantage of for cyber warfare. As a result, there is a real requirement for *rapid change*. When a combatant commander identifies an “urgent need” for new equipment in the field, the acquisition structure cannot take years to respond. There must be processes and funding in place able to respond in months or less.

The recognition of *persistent conflict*, as represented by the current wars in Iraq and Afghanistan, means our force planning and equipment planning must assume the need for sustained operations. Persistent missions of stability and reconstruction have now assumed a high priority.

To address this twenty-first-century world of national security, four top-level changes are required: a restructured National Security Council; a new, holistic national security strategy; a fiscally constrained DoD long-term budget, with matching force structure; and, most important, a major thrust for acquisition reform.

## The Acquisition Challenge

The DoD acquisition system must be significantly improved to achieve greater overall mission effectiveness with significantly fewer dollars. The administration and the Congress are attempting such initiatives with full recognition that there will be enormous resistance to the needed cultural change. This includes changes to the post-9/11 DoD budget explosion—the military and the defense industry are now structured on the assumption that it will be maintained. Essentially, it means changing the historic DoD paradigm, which accepts that “to get higher performance you have to pay more for it.” The belief, supported by decades of defense weapons cost growth, has been that we can continue to get higher and higher performance but only at greater and greater individual weapon costs. Yet, commercial electronics and information technologies have dramatically demonstrated the opposite; for example, computers today offer higher and

higher performance at lower and lower costs through the use of both product and process technology driven by market demand. Change is clearly required in the coming decades, since the national security market demand will require higher and higher performance at lower and lower costs.

To meet the new market demand, the acquisition paradigm of defense goods and services requires dramatic changes. Four essential issues surrounding our interrelated acquisition process must be addressed:

- *What* goods and services to buy (the requirements process),
- *How* to buy them (acquisition reform),
- *Who* acquires them (the acquisition workforce), and
- *From whom* are the goods and services acquired (the industrial base).

### **Requirements (What is Acquired)**

To meet the wide range of challenges within a resource-constrained environment, the United States needs an effective, agile, and affordable joint (i.e., multiservice) military force. It is absolutely necessary to focus on lower-cost systems and services while still achieving the required performance. The focus of twenty-first-century acquisition will include:

- Optimized, net-centric systems-of-systems, necessitating a movement away from the platform-centric thinking of the past to more network-centric thinking. These will be integrated systems-of-systems with large numbers of inexpensive, distributed sensors and shooters, all interlinked with complex, secure command, control, and communication systems.
- The new, holistic view of national security, combined with the projected twenty-first-century threats, will require a more flexible and adaptive force structure and a more balanced allocation of resources designed to address widespread needs. Some examples include improved C3ISR, more unmanned aerial systems, special operations forces, “land warrior” systems, missile defense, and cyber defense.
- New systems must be interoperable with those of other military services in a joint environment, with other US government agency systems, and with our coalition partners. The only way to ensure this is

to plan and exercise as we will fight—together with our allies, other agencies, and contractors on the battlefield. Today in Iraq and Afghanistan there are well over 200,000 contractors in the war zone, and yet there has been totally inadequate planning, exercising, and education on this likely future mixed force.

To address affordability, we must include cost as a design/military requirement. Cost, in a resource-constrained environment, translates directly into the number of systems that can be bought. One example of what can be done using this approach is the joint direct attack munition (JDAM). For that program, the chief of staff of the Air Force wrote the total requirement on a small piece of paper. The requirement had three elements: (1) “it shall hit the target” (an accuracy requirement), (2) “it should work” (a reliability requirement), and (3) “it should cost under \$40,000 each.” It currently hits the target, works well, and costs around \$17,000 each. It satisfied the military’s need not only in accuracy and reliability but also in the quantities required, at an affordable price.

## **Acquisition (How Goods and Services are Acquired)**

Achieving higher performance—faster and at lower costs—will require significant changes in the overall acquisition process. Major aspects of the changes in how goods are acquired include competition, commercial off-the-shelf (COTS), enterprise-wide information technology (IT), rapid acquisition, spiral development, and continuous improvement.

Competition is a driving force in the US economy and a vital component of efficiency and improved market performance in both the public and private sectors. It has been widely held among economists that competition provides incentives to produce better products faster, at lower costs, and with better quality while focusing more attention on customer needs. Congress recognized the benefits of competition and mandated its use with the Competition in Contracting Act of 1984. From a defense perspective, the mandate is, simply stated, “Competition is very beneficial; maximize its use.”

Competition built in from the beginning of a product’s or service’s acquisition planning is critical to ensure benefits can be harnessed throughout the process. Because of the phased design, development, production, and support requirements for system acquisition, natural cutoff points

exist where competition can be introduced into the process. Competition is largely accepted at the initiation of development; however, it is often resisted during production, even though it is the key to ensuring a real incentive for contractors to ensure they meet cost, schedule, and performance requirements. The level of net cost savings that can be achieved with competition can be significant and should be encouraged in all its various forms and options. The DoD needs to ensure that funds for dual-source production are available when the development and planning process begins and that the necessary oversight and management structures exist to support a dual-production environment across the services.

Competition during support should also be expanded across DoD programs. There is a potential here to significantly lower the total ownership costs of weapon systems, which can free up needed funds for force modernization. Within the over-\$200 billion annual DoD logistics budget, performance improvements are required, and savings potentials are significant.

While most of the federal regulations are written for acquisition of products, services now make up well over 50 percent of DoD purchases, and competition for services is very different from competition for products. Because of the various types of services—ranging from logistics services to security services to food services—and the numerous sources available, agencies and departments within the DoD need to understand the costs, benefits, and differences of each. The benefits from competition for services can be significant, with much flexibility available in exactly how the services are provided and who provides them. The important factor is to provide an incentive for those supplying the services to be efficient and effective.

Contractors who continue to provide increasing performance at continuously lower costs should be rewarded with follow-on contracts. Thus, competition should not be a requirement throughout a program, but simply maintained as a credible option in the event the supplier does not provide continuously higher performance at continuously lower cost. It is the “threat” of competition that is a sufficient incentive to motivate even sole-source suppliers to continuously lower their costs.

Another option is commercial off-the-shelf procurement. There are examples of COTS being used as far back as the 1970s. With the advent of the information age and widespread commercial technological advances, growing DoD emphasis on information systems heralded a shift in acquisition policy that strongly favors the use of COTS products. Considered a

seminal document in setting recent COTS policy, the “Perry Memo,” written by then–secretary of defense William J. Perry, called for the military to increase the purchase of commercial items and systems.<sup>5</sup> Perry also called for increased use of commercial practices and specifications. The requirement to consider and use COTS was officially enacted into law in the Federal Acquisition Streamlining Act (FASA) of 1994 and is also addressed in the Clinger-Cohen Act. COTS policies are contained in the *Federal Acquisition Regulation*, the *Defense Federal Acquisition Regulation Supplement*, the basic DoD acquisition policy (5000-series), and several other instructions, directives, and statutes. Using COTS, programs can leverage the massive technology investments of the private sector and reap the benefits of reduced cycle times, faster insertion of new technologies, lower life-cycle costs, greater reliability and availability, and support from a robust industrial base. Although the requisite policies are in place to mandate considering commercial solutions, there is still much organizational resistance and significant regulatory barriers.

Use of commercial products and services can be especially important at the lower tiers, since developing, manufacturing, and integrating COTS components are within the capability of a much greater number of smaller firms—firms that normally could not overcome the high barriers-to-entry into the defense industry. This has the effect of creating a much broader business base, and this competitive environment will increase innovation as well as help ensure continuous price competition. With commercial firms, it may be most desirable to contract using “other transactions authority,” including best commercial practices, rather than unique government requirements. This initiative would help encourage commercial suppliers to do business with the DoD. In many cases, the prime contract will utilize the *Federal Acquisition Regulations*, but the prime contractor should be encouraged to pass on the contractual terms for “other transactions authorities” when the subcontractors can be commercial suppliers. To gain the full benefits from the use of COTS, program managers need greater funding flexibility, since “color of money” conflicts can create problems. For example, COTS modifications may be bought with procurement dollars but may need some developmental testing. The supplier is not able to use procurement dollars for developmental test and evaluation.

While greater use of COTS will significantly reduce acquisition cycle times, the government should also implement modern, enterprise-wide IT systems. These systems—including logistics, business, personnel, and



finance—should link the government and industry, as appropriate. Although there are many cases of successful private sector business systems transformation, the transformation of DoD's business systems has proven to be very challenging. The DoD still relies on 4,700 stove-piped, non-integrated, noninteroperable business systems, creating a great deal of inefficiency. These inefficient "legacy" systems were created over the past several decades as organizations within DoD independently developed specialized systems. Each organization used unique processes, objectives, and functions designed to best support their individual mission area. As information systems have evolved, many of these specialized systems have become outdated. Moreover, the lack of data standards, obsolete computer languages, and noninteroperability are frequent causes of errors, redundancy, and growing maintenance costs. For over a decade, the DoD has attempted to integrate new information technologies to improve business management but with limited success.

The same level of success pertains to the rapid acquisition process. Rapid acquisitions take place within a number of ad hoc organizations but are ultimately shackled to the traditional acquisition system. This system is linear, stove-piped, and designed for risk minimization during extended development of technologically sophisticated equipment. Rapid acquisitions are generally of a completely different character—imperfect solutions, required immediately, using currently available technology. This tension will always exist between rapid and deliberate acquisitions. The need for rapid acquisitions is unlikely to decrease. When combatant commanders have an urgent need, there should be an institutionalized process, utilizing available contingent dollars to dramatically reduce the acquisition cycle time. One tool available to help reduce acquisition time is spiral development.

The DoD has historically used a linear acquisition strategy, often referred to as the "waterfall" method. The waterfall method gave military planners the illusion of stability, as firm, "final" requirements would be determined early in the development process. As a result, key development decisions would be made before sufficient knowledge was available to make accurate assessments. Recognizing the benefits of a concept developed by Barry Boehm to improve the software development process, which he called "spiral development,"<sup>6</sup> a growing number of senior DoD officials came to believe it should be extended to the acquisition of software-intensive weapon systems and, subsequently, to all weapon systems. In a military context, spiral development is understood as a cyclical development strategy

where a basic capability is rapidly fielded and incremental capability improvements are periodically made in subsequent “blocks.” The DoD officially endorsed spiral development as a key implementation process for the preferred evolutionary acquisition strategy in the 2003 version of DoD Instruction 5000.2, *Operation of the Defense Acquisition System*.

One of spiral development’s primary attributes is that it can help ensure a more rapid deployment of weapon systems. Specifically, when systems are developed incrementally and technology is mature enough to be integrated, risk is minimized. As a result, delays in development are reduced, keeping cost growth in check as well. Because spirals are flexible and can be changed as the program progresses, spiral development permits constant refinement over time, allowing the user and the developer to hone in on evolving requirements. Finally, spiral development can help foster a robust defense industrial base. The potential for competition at the beginning of each spiral creates broader opportunity and leads to increased pressures on private industry to be more efficient, while simultaneously encouraging innovation. Although it is DoD policy to utilize spiral development fully in both hardware and software practices, it is still far from common practice.

So, too (unfortunately), is the practice of incentivizing continuous improvement. Contractors must be incentivized to achieve continuous performance improvements at continuously lower costs. The benefits of the lower-cost systems must be shared with contractors through greater use of value-engineering (shared savings) clauses in contracts, as well as through awards of follow-on business when the desired results are achieved.

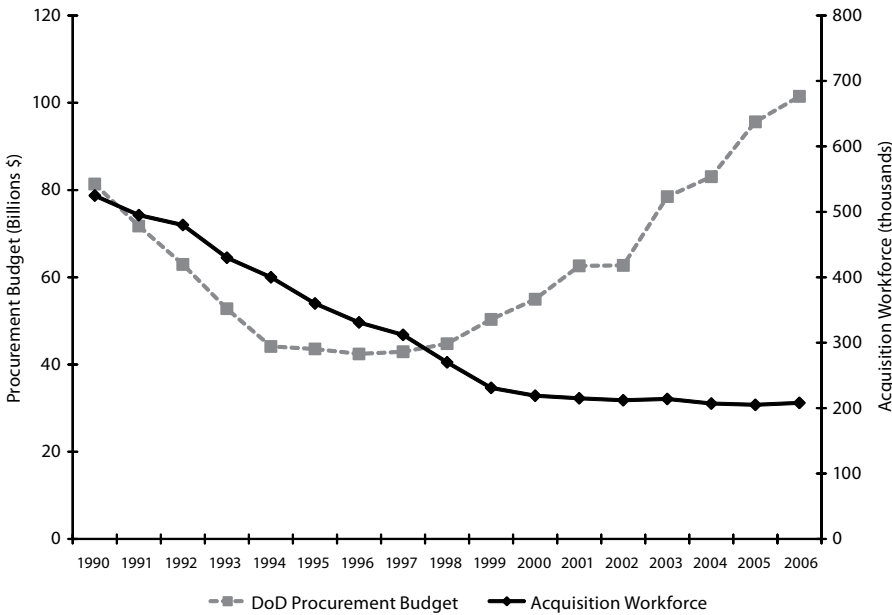
It must be noted that the acquisition approach of the Obama administration during its first two years has frequently been referred to as a “global war on contractors.” An adversarial atmosphere between the government and suppliers has been created by establishing a quota of 33,000 in-sourcing positions, a 10–13 percent mandated reduction in contracted dollars, a Defense Contract Audit Agency practice of withholding 10 percent of the cash payments, an emphasis on fixed-price development contracts, and efforts to cut back defense industry profits. Rather than creating a partnership between buyer and seller to achieve the common objectives of higher performance at lower cost, as in the commercial computer business, just the opposite has occurred. When proper market incentives are presented, such results should be achievable within the defense marketplace.

Many of these government initiatives are well intended, but implementation has been carried to an extreme. In the case of the in-sourcing initiative, ample evidence shows that inherently governmental functions in the acquisition workforce have been grossly undervalued, and there is an extreme shortage of government people (particularly at the senior levels) in the contracting community—clearly an inherently governmental function. However, there has been a move within the services to bring a significant portion of their equipment maintenance in house, with the argument that it will save money. In fact, the Air Force has realized an estimated 40-percent cost savings for this move, although Congressional Budget Office analysis states that “over a 20-year period, using military units would cost roughly 90 percent more than using contractors” for this function.<sup>7</sup> While the management, oversight, and budgeting of this work is clearly “inherently governmental,” the wrench turning is not an inherently governmental function. There are distinct advantages (besides the 90-percent cost savings) to using contractors who are trained, can surge as required, are incentivized (through competition) for higher performance at lower cost, and can be terminated when not needed. Overwhelming data shows that using performance-based logistics contracting results in significantly higher performance in such measures as readiness and responsiveness, as well as lower cost. Inherently governmental functions must be conducted by the government acquisition workforce, but the rest should be done in a competitive environment (between the public and private sectors or between competitive firms).

### **The Acquisition Workforce (Who Does the Acquiring)**

A flexible, responsive, efficient, and effective acquisition program for sophisticated, high-tech goods and services requires “smart buyers.” This includes both the quantity and the quality of senior and experienced military and civilian personnel. Unfortunately, in the last decade this requirement has not been met. As the defense budget plummeted in the post-Cold War period of the 1990s, it was natural for the DoD to make significant cuts in the overall acquisition workforce. Then, in the Defense Authorization Act for FY-1996, Congress mandated that the DoD further reduce its acquisition workforce by 25 percent by the end of FY-2000. In total, the acquisition workforce fell from approximately 500,000 to

around 200,000 (see fig. 2). However, as the defense budget increased rapidly after 9/11, the DoD maintained the same lower level of acquisition workforce. By the end of the first decade of the twenty-first century, the budget, including the supplemental, had effectively doubled while the acquisition workforce remained constant.



**Figure 2. Decline in acquisition workforce and increased defense spending** (Reprinted from Jacques S. Gansler et al., *Urgent Reform Required: Army Expeditionary Contracting*, Commission of the Army Acquisition and Program Management for Expeditionary Operations, 1 October 2007.)

Perhaps even more significant, many experienced senior civilians were retiring, while at the same time, acquisition general officer positions were not being filled with acquisition personnel. In 1990 the Army had five general officers with a contracting background; in 2007 it had zero. Similarly, in 1995 the Air Force had 40 general officers in acquisition; today it has 24. Senior executive service (SES) leadership in the contracting career field decreased from 87 to 49 positions in the same time period. In the Defense Contract Management Agency, which is responsible for oversight of contracts, total personnel count declined from 25,000 to 10,000 and from four general officers to zero.<sup>8</sup>

The second issue affecting the acquisition workforce is the age of its members. A significant proportion of the workforce is at or near retire-

ment age. Without careful planning, the potential exists for a major turnover of personnel in the near future, ultimately leading to a severe decrease in institutional knowledge as well as the short-term possibility of an increased workload for those employees who remain. While about 31 percent of the private sector workforce is 50 or older, some 46 percent of the federal workforce is 50 or older.<sup>9</sup> Within the DoD, an even higher percentage of its workforce is at or near retirement age. In 2005 the “baby boomers” and “silent generation” within the DoD made up roughly 76 percent of the acquisition workforce; thus, a disproportionate number of employees are either ready to retire or approaching retirement age, as is illustrated by figure 3.<sup>10</sup>

Generation	National (2005)		DoD-wide (2006)		DoD AT&L Civilian Workforce (2006)	
	Workforce (millions)	Percent Workforce	Workforce	Percent Workforce	Workforce	Percent Workforce
Silent Generation (Pre-1946)	11.5	7.5%	45,625	6.7%	8,322	7.4%
Baby Boomers (1946–1964)	61.5	42.0%	438,971	64.5%	77,779	68.7%
Generation X (1965–1974)	43.5	29.5%	132,948	19.5%	17,581	15.5%
Generation Y (1977–1989)	31.5	21.0%	62,676	9.2%	9,394	8.3%
Millennium (1990–Present)	51.0	0.0%	153	0.0%	0	0.0%
		100.0%		100.0%		100.0%

**Figure 3. Distribution of workforce by generation** (Reprinted from Ken Kreig, *Human Capital Strategic Plan* [Washington: Undersecretary of Defense for Acquisition, Technology, and Logistics, 2007].)

When comparing new hires to retirements, it is evident the replacement rates are not great enough to stem the upcoming tide of older workers who will retire. Some 13 percent of the DoD civilian acquisition workforce in the contracting series were eligible to retire in 2008; however, 30 percent will be eligible to retire in 2013, and about 50 percent will be eligible in 2018. Furthermore, in 2008 the DoD hired only 2,228 new employees in the contracting series (many with little experience), while they lost some 2,291 to agency changes or occupation series changes. The result is not only a net loss in contracting series personnel for the year, despite both increasing requirements and spending, but also a net loss in experience.<sup>11</sup>

The need for hiring people with contracting and management experience into inherently governmental positions is widely recognized by both the Congress and the administration. It is important that these positions be filled with the highest caliber of personnel and that they be given ample training and opportunities for maximum experience. However, it must be recognized that it will take time for these new hires, many of whom are young interns, to develop the necessary experience. Thus, the government should consider special programs for hiring acquisition experts from industry for three-year, term-limited periods, with careful attention to avoiding any conflicts of interest. On the military side, it is also critically important that general officer positions be filled with people who have experience and knowledge in the field to lead the acquisition workforce. Overall, the acquisition personnel function has been grossly undervalued over the last decade, resulting in inefficiencies and even a number of scandals.

### **The Industrial Base (From Whom Goods and Services are Acquired)**

The defense industrial base has experienced considerable difficulty in meeting cost, schedule, and performance objectives. It is increasingly isolated from the broader domestic and global economy and is less agile and innovative than necessary. A Defense Science Board (DSB) report on the twenty-first-century defense industry stated: “The last two decades have seen a consolidation of the defense industry around Twentieth Century needs. The next step is DoD leadership in transforming to a Twenty First Century National Security Industrial Structure.”<sup>12</sup> To achieve the desired industrial base it will be necessary to first transform the way the DoD conducts its business. Transforming the demand side will force a change in the structure of the supply side. As the DoD makes acquisition changes, the defense industrial base will begin to transform. The focus must be on achieving several lofty goals: the industrial base must be efficient, responsive, technologically advanced, and highly competitive at all levels. As the DSB emphasized, this overall industrial base must include not only the private sector but those facilities and operations of an industrial nature in the public sector (e.g., Navy shipyards, Army arsenals, Air Force depots, etc.) as well.

The twenty-first-century industrial base must also be viewed as a global base, where the “best in class” is fully utilized. Globalization offers the

DoD many benefits. Perhaps most important is the increased use of commercial products, technologies, and services—none of which can be separated from the globalization phenomenon. Moreover, the use of the global industrial base has substantially lowered the cost of selected new systems, system upgrades, and operational support. Foreign sourcing can also provide competition for, and improve innovation in, domestic firms. The DoD cannot turn back the clock on its increased dependence on the global commercial sector without major setbacks in capability.

Leveraging the global industrial base requires changes in US export and import laws and certainly requires ensuring that potential vulnerabilities are explicitly addressed. This is the approach being taken on the joint strike fighter, to be acquired by 11 nations—using the best-in-class equipment available worldwide for all of the subsystems. It is interesting to observe that today every US weapon system has parts from foreign suppliers, and these were selected not because they were the lowest cost but because they were the best performance available. With the global spread of technology and industry, it is important that we think globally in providing the best possible equipment to our fighting forces.

For industries to invest in independent research and development (IR&D) and capital equipment modernization, it is essential they are “healthy” (i.e., profitable). Government contracting personnel often strive to reduce profits rather than working with industry on reducing costs, not acknowledging that profit is a very small percentage of a program’s total costs (nominally in the 5–8 percent range, but often even less). The government’s primary objective must be to incentivize contractors to continually increase performance while reducing total costs.

In many areas today, the commercial world has more-advanced technology, higher performance, and lower-cost equipment of which the Defense Department must take full advantage. It must consider commercial suppliers of goods and services as part of its industrial base. In fact, the ideal situation is to have suppliers that have integrated commercial and military operations (i.e., “dual use”). Such dual-use operations provide increased volume; thus, not only lowest cost but also the capability for surge in goods or services during wartime. This combined operation does necessitate the waiver of some specialized DoD requirements (e.g., unique cost accounting), but it has huge payoffs for higher performance at lower cost and is certainly worth doing.

Prime contractors performing system-of-systems integration support functions have an inherent conflict of interest that creates perverse incentives which may benefit the company's bottom line at the expense of the government; for example, in the selection of platforms and subsystems. As the DoD moves toward system-of-systems, it is important it have independent firms capable of doing the systems architecture and systems engineering of the overall system without conflicts of interest. In the past there were large numbers of mid-size, independent firms with this characteristic, but they were largely acquired by prime contractors during the post-Cold War mergers and acquisitions period. Now it is up to the government to recreate that industrial base to support it directly in developing the best possible overall system-of-systems.

To gain the benefits of competition, it is clearly desirable to have multiple firms at all tiers in all critical sectors of the industry as subcontractors and parts suppliers. This becomes particularly important if there is a reduction in the future overall DoD budget. Considerations of future mergers and acquisitions must be reviewed carefully with these objectives in mind.

In the past when non-inherently governmental work was done by government employees and competed between the public and private sectors, the data showed overwhelmingly that the government got higher performance at significantly lower costs, no matter who won the competitions. In fact, the average savings were over 30 percent and, in many cases, significantly higher—even though more than 50 percent of the time, the government won these competitions.<sup>13</sup>

In 2009, under government union and depot caucus pressure, Congress stopped these competitions. Although it did not officially kill public/private competitive sourcing, the FY-2009 Omnibus Spending Bill put a temporary halt to these job competitions. While this bill may be the final nail in the coffin of competitive sourcing, the program had been slowly dying since 2006.<sup>14</sup> Prior to cessation of competitive sourcing, however, the government won two extraordinary competitions with cost reductions of 70 percent and 82 percent respectively—both within the Internal Revenue Service.<sup>15</sup> With such overwhelming evidence (of achieving higher performance at lower costs), it would seem highly desirable that all future non-inherently governmental work be contracted in a competitive fashion.

There has also been a breakdown in government-industry dialog. During the Clinton administration, semiannual meetings were held between a significant number of defense industry CEO's (including small and minority



firms) and senior leaders of the DoD; two-way industry-government communications was encouraged. During the Bush administration, these meetings were discontinued. For the industry to fully understand the government's needs and initiatives and the government to fully understand the concerns and needs of the industry, such communication must not only continue at the senior-most levels but also within all areas of specialization. This can be done at the generic level without any conflicts or special contractual considerations, and the results can be made public to allay concerns over fairness or ethics. The government can benefit significantly from such exchanges.

It is critically important throughout the overall acquisition system that there be no conflicts of interests. This became an issue of increasing importance as a result of consolidations in the defense industry in the post-Cold War period. After initial consolidations at the prime contractor level, many firms began vertical acquisitions. In some cases, prime contractors acquired firms that had personnel working directly in government program offices involved in programmatic decisions. On occasion these decisions involved hardware supplied by other divisions of the same prime. Due to their acquisitions of subsystem suppliers, prime contractors were making make-or-buy decisions between their own divisions and competitors when purchasing the "best" subsystems. It is therefore important for the government to have significant visibility into such vertical integration issues—not to decide the make-or-buy choice, but to assure the openness of the process.

## **Summary**

Acquisition has reached a critical period. Many even compare it to the period following the launch of Sputnik or the fall of the Berlin Wall. Today, the security world is changing so dramatically that a holistic perspective is clearly required in terms of a multiagency and multinational approach. Moreover, after a decade of solid defense budget growth, which will almost certainly change, many difficult choices and shifts remain. Secretary Gates began that shift with his termination of the F-22 fighter production and cutbacks of the Army's Future Combat System program. However, he has argued for an even greater shift in the balance of resources toward more intelligence, surveillance, and reconnaissance (ISR) systems and greater use of unmanned systems and robotics.

In spite of this dramatically changed national security environment, the controlling acquisition policies, practices, laws, military budgets, and requirement priorities have not been transformed sufficiently to match the needs of this new world. In fact, there is still an emphasis, in many cases, on resetting of the equipment that has been used in Iraq and Afghanistan versus modernization.

To address these challenges, we offer four summary recommendations. First, in an effort to focus the requirements process and improve affordability, the undersecretary of defense (acquisition, technology, & logistics) should mandate that cost be included as a design/military requirement for weapon systems. Second, although the requisite acquisition policies are in place to mandate the consideration of competition and the use of commercial solutions, they are frequently not used effectively. DoD leadership must work to ensure the option of credible competition is present during all phases of acquisition and exercised if the current contractor is not achieving desired performance, cost, and schedule objectives. Also, the use of commercial technologies and services should be maximized through active efforts to remove the many current barriers to their use. Next, the DoD's senior leaders must focus on developing a world-class acquisition workforce in sufficient numbers with the necessary skills and experiences to successfully support defense acquisition in the twenty-first century. Finally, the DoD must foster a defense industry that is flexible, adaptive, agile, innovative, low-cost, high-quality, and satisfies twenty-first-century security needs. To achieve the desired industrial base, it will be necessary to first transform the way the department conducts its business to allow for the effective acquisition, management, and support of complex systems, systems-of-systems, and services required of the nation's capabilities-based military forces.

Clearly, adopting these recommendations will be a difficult transition, since what is required from DoD military and civilian employees is a "cultural change." The literature is very clear on what it takes to achieve a cultural change. First, there must be a clear recognition of the need for change (a crisis). The combination of anticipated downward budgetary pressures and acquisition workforce issues creates such a forward-looking crisis. Second, and perhaps most important, is the need for leadership with a vision, a strategy, and an action plan to achieve the required changes. As evidenced by speeches and statements, there is widespread recognition within the Congress and the executive branch of this need for change. The

question is whether the changes being enacted now and those proposed are the right changes to achieve the desired objectives. Namely, will they satisfy the twenty-first-century needs for higher performance at lower costs with greater agility and speed?

Achieving the desired changes will take political courage and sustained, strong leadership by both the executive and legislative branches working together. The American public, and particularly our fighting men and women, deserve nothing less; the nation's future security depends upon it. It can be done, and the time to start is now. ■■■

## Notes

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