Prepared Statement

Senate Armed Services Subcommittee on

Emerging Threats and Capabilities

Tuesday, May 3, 2011

Introduction

Chairwoman Hagan, Ranking Member Portman, members of the subcommittee, thank you for the opportunity to submit this written testimony on the U.S. Department of Defense's (DoD) commitment to maintain the health and productivity of the defense industrial base and the defense acquisition workforce.

The Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD(AT&L)) is the principal staff element of the Secretary of Defense for all matters relating to DoD acquisition; research and development, advanced technology; developmental test and evaluation; production; logistics; equipment sustainment; installation management; military construction; procurement; environmental security; and nuclear, chemical and biological matters.

I am the Principal Deputy to the Under Secretary of Defense for Acquisition, Technology and Logistics and I am joined today by The Honorable Zachary Lemnios, the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)) and Mr. Brett Lambert the Deputy Assistant Secretary of Defense for Manufacturing and Industrial Base Policy (DASD(M&IBP)).

Today, I will discuss the Department's activities to sustain the health, vibrancy, and efficiency of the U.S. defense industrial base. The U.S. military's superior operational capabilities are enabled by our industrial base. For decades the U.S. has commanded a decisive lead in the quality of defense-related research and engineering conducted globally and in the military capabilities of the products that flow from this work. However, the advantages, which have enabled American pre-eminence in defense technology, are not a birthright and they must be sustained. The U.S. defense industrial base is critical to equipping our military with superior capabilities, as recognized by Dr. Carter earlier this year: "a strong, technologically vibrant, and financially successful defense industry is… in the national interest.[1]"

I will discuss the policies and processes adopted by the Department to actively strengthen the sources of science and technology – the industrial base, defense labs and academia – to sustain technological superiority, provide innovative capabilities and acquire dominant war fighting weapon systems for our soldiers, sailors, airmen, and marines.

The Industrial Base in a New Era

The Department of Defense relies on a robust and capable defense industry to develop, field and maintain high quality equipment. America's industrial capacity and our capability enabled victory in World War II, maintained the technological edge against the Soviet Union, and today helps ensure that our military personnel in harm's way have the world's best equipment, supported by modern logistics and information systems. Our technological dominance is what enables us to accomplish our national security missions. To sustain this advantage, the Department must continuously sustain and strengthen the key sources of militarily relevant science and technology from its sources in the defense and non-defense industry, government laboratories, and academia.

As the era of sustained growth in the defense budget comes to an end, the Pentagon's stewardship task becomes more challenging. The Department needs to adapt its industrial base considerations and actions to the emerging reality of relatively flat defense budgets. In the past two years, the Department has significantly increased its efforts to address the implications of the changes in the arc of the national security budget on our defense industry.

[1] Ashton B. Carter, "The Defense Industry Enters a New Era," Remarks at the Cowen Investment Conference, New York, NY, February 9, 2011.

Our base today is more global, more commercial, and more financially complex than it was in the past. The defense industry, from the prime contractors that work directly with the government to their subsystem and component suppliers and even their raw materials suppliers, is constantly changing, constantly adapting to the Department's requirements and to the conditions in the marketplace. This natural evolution in the base is inherent in a free enterprise system, but it can bring with it new challenges for a Department of Defense that seeks to sustain and grow a strong defense industrial base even as budget growth declines.

Those challenges posed by a relatively flat defense budget vary across the many sectors of the defense industrial base. The situation for companies that offer platforms like ships and tanks differs from the situation for companies in emerging sectors like unmanned vehicles and cyber-defense. The situation differs at various tiers and with the products produced. At some levels, a key supplier may make a truly defense-unique product, while other suppliers at other tiers are motivated primarily by their sales to commercial markets, offering innovative products to the defense supply chain as a sideline – a sideline for them, in terms of revenue, that may be vitally important for the Department, in terms of military capability or cost control. Understanding and reacting to this complexity in the industrial base, the Department must increasingly tailor its relationships and policies to specific circumstances. One area of particular concern is maintaining adequate product "design teams" for the key weapons systems product types that the Department procures. A long hiatus between new program starts in a given area can call into question the continued existence of experienced design teams and the body of knowledge they bring to development of certain types of products. Once lost, rebuilding this type of capability can take a generation or more and the Department must be particularly vigilant about situations where this can occur.

To understand this increasing dynamism and complexity the Department is pursuing multiple, concurrent efforts to map and better understand the defense industrial base. This approach is in contrast with other more traditional narrow program-focused and product-focused assessments. The Department will replace intuitive judgments about the impacts of changing domestic demand, globalization, commercial-military integration, emerging sources of innovation, and other issues with data-driven industrial base evaluations. By continuously assessing the industrial base on a sector-by-sector, tier-by-tier basis, the Department will develop a reservoir of critical and actionable information.

Looking ahead, this deeper understanding will be increasingly important as the changing budget environment prevents the Department from readily addressing program management and industrial base challenges with the simple antidote of increasing expenditures. For the fifth time since the Second World War, the Defense Department is facing a significant defense budget transition, in this case from a decade of rapid year-on-year growth. Nevertheless, we do not expect the base defense budget to fall precipitously, like it did in the post-Cold War transition. The Department will still be a significant market for the industrial base, will still support an innovative science and technology base, and with appropriate attention will still maintain our technological advantages.

That said, we do need to manage our investments more effectively to ensure a healthy industrial base. A decade of rapid budget growth driven by pressing operational needs has fostered an environment in which cost discipline has lost ground to the urgency of operational needs and projections of rapidly evolving threats, both in government and in industry. Greater efficiency is one answer. Secretary Gates' efficiency initiative, which includes Under Secretary Carter's Better Buying Power initiative addressing the contracted expenditures of the Department, is already helping adapt both the Department and our industrial base to the new fiscal realities; but efficiency is only one part of the solution set to the challenges we face.

A Healthy Industrial Base

The industrial base equips our war-fighters. Industry makes the products that are our servicemen and women depend upon. America relies on a defense industry that is healthy, robust, and innovative. A healthy industry is one that on the whole makes a competitive profit. Companies exist to make money, and without that potential no one would be competing to win defense contracts. As a whole, most

corporations in our base fare well, particularly in comparison with other relatively mature industrial sectors. In addition, our primes typically have the advantage of strong backlogs and significant visibility into plans and programs in the markets they serve. The Department of Defense will not deny the businesses it deals with the opportunity to make a reasonable profit. Individual companies, however, if they do not provide the government with quality products that meet the Department's requirements on time and at reasonable cost, should expect to make reduced or no profits. In the high budget environments of the past many companies have grown to expect high margins independent of the quality of their performance. As budgets shrink this practice must stop.

A healthy industrial base is not just profitable. Being healthy also includes being fit, or if you will, lean. Competition, disciplined cost negotiations, and well structured contract incentives are the key motivators the government can employ to ensure that our industrial base is lean. Competition is one of the key drivers of productivity and value in all sectors of the economy, including defense. Sometimes competition is provided by having two or more providers of the same thing go head-to-head, but where this is not possible we can still harness this power through a wide variety of other competitive strategies that create a competitive environment where companies are not complacent about the work they will receive.

Contract incentives must provide rewards for good performance and consequences for poor performance. Achieving this balance is a key goal of the Department's BETTER BUYING POWER effort. As such, the Department is pursuing initiatives to reward contractors for successful supply chain and indirect expense management, such as increasing the use of Fixed-Price Incentive Fee contracts where it makes sense, but not where it puts unreasonable risks on industry.

As the budget environment changes, we expect companies to adapt to this new era through both organic efficiencies and inorganic growth and realignment. Successful companies are constantly trying to anticipate market shifts and position themselves to be more competitive and to achieve greater growth and profitability. In general this is a healthy process. So readjustment to new technologies, priorities, and defense budgets is likely to involve a normal course of realignment as companies move to position themselves for growth, competitiveness, and efficiency improvement.

The Department is very conscious that the top tiers of the defense industry have already consolidated significantly, and we do not anticipate it to be in the best interest of the warfighter or taxpayer to see additional merger activity among the top prime contractors. But we do expect some increased activity at the middle and lower tiers, activity that we will monitor closely. We will be particularly attentive and vigilant to vertical integration, especially when such combinations capture key suppliers or technologies that may restrict the availability of components and subsystems to multiple players on a competitive basis. We have some tools to influence these activities, such as the Department's roles in the Hart-Scott-Rodino and the CFIUS processes, along with some DFARS regulations concerning matters such as organizational conflicts of interest. In this new era it is critical that the Department communicate clearly, openly, and consistently about our concerns as early as possible. We don't want industry wasting its time and effort on unacceptable combinations or in pursuit of business arrangements that the government will ultimately find objectionable. The Department understands that we need to be transparent and consistent and avoid reversing direction whenever possible.

Toward that end, we have publically described our expectations, or "guideposts," for any future industry rationalization and consolidation. Dr. Carter laid out these guideposts publically in a speech he delivered in New York in February 2011. Well aware that each suggested transaction must be examined on its own individual merits, we have laid out the overall environment in which we expect this industry to operate. From the Department's perspective, we need firms and suppliers interested, as we are, in a long-term commitment to the base, not short term financial gains which may ultimately erode the viability and vibrancy of our suppliers. In this respect, our viewpoint is similar to long-term investors who pursue a balanced portfolio and expect positive returns over time. This is a message we convey both publically and privately in our interactions with both industry and Wall Street.

While working with our traditional suppliers as they reshape their business models and practices, the Department also encourages new sources of competition in the form of new entrants into our market. New entrants renew and refresh the technology base and ensure that defense is benefitting from the main currents of emerging technology, particularly commercial technology and technology originating in small businesses. We must redouble our efforts to lower the barriers to entry. We are addressing many of these barriers – such as needless or time consuming paperwork – again as part of the Better Buying Power Initiative, not just because they impose unnecessary costs but also because we want to make it easier for companies to do business with us.

Our efforts to encourage competition in the industrial base build on our commitment to gain insight about the state of the base's health before dictating oversight – insight that the Department has historically lacked, especially about the companies at the lower tiers of the industrial base. We have undertaken an aggressive effort to map and assess the industrial base sector-by-sector, tier-by-tier (S2T2). The goal is to understand the gross anatomy of the industrial base. Just as doctors do not seek to understand the functioning of every individual neuron in the central nervous system, the Department does not seek to know the exact details and reasoning behind every supplier relationship. But we do need to better understand the industrial base's nervous system, circulatory system, and bone structure.

Improved understanding of the structure of the defense industry aligns with the Better Buying Power Initiatives. For example, the Department expects to reward prime contractors for successful supply chain management, efforts that add value to DoD by reducing the costs of the components integrated further up the product stream. Understanding subtier-level connections between the Department's programs will improve our own supply chain management, helping the Department's efforts to maintain economical and stable production rates at multiple tiers. A better baseline of industrial base data will assist programs' market-research efforts, including in the area of contracted services, where market research needs particular attention and where the Department tends to pay rates above commercial rates. Comprehensive information about industry's deeper structure will help program managers develop strategies to increase competition, as directed under the Better Buying Power initiative.

As the budget environment changes we expect that some niche firms will have trouble staying in business due to temporarily decreased demand. We expect these firms to be proactive about their concerns, but the Department will be proactive also. We will attempt to identify early warning signs of particular product niches that may get into financial trouble due to temporarily decreased demand despite the fact that they offer truly critical, unique and necessary capabilities. While we anticipate these cases to be exceptions, we must nonetheless be prepared on occasion to tailor our investment policies to preserve essential capabilities. We need sufficient insight to make these strategic investment choices.

The new S2T2 repository of industrial base data will also serve as a jumping off point for future assessments by all Defense Components, ensuring that data collection and analysis cumulates, thereby increasing the value of all industrial base assessment efforts. Having one office in the Department leading this effort will prevent duplication of effort that wastes the Department's resources and harasses overworked program offices and contractors with multiple, redundant requests. Sustaining and strengthening the data over time will also contribute required insight to the Department's merger, acquisition, and divestiture reviews and other industrial base policies.

While the Department certainly needs more systematic insight into the industrial base, we are already aware of the important outlines of major changes, and we are implementing policies to address the new realities. During the Cold War our industrial base consisted primarily of US-owned and -operated private firms building defense-unique products almost exclusively for the Department. This is clearly no longer the case. We now find ourselves buying products from international commercial and mixed defense and non-defense companies that service many customers – both within and outside of defense markets.

The Department has found that this shift from defense-unique to commercial companies is typically in the best interest of the warfighter and the taxpayer. Buying from commercial sources and taking advantage of commercial technology in areas like information technology incorporates more

innovative products into the military's arsenal, and it does so at a lower cost to the taxpayer. It also injects more competition into our buying processes and allows for quicker integration of technology improvements into weapons systems.

But buying commercial goods and services is not without risks and complications as well as rewards. The commercial base has become increasingly global in nature. It maintains global supply chains, gets financing from global investors, and employs a global workforce. Globalization poses numerous advantages and challenges. Foreign competition pushes our domestic base to continue producing innovative, cutting-edge products that can compete with new international entrants, fomenting competition in price and capabilities throughout the vender base. It allows the Department to benefit from a broader base of R&D and capital investments, augmenting our own investments that draw on the U.S. government budget. Sharing technologies and processes among allies also helps ensure that when we engage around the world, our systems are interoperable to the greatest extent possible.

On the other hand, the benefits of globalization are tempered by potential risks. Some foreign nations and non-state actors are constantly trawling global supply chains, trying to gain access to critical US technologies and information on US defense systems. Similarly, the U.S. needs to address risks that counterfeit parts or even components intentionally designed to subvert crucial defense systems could slip in through the increasingly complex, global supply chain. The Department is strongly committed to rigorous systems testing and to our anti-counterfeit and program protection plan initiatives. We also cooperate closely with other parts of the government on some of these responses to globalization.

As a key example of the whole-of-government response to globalization, the Defense Department – along with the NSC and the departments of State, Treasury, and Commerce – is currently developing reforms to our export control process to protect our most valuable technologies – our "Crown Jewels" – while also streamlining the process to make it easier for companies to export parts or systems that are not critical defense capabilities. Improving the U.S. defense industry's ability to export is the necessary and expected flip side to our own increased openness to globalization of the defense supply chain: as foreign firms inject competition into the U.S. market, U.S. firms should gain equivalent advantages in overseas markets.

Globalization also poses unique risks of supply chain disruptions. Natural disasters can happen anywhere in the world, and even an entirely domestic defense supply chain could face disruptions. But if a disruption occurs at a domestic supplier, the Department can use Defense Priorities and Allocation authorities under the Defense Production Act to compel US industry to prioritize DoD critical orders. Those authorities do not extend overseas, so when disruptions occur at foreign suppliers, the Department may have a more difficult time adjusting. We are working to alleviate this challenge by increasing the use of bilateral defense trade agreements and security of supply agreements with our allies.

Finally in order to have a healthy industrial base the Department must have an acquisition system that avoids false starts - programs that are canceled after substantial investments, but before serial production. We want our industrial base to produce high-quality systems that are delivered to the Department and that serve our warfighters' needs. The Department has a long history of beginning programs that we ultimately discover are unaffordable to produce. This certainly doesn't benefit the Department or the taxpayer and it doesn't benefit our industrial base. For these reasons the Better Buying Power Initiative stresses affordability as a key parameter of the defense acquisition process. We are now forcing planners in the Department to confront affordability constraints at the beginning of programs when requirements are formulated and we are putting cost caps all new starts that we will enforce over the life of the program.

We must leverage creative innovation and turn it into real products, meaning that we need to continue our efforts to strengthen the focus on technology transition and manufacturing process development. As a 2006 Defense Science Board Task Force study led by Dr. Jacques Gansler concluded, use of immature manufacturing technology and processes, particularly among lower tier suppliers, substantially increases the cost of new weapon systems. The Fiscal Year 2011 National Defense Authorization Act presented new opportunities to align assessments of subtier capabilities with

programs like Title III of the Defense Production Act, the Manufacturing Technology Program, and the Industrial Base Innovation Fund that are geared specifically toward addressing these manufacturing readiness concerns. Congress has long championed these important programs, and we look forward to continuing our partnership to support the warfighter at the best value for the taxpayer.

Sources of Innovation in Industry, Academia, Defense Laboratories, and Federally Funded Research & Development Centers (FFRDCs)/University Affiliated Research & Development Centers (UARCs)

The technologies that provide the basis for all our weapons systems are created through a variety of mechanisms in industry, academia, and defense laboratories. The Department maintains a strong relationship with industry through a variety of programs designed to foster collaboration and encourage innovation - Industry Independent Research and Development (IR&D) programs; the Small Business Innovation Research (SBIR) program; and Cooperative Research and Development Agreements (CRADA). The Department's IR&D program encourages firms to pursue innovative technological solutions to the most challenging operational problems, both for near-term missions and to prepare a vibrant tech base for an uncertain future. DoD reimburses approximately 1200 firms in the industrial base for IR&D efforts, thus providing opportunities for innovation to both the large primes and the smaller mid and lower-tier firms. The IR&D funding is critical to ensure a healthy talent base in industry and to keep industrial design team skills sharp over the long term.

The Department has recently launched initiatives to increase communication with industry regarding technology needs and operational requirements to ensure maximum return on industry's IR&D efforts, which the Department reimburses as an allowable cost. For example, the Department is preparing Vendor Communication Plans which provide clear guidance and encourage communication between industry and government about requirements and technology objectives. The Department is also reaching out to industry to find new ways to collaborate through sharing of detailed information about their IR&D projects and the Department's technology roadmaps. We believe efforts like these will encourage Industry to continue to invest in high-quality research and development projects, and also help them identify the technical talent they will need for the near and long term to be a successful source of innovative technology for DoD.

The Department also uses its SBIR program to fund S&T talent at small businesses. In FY 2010 the Department issued approximately 2,000 SBIR Phase 1 awards and approximately 900 Phase 2 awards. The Department also concluded approximately 2,500 CRADAs across a broad industrial base. SBIR projects and CRADAs leverage the innovation created by the industrial base talent to bring new ideas into the Department. These vehicles provide support to small businesses which are the greatest engines for innovation and growth in our economy.

The Department's basic research program, primarily with Universities, paves the way for our technological future – the scientific discoveries it yields today provide the foundation for tomorrow's capabilities. Given the increased global emphasis on research and development, the U.S. cannot assume an assured technological superiority on the battlefield: to do so it must remain on the scientific cutting edge. The President's commitment to an appropriately funded basic research program is reflected in the Department's FY 2012 budget request. The budget requests increases the Department's basic research accounts by $79M to $2.078B, or 2.2 percent real growth from the FY 2011 President's Budget Request.

The Department also supports an extensive program to shepherd discoveries into solutions to today's problems and to develop the next generation of research leaders who will set the vision and exploit opportunities. In order to increase the effectiveness and value of the Department's basic research program, the research and engineering enterprise has redoubled efforts that: attract and inspire the best scientists to engage problems of defense importance, and to enable those scientists to better interact with developers and users; improve management practices and policies to enhance productivity and enable scientists to better communicate and collaborate; identify emerging areas of science with the potential for significance to defense capabilities; and focus DoD basic research on specific domains of defense interest, and on transformational scientific opportunities.

Basic Research is fundamentally about creating knowledge, and innovation occurs when that knowledge is used in creative ways. The Department believes sharing basic research information helps advance the progress of knowledge and attracts the best talent. Last year the Department reaffirmed and extended its policy towards removing restrictions on publication of fundamental research results. We believe this will encourage researchers to work in areas important to the Department.

Another key source of technological innovation is the Department's laboratories. The laboratories serve as the technical core of the Department and encompass an important pool of talent and resources. This footprint includes 67 DoD laboratories dispersed across 22 states with a total workforce of 60,000 employees; 35,400 of whom are degreed scientists and engineers who conduct DoD-relevant research leading to key technology demonstrations and publish thousands of reports and peer-reviewed technical papers. In many cases, this community defines a technical field with seminal work and leads the industrial base in their respective areas.

This highly skilled workforce and associated unique infrastructure perform state-of-the-art basic and applied research; respond to rapid need requests (prototyping, equipment modifications, etc.), support acquisition programs and the deployed forces. The defense industrial base looks to the DoD labs for new ideas and concepts for next generation weapon systems while academia works closely with the labs to transition new concepts into the military technical community.

Through special direct hiring authority granted by Congress, we have the ability to rapidly hire new graduates in emerging critical areas for the Department[2]. As a result of this authority lab directors have latitude to implement personnel policies to hire, reward, and train the talent necessary for them to execute their respective missions.

This authority has enabled lab directors to replace engineering Staff lost through attrition and quickly respond to changing technology requirements. In FY10 the labs used this authority to hire 114 qualified staff.

A source of unique capabilities in many areas where the government cannot attract and retain personnel in sufficient depth and numbers is the FFRDCs. FFRDCs operate in the public interest, free from organizational conflicts of interest, and can therefore assist DoD in ways that industry and for-profit contractors cannot. Our FFRDCs maintain long-term capability in core competencies in domains that continue to be of great importance to the Department, such as analysis, engineering, acquisition support, and research & development. I view them as a vital component of the overall acquisition workforce.

UARCs provide an effective conduit for capturing diverse university-based engineering and technology capabilities that are essential to the DoD. They advance DoD operations via application of leading edge research, development or engineering in specific domains and maintain core competencies in those domains for the benefit of all DoD Components and Agencies.

Strengthening the Government's Acquisition Workforce

The Department is committed to a strong acquisition workforce in industry and government. Competitive pressure is used to motivate industry to increase its scientific and engineering capabilities. The Defense Department, with assistance from the Congress, is in the midst of rebuilding its own scientific and engineering workforce. Without a strong professional technical workforce the government cannot effectively define, evaluate, and manage the defense contractors who develop products for the Department. This workforce was downsized dramatically during the 90s and we are in a re-building phase that needs to continue. While we have made progress in restoring the workforce size, our single greatest concern is building the human capital available to DoD inside and outside the government. Talent matters! We need people with the right ability, training, and experience to take on major responsibilities for stewardship of the taxpayers' investments in a broad range of national security systems. We are concerned about our program management, engineering management, and contract management capabilities. Our industry partners share identical challenges. We must actively attract talent (enrich the pipeline) and then support the newly hired acquisition workforce – build on their talent with key experience and training – engage, motivate and retain. We must help the mid-career workforce prepare to lead the 21st century DoD acquisition mission as the "space age" work force enters retirement.

[2] Science and Technology Reinvention Laboratory (STRL, also known as "Demonstration Labs")

This mid career workforce is one fifth the size of the senior experienced workforce. We must deliberately provide opportunities to them to get the experience they need to take on major responsibilities and lead into the future.

In authorizing the Defense Acquisition Workforce Development Fund (DAWDF), Congress recognized the importance of training and developing the acquisition workforce. Anticipating the recruiting of new talent and the need to improve training, we have added faculty to the Defense Acquisition University (DAU), particularly in contracting, but also in the management and engineering disciplines. The training will equip the workforce to apply their skills and energies to managing their programs and the contractual efforts that deliver goods and services in support of national defense, to do so efficiently and effectively, and to eliminate wasteful effort which is spent, in effect, on managing the internal bureaucracy.

Strengthening the Department's Systems Engineering Workforce

A key focus within the Department's research and engineering enterprise is to ensure that the Department's engineering workforce is trained and experienced enough to meet the needs of complex systems engineering efforts, test and evaluation efforts, and ensure a future supply of talent, both for the Department and the industrial base. To ensure we are on the right path, the Department has launched a comprehensive survey of the Department's Systems Planning, Research, Development and Engineering (SPRDE)-certified engineering workforce. This survey will assess the current competencies and identify any skills gaps that may exist between the workforce's current capabilities and those needed to meet current and future mission requirements. This assessment and resultant gap analysis will help shape future workforce development and human capital planning initiatives.

We have established several engineering workforce development initiatives to address the growing department and industry challenge of attracting and retaining the most qualified systems engineering technical leaders to address defense acquisition challenges. These initiatives include implementation of the engineering portion of the Key Leader Professional Development program, working with the defense industry and engineering professional organizations on education and training initiatives, and conducting national and international workshops that explore lessons learned in systems engineering education, training and experience development. One such initiative is the Systems Engineering Capstone pilot program, which is designed to increase systems engineering skills in engineering students, and increase the pipeline of systems engineers available to DoD. The program inspires students to solve the types of system engineering challenges evident among DoD programs. Three hundred undergraduate and graduate students at 14 educational institutions, including service academies and graduate schools, currently participate in this program.

Future Science and Engineering Talent; Science, Technology, Engineering, and Math (STEM) Programs

The Department's STEM Programs are focused on growing the pool of talent to replace the aging workforce. The Department requires specific expertise in established and developing disciplines. We continue to foster a strong relationship with future scientists and engineers.

In May 2010, the Department submitted to Congress its STEM Education and Outreach Strategic Plan. This plan, developed by 27 senior leaders from across the DoD, lays out our vision to develop a diverse, world-class STEM talent base by. The implementation strategy strengthens our STEM education and outreach portfolio and provides for specific processes and measurement criteria. The strategy includes a STEM governance architecture consisting of a DoD Executive Board, and links to the newly formed National Science and Technology Committee (NSTC) on Education and a defense industry forum. The STEM Board of Directors will meet in later this Spring to discuss the Implementation Strategy.

Core to the strategy is the National Defense Education Program (NDEP). NDEP invests in inspiring, developing, and attracting the current and new generation of STEM talent. NDEP also enhances students and world-class researchers' interest in DoD by offering opportunities for direct engagement with DoD labs and Component technical staff.

NDEP's K-12 program enhances STEM education through public-private engagement between DoD and local schools and organizations. DoD research and engineering professionals serve as direct

conduits for inspiring students to learn STEM and, in the process, motivate many to pursue STEM careers. Currently, 1,750 DoD scientists and engineers in 26 states have engaged 180,000 students and 8,000 teachers.

The Science, Mathematics and Research for Transformation (SMART) program funds 670 undergraduate, graduate, and doctoral students in 19 DoD-relevant fields of study. SMART is a scholarship-for-service program - participants commit to one year of DoD employment for each year of academic support received. Since 2006, nearly 300 students have transitioned into the DoD workforce. The program is popular – we received 2,800 applications earlier this year and selections will be made soon.

The National Security Science and Engineering Faculty Fellowship (NSSEFF) focuses on distinguished scholars and graduate students. The program awarded long-term funding to 29 distinguished university faculty members to conduct basic research on topics essential to national security. Connections to the faculty enable the program to leverage more than 150 students and postdoctoral scholars serving on research teams. The NSSEFF enables partnerships between the faculty and their research assistants with scientists and engineers in the DoD laboratories, providing us opportunities to identify and recruit top talent.

Conclusion

We do not have, nor do we desire, an arsenal system. Today, a competitive and robust industry makes the weapons and support systems that give the U.S. military its crucial technological edge. Companies use their understanding of technology and business to choose investments, key technical talent, the best supplier networks, and other business strategies, and they can earn respectable profits from reliably delivering high-quality products. The Department has no desire to replace or reduce industry's profit motive, a strong incentive for good performance of which we intend to take more effective advantage.

The Department has its own key roles: responsibly investing taxpayers' money, preserving healthy competition, and managing across portfolios of defense systems where individual contractors cannot know how progress on one system will affect industrial capability to support another system. Fortunately, leaders in both the DoD and the defense industry widely recognize their coincident long-term interests in supporting the warfighter and protecting American national security.

But the leaders also recognize the key differences in their interests, too. We are buyers, they are sellers, and we both hope to negotiate good deals in our self, and collective, interests. The best outcome is to find win-win strategies, where contractors earn profits for superior performance and the Department gets quality products for a fair price. The Department's initiatives like Better Buying Power, the sector-by-sector, tier-by-tier assessment of the industrial base, and programs to promote STEM and reinvigorate defense R&D should position us all to find more win-win situations in the future.

Congress has been actively involved in shaping and supporting the Department's initiatives. Your support in funding, expedited hiring authority, workforce recognition and incentives, and other human capital legislation has been very important for our current success. Congress has also supported the Department's engagement with industry, affording the Department the tools necessary to maintain a healthy industrial base. Complete success will not be achieved overnight. As Secretary Gates has stated, "there are no silver bullets." Dr. Carter and I appreciate this support and look forward to continued partnership to best serve the taxpayer.