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**NDIA**

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*The Voice of the Industrial Base*

## **INCREASING CHALLENGES FOR THE DEFENSE INDUSTRY**

### **An open letter from the President and CEO of the National Defense Industrial Association**

In January of 2012, President Obama directed the release of a new strategy for maintaining defense readiness as the US draws down from conflicts abroad and works to manage national debt and deficit challenges. The implementing guidance to achieve this new strategy from Secretary of Defense Leon Panetta, outlined the intentions of the Department of Defense (DoD) to protect the missions of our armed services, paying careful attention to investment strategies into the future that protect our ready and capable all-volunteer forces, all while working toward reductions in the “cost of doing business.”

This strategy builds upon the principles introduced by Dr. Ashton Carter, Under Secretary of Defense for Acquisition Technology and Logistics (AT&L), in June 2010, advising industry of a new program with the goal of increasing capabilities without proportionately higher budgets. Dr. Carter issued a memorandum that outlined his objectives of improving efficiency by reducing unnecessary or low priority overhead. The memorandum detailed a framework for restoring affordability in defense programs. These initiatives include:

- Increasing in real competition for defense programs
- Increasing the use of fixed price contracting
- Limiting cost reimbursable contracting only when programs lack specification and phasing out T&M contracts
- Improving cash flow for price reductions
- Aligning profits to performance risk
- Strengthening the skills of the acquisition workforce
- Improving the consistency and quality of audits
- Establishing a PEO for services contracting in each service
- Reducing industry overhead

NDIA clearly recognizes the budget realities and constraints that face DoD, and appreciates that the Administration’s strategy highlights the need for careful consideration in defense planning. NDIA member companies have welcomed and will continue to welcome the opportunity to engage in real and meaningful efforts to reduce industry costs and to implement best practices to improve DoD efficiency while meeting mission critical goals.

NDIA, its members, and other industry groups have submitted nearly 100 separate recommendations that identify inefficient DoD processes or government unique practices that add cost with marginal value. America faces tough challenges economically, and in this environment it will take collaboration and creative solutions, including meeting the goals of Dr. Carter’s efficiency initiative. Industry stands prepared to work with DoD in ways that control costs and share the risks in contract performance.

A handwritten signature in black ink, appearing to read "Lawrence P. Farrell Jr.", is positioned above the typed name.

Lawrence P. Farrell Jr.,  
Lt. General USAF (Ret)  
President and CEO

# 1

## ISSUE 1: Promote Energy Security While Reducing Costs

### Energy Security

The past decade has witnessed a transformation of philosophy within the military for energy security and reliability. The change emerged internally and pragmatically from field commanders' needs for combat effectiveness, a reliable supply of fuels and force protection. The response of DoD and the services to Lt. General James Mattis<sup>1</sup> famous appeal in 2003 to be free from “the tether of fuel” has been dramatic and comprehensive. Each service has embraced and fielded innovative renewable and alternative energy production technologies, and has invested resources to find and apply energy efficiencies in infrastructure and standard practices. The creation of responsible offices within the services and the Office of the Secretary of Defense (OSD) to help institutionalize and coordinate the initiatives underway demonstrates the seriousness with which the DoD views energy security, sustainability and cost control.

Much work has been done toward achieving improved energy efficiency at DoD facilities in the United States and overseas. Focused effort has been applied to identifying alternative energy management practices and applying renewable energy technologies in the field to meet urgent needs. In addition, the military has considered alternative fuels, successfully testing blended fuels – both synthetic diesel and bio-based fuels – in a range of aviation platforms. A recent multilateral agreement between the DoD, Agriculture, and Energy pledged effort and resources to achieve a production scale capability in bio-fuels for military use, with the potential for greater production for consumers in the future. The Air Force, for example, has pledged to replace its non-tactical vehicle fleet with electric

powered vehicles in the near future. The Army has implemented an energy “net-zero” approach as test installations, with the aim of sharing the lessons of this initiative throughout all the facilities it manages. Nonetheless, some critical work to achieving energy security remains to be done.

### Utilizing Nuclear Power Technology

A stable, reliable base-load power generation that does not contribute to CO<sub>2</sub> or methane emissions (such as coal-fired power plants or natural gas powered plants) that is already available, and is suited well to both military facilities and smaller metropolitan areas is commonly referred to as a small modular reactor (SMR). Global demand for energy will only increase for the foreseeable future; the demand for electricity in the United States alone is projected to rise 30% by 2035. While wind and solar power are promising sources of plentiful energy, and natural gas is seen as a reasonable replacement for coal-burning plants, only nuclear power provides the non-carbon base-load energy necessary for current and future needs. SMRs make sense as an affordable alternative to large-scale reactors and can serve as a source of continuous, reliable electric power generation. Military installations are the ideal place to test and implement SMRs, and the military has the ability to provide the long-term demand required to recoup SMR fabrication. If a few SMRs are initially built and used at military installations, adjacent civilian communities could also benefit, ensuring an uninterrupted and entirely secure supply of energy, while reducing DoD's energy costs.

### Open the Door to Cost-Effective Section 526 Opportunities

One of America's greatest national security challenges is to develop assured fuel supplies in an increasingly turbulent energy market. The Energy Independence and Security Act of 2007 (PL 110-140 originally named the Clean Energy Act of 2007) includes a provision, Section 526, that prevents federal agencies from contracting to purchase liquid coal and other “dirty fuels,” such as tar sands and oil shale, that produce more global warming pollution than conventional gasoline. However, dirty fuel supporters in Congress have introduced legislation that would repeal this important provision that will help fight global warming, and energy companies are poised to market dirty fuels to the government at the first opportunity.

DoD budgets have been roiled, as has the entire economy, by wildly fluctuating and generally higher fuel prices. While DoD endeavors to increase capabilities through increased fuel efficiency and the introduction of appropriate renewable technology will moderate the military's needs for liquid fuel, the simple reality is that the military's huge capital stock requires liquid fuel to run, and in the current fiscal environment, this

<sup>1</sup> Army Professional Writing Archives vol. 5 April 2007

is unlikely to change significantly in the foreseeable future. NDIA supports DoD's efforts that will lead to cost-effective biofuel alternatives to traditional fuels in the coming decade without overlooking other paths to achieve performance engineered fuels to meet military requirements.

### **Weapon Systems, Acquisition and Energy Security**

Energy efficiency is not a "product" that neatly fits within the DoD 5000 acquisition policy or the Chairman of the Joint Chiefs of Staff (CJCS) 3170 Requirements Process. Nor can "energy efficiency" be concisely defined by a program element in a budget line. Historically, energy efficiency has not been considered in the design of lethal systems in DoD. In modern times, energy efficiency must be given prevalent consideration throughout the entire acquisition process from the analysis of alternatives (AoA) to production and life cycle sustainment, and be part of the DoD lexicon considered by everyone-- developers through the soldier-- that ultimately uses the system. There are three specific areas that limit DoD's ability to implement energy efficiency in weapons system acquisition or to procure alternative energy systems: requirements, ownership and, of course, funding.

DoD has made strides in considering energy efficiency with the energy key performance parameters (KPP) in CJCS 3170 Requirements Instruction, but it is "selectively applied." In the AoA during the requirements process, energy competes in trade-offs with other more traditional military characteristics, such as performance. In the tradeoff between performance and energy in developing weapon systems in competing for development funds, energy will lose. Additionally, the energy KPP does not apply to systems already produced or in development, which misses the majority of systems in place for the next two decades. Additionally, the larger impact on reduced energy consumption is the strategic consideration of reducing troop vulnerability on the battlefield, which is often not considered.

Alternative energy systems or changes to reduce energy consumption in ongoing programs do not fall within typical military categories and therefore lack ownership to allow systems to be funded, tested and procured. There are many energy efficient products that have been tested and even deployed, but unless there is a program line and program element, the product will not be purchased in the future or maintained. Without a "home," requirements cannot be generated or championed, and funds will not be allocated.

The opportunity to improve existing systems is *now* as we draw down forces and leave the theater. Weapons systems

are returning to overhaul points, and the funds are already allocated for repair, so making these changes at this juncture makes sense. Further, applying energy efficiency as part of that overhaul process would benefit current systems. Industry partners can be key to meeting these goals. Implementing performance-based contracts that include adding energy efficiency modifications would incentivize vendors and maximize limited funds.

### **Contractor Performance and Executive Order 13514**

EO 13514 requires contractors to recognize and promote the standards and goals set for each federal agency. Requiring energy efficiency in contracts for new construction or renovation at bases could be as simple as a contract clause; for example, requiring higher insulation levels to reduce demand and requiring even some solar powered lighting would be simple ways to reduce energy consumption costs. Performance-based contracting rewards a vendor who makes energy efficient changes and reduces costs. Done correctly, including contractor energy and other resource efficiency within the contracting process could lead to lower costs for the taxpayer, more secure industry profitability, and improved US industrial competitiveness globally.

NDIA is concerned, however, with a lack of clarity in developing approaches and a risk of this process taking a path that could lead to significant additional administrative burdens for both government and industry. NDIA also believes that there is a relatively straightforward way to achieve the desired goals of reduced cost to DoD (and the taxpayer) and reducing contractor pollution loads while avoiding damaging outcomes. The executive order mandates that executive departments and agencies create plans to reduce their energy intensity (a term similar to "carbon intensity"), and improve building energy efficiency, resource use, and other elements. The executive order does not seek to compare agency to agency, but sets a standard against which all departments are to plan. The potential seems to exist to create a similar rule set for contractors.

NDIA recommends that DoD consider the following:

- Require all contractors (and bidders on future contracts) above threshold fiscal levels to have an energy and resource efficiency plan based on defined rule sets.
- Require plans to have established audit procedures acceptable to government standards.

The recommendations would create a level playing field in the contracting environment with a traceable, government-wide system for fostering ever-greater resource and energy efficiency within its industrial base, without creating onerous burdens

that will erase the fiscal gains from energy savings. NDIA looks forward to an opportunity to work with the administration to resolve these details in ways that will help achieve lower costs for the taxpayer and increased fiscal resiliency for the industrial base.

# 2

## **ISSUE 2: Align Defense Industry Capacity and Investment with National Security Requirements, Priorities and Budgets**

Alignment of industry capacity and investment with DoD program priorities and funds will be critical in the coming fiscal years. Budget constraints and operations tempo demand that industry and DoD close the gap between DoD needs and industry capabilities. Gaps in shipbuilding, strategic priorities, undersea warfare and long-range strike capabilities, for example, are pressing concerns for national security and complicated problems for ever-tightening budgets. The reality is that the budget will undergo continuing pressure on operations, maintenance and personnel costs, ground forces' equipment recapitalization, and projected increases in military health care expenses. Further pressure will result from the affordability mandates to be implemented over the next five years.

Industry has been reluctant to invest in areas where a lengthy timeline required to field complex capabilities has combined with uncertainty regarding future budgets. The outgoing chairman of the Joint Chiefs of Staff described as “unsustainable” the current rate of defense spending. “Money is not going to keep rolling in ... It’s just not going to happen. We’re in a time of real economic challenge. The military’s budget will be affected by these realities. It’s unrealistic to expect this [spending] will continue.” Aging in Navy and Air Force platforms appears to be the surrender to decreasing force structure in both services.

As indicated by the program terminations and other reductions contained in the 2011 defense budget, combined with further inevitable reductions that will be mandated in the 2012 budget, there will be fewer new starts of big programs. The fiscal emphasis has shifted to near-term challenges due to pressures on the defense budget from burgeoning health-care costs, the continuing bill for combat operations, and capital equipment recapitalization. Addressing these issues and challenges will require a different practice and discipline.

Once a program is authorized there should be sufficient funding committed in the budget for program execution. There should also be a prohibition on increases of the requirements or the threshold levels. Additionally, any downward adjustments should be reviewed at the same decision level as was done when they were established. The operational test verification approach should also be established prior to contract award such that the test and acceptance requirements are clearly known by the government program office and contractors. Following delivery, industry exposure to field and sea training and operator feedback will be critical to squeezing all the capability from our fielded systems. Industry’s ability to conduct operationally significant training exercises is critical to maintaining operational readiness.

Even as we experience a draw down in the budget and force structure, it is crucial that we protect the basic health of the defense industrial base. A critical tool for assessing the health of the US defense industrial base is visibility into the lower levels of the supply chain, at the second and third tier. Traditionally, DoD has taken responsibility for monitoring the capabilities and competitive viability of prime contractors, OEMs, and key first tier suppliers. Recently, the DoD has embraced the responsibility for monitoring and stress-testing the industrial base to the lowest levels in the form of the Sector by Sector, Tier by Tier (S2T2) assessment, currently being executed the Department of Commerce. As its name signifies, the assessment is organized along seven industrial base sectors

and down to the lower tiers levels. The objectives of this assessment are to understand where there are weaknesses in the US defense industrial base that threaten the DoD's affordability, readiness, surge capability, or technical and engineering workforce. Technology advances should help these assessments, with newer modeling of supply chain networks able to stress-test the vendor networks and highlight risk. NDIA looks forward to learning more about the results of these assessments, and ensuring there is a great deal of visibility for industry into the process, while still protecting any proprietary information.

### **Increased Collaboration and Communication with Industry**

In the current and near-future fiscal realities, effective and timely two-way communications will be required to ensure a minimum of disruption in the availability of goods and services required by the DoD. A partnering approach to focus requirements, budgeting, research, development, and acquisition will be critical. Communication of program requirements to industry as soon as possible would help industry shorten response times and focus investments. In some cases, access to critical classified information is impeded by the availability of classified systems and individuals. Enhanced dialogue on results of S&T research between government and industry could potentially quicken the transition of capability to fielded systems. Program review and approval at the initial phases should provide a need base and fiscal assessment prior to authorization in the context that future cancellation or termination are not budget and program management tools. Similarly, requirements and fiscal assessments should be equally rigorous prior to any discretionary cancellation or termination.

Acquisition decisions must be made with adequate early technical analysis and planning to sufficiently identify the technical risks, and cost/schedule drivers associated with a proposed program to result in an affordable and timely materiel solution. The absence of early technical analysis and planning results in solution strategies, that have not adequately considered the full scope of technical risks and the full range of solution options and technology opportunities, can lead to programs initiated with poorly understood requirements. This negative dynamic will inevitably lead to inaccurate cost and schedule estimates that will increase the program risks. Senior leadership is thus handicapped from making well-informed strategic investment decisions to properly manage the pipeline of capability development aligned with critical warfighter needs. These issues must be addressed in the very early conceptual stages of the acquisition lifecycle.

Early information sharing maximizes the potential for the government, through the expanded awareness of opportunities and risks, to get the right capability quickly and affordably, and better position programs to achieve a balanced design of performance, schedule and cost (including life cycle cost) as it moves through the acquisition phases. Timely and effective communications provides industry with greater awareness of the current and emerging government and warfighter needs. This allows more precisely targeted industry investment in R&D through independent research and development (IRAD) and contract research and development (CRAD), and better positions industry as a whole to invest, produce, and deliver solutions in response to government needs while still making a return on investment.

NDIA believes that increased discussions between industry and government would result in a common approach that would be a significant benefit to defining a development planning process that enables government and industry collaboration. Existing mechanisms are in place that allows this collaboration in a one-on-one proprietary relationship between the government and individual industry partners. Additional mechanisms enabling multiple partners to work collaboratively with the government should be investigated.

### **Fully Implement Outcomes-Based Sustainment for DoD Systems**

Section 805 of the National Defense Authorization Act for Fiscal Year 2010 (Public Law 111-84) required DoD to issue comprehensive guidance on life-cycle management and the development and implementation of product support strategies for major weapon systems. The guidance issued pursuant to Section 805 required DoD to employ outcomes-based sustainment strategies for all major systems. Outcomes-based strategies ensure readiness at a transparent cost and typically include strong government and industry partnerships, contractual commitments to readiness and fixed price multi-year contracts. The requirements of Section 805 were developed based upon the DoD's decade long history with performance based logistics (PBL) and DoD's recent Product Support Assessment Team (PSAT) report that identified eight principal areas, that if developed or improved, will make product support more effective and acquisition reform more far-reaching. The PSAT report can be found at: <http://www.ndia.org/psatstudy>

Despite the statutory requirement for outcomes-based strategies, over 80 percent of DoD product support is provided in a fractionated, transaction based manner. This transaction approach hides true costs, sub-optimizes inventory, degrades readiness and limits public/private partnering. For example,

DoD spends an estimated \$270 billion per year in logistics and sustainment, consuming resources that could be better redirected to critical priorities such as DoD modernization accounts.

To sustain military readiness while providing for the future, NDIA strongly supports full implementation of outcomes-based sustainment including:

- Business case analyses (BCAs) of currently fielded systems supported via a transaction based strategy;
- Full cost accounting in the development of BCAs to ensure meaningful cost comparisons;
- Competitive selection of end-to-end supply chain integrators for common items across DoD;
- Consistent application of 5-year contracts (plus 5-year option) for outcomes-based sustainment contracts.

The recent DoD analysis of prior PBL programs, “Proof Points,” demonstrated improved readiness at reduced costs for the 10 programs in the study. Similar results, if applied across DoD, suggest DoD can maintain readiness at reduced costs by expanding the use of these techniques.

### **Systems-2020: New Engineering Approach to Defense Systems**

The US faces a complex and uncertain security landscape in which the pace of change continues to accelerate. Changes include new foreign powers, non-state actors, and the availability of destructive enabling technologies<sup>1</sup>. The Department of Defense (DASD/SE) created a new program with \$8.4M funding, called System 2020, to develop new engineering tools to facilitate rapid fielding and the engineering of resilient systems, meaning those that are readily adaptable and able to be modified quickly to meet emerging threats. The defense industry strongly agrees that a suite of such tools will greatly aid how we design systems now and in the future. However, NDIA understands the Congress has failed to continue funding System 2020.

With rapidly emerging new threats to the warfighter and declining budgets becoming the normal way of life, the DoD engineering enterprise needs more robust capabilities (processes and tools) to support rapid, thoughtful, informed design that makes weapon systems more effective and reliable and able to meet quickly emerging and changing threats to the warfighter. Lack of these capabilities leads to unintended consequences and premature loss of options when refining requirements and choosing engineering solutions in defense programs, which in turn causes severe systems acquisition program schedule

delays, unit cost increases, quantity reductions and program cancellations. This lack of thoughtful design also necessitates time-critical retrofitting and revising of systems for emerging threats. Costs of adapting to new threats (e.g., IEDs) or upgrading components (e.g., improved radios) are potentially overwhelming—often exceeding original program costs.

To create and field affordable, effective systems, government personnel need to conduct comprehensive systems engineering tradeoff analyses for optimum solution selection. Engineers need more informative requirements, and the refinement of these requirements need to be better grounded in engineering feasibilities and opportunities, and more alternatives must be considered in depth, and kept active longer. Adaptability, trustworthiness, and affordability must be sufficiently considered in the trade space and must be maintained when modifications occur during design, manufacturing, and fielding. Without these capabilities, we will not have the means to assure that US defense systems can handle changing missions while also being delivered quickly and at acceptable costs. *In an era of declining budgets, global instability, and rapidly emerging and proliferating threats, this is simply not a tenable situation.*

The US government, the defense industry, and the providers of systems design and engineering tools need to work closely together to develop a 21st century paradigm for engineering of resilient systems. This will transform the engineering design and development of resilient defense systems by providing technical methods, processes, technologies and tools spanning the full range of product life cycles. It should cover both rapid fielding activities and traditional acquisitions, and span from concept formation all the way through sustainment.

In the *National Defense Authorization Act for Fiscal Year 2012*, Congress failed to reauthorize System 2020. NDIA urges Congress to restore and fund this important program as it will help government better communicate its needs, while providing industry the opportunity to address those needs in creative ways.

### **Following Lessons Learned from the US Munitions Base**

As Congress and DoD consider the difficult funding choices that will need to be made in the coming years, NDIA hopes to partner with government decision makers to avoid the types of pitfalls experienced thirty years ago in the US munitions industrial base. During the period FY 85-94, funding of ammunition procurement declined by 80% as budget cuts were made across the board. Little consideration was given to the effects of this decline on the long-term viability of the

<sup>1</sup> Quadrennial Defense Review Report, February 2010.

munitions industrial base as no planning was done to maintain munitions production capability.

The result was a crippling of the munitions industry. More than 75% of the companies exited the business, never to return. Total collapse was barely averted through the intercession of the OSD with yearly increases in budget funding, and by Congress with additional appropriations above the budget, and eventually by increased ammunition production demands created by the Global War on Terrorism.

Funding for ammunition procurement, along with other sectors, is expected to decline significantly in the coming years. DoD and industry must ensure that a US munitions industrial base, as with the broader defense industrial base, funded at reduced levels is nonetheless able to remain capable, competent and responsive. Overall, DoD funding has not presently declined due to continued funding of the Global War on Terrorism and “reset” costs. However, the military services’ modernization programs will continue to extract a heavy burden on procurement funds over the coming budgets. One of two alternate futures will result in the face of anticipated budget cuts: 1) adverse impacts will accumulate to the point of threatening the continued existence of a viable and responsive US munitions industrial base, as occurred in the past in the munitions sector. Subsequent rescue will be expensive and will create significant turbulence in the industry; or 2) purposeful actions taken now by DoD and industry can ensure that the munitions industrial base remains in good health and able to meet the nation’s needs.

Initiatives such as the Single Manager for Conventional Ammunition must be aggressively pursued and completed in many defense sectors. They provide industry with a reasonable basis for making prudent capital investment or divestiture decisions. Further, a protocol ensuring that these management tools are used and the results acted upon by the services and DoD leadership is a necessary ingredient for reasoned budget decisions. Time is of the essence. DoD and industry must continue to actively partner to achieve an industrial base characterized by a skilled workforce; modern and efficient equipment and facilities capable of surge performance; and financial incentives sufficient to persuade businesses to remain in the base. The tools are in place. Purposeful actions are now required to maintain a defense industrial base that is capable of responding to the future needs of our nation’s armed forces.

# 3

## **ISSUE 3: Strengthen the Integrity and Responsiveness of the Acquisition Process**

### **Contractor Ethical Conduct**

NDIA stands ready to enable partnerships which will sustain competition and fit within the government ethics and conflict of interest policies. New ethics policies and expanded compliance actions by industry result in an industrial base that provides high quality products and services, transacted in an ethical and transparent environment, at fair and supportable prices.

The Federal Acquisition Regulations (FAR) Council published a rule requiring that contractors receiving awards in excess of \$5 million and with performance periods of 120 days or more have a written code of ethics and business conduct within 30 days after contract award. The government also issued new mandatory disclosure rules that require contractors to report when there is credible evidence of a violation in the law or significant overpayment. NDIA continues to support contractor ethics initiatives including effective policies, compliance training and internal controls to better manage compliance in all contracting requirements.

With the current focus on ethical behavior and perceived waste-fraud-and abuse, industry is concerned with any increase in the use of suspension and debarment as a punitive action taken against a contractor for performance mistakes. Suspension and debarment actions should be used as a remedy for egregious violations of the law or intentional fraud. Further, industry experiences suspension action with little or no

due process. NDIA supports a process where suspension and debarment action are preceded by due process and where the contractor is provided insight into suspension and debarment concerns with a 30 day period to develop and submit a corrective action plan that will be evaluated prior to any implementation under suspension and debarment.

NDIA encourages sustaining a broad-based effort between industry and the government to reinforce high ethical standards and responsibility in the entire acquisition process. NDIA stresses through its seminars and educational events critically important procurement integrity information throughout the US industrial base and recognizes that procurement integrity problems and ethical lapses negatively impact the public trust of government and industry alike. Adverse procurement integrity issues detract from public and private sector priorities to ensure that the federal procurement system is and remains fair, balanced and accountable. The federal marketplace is critical to our national security, and industry and government must work together to enforce existing laws, maintain effective checks and balances, and eliminate the potential for unethical conduct.

(See NDIA's Ethics Code at the end of this publication)

### **Clarify Rules on Organizational and Personal Conflicts of Interest**

On April 26, 2011, the FAR Council proposed sweeping reforms to organizational conflicts of interest (OCI) rules. The proposed FAR rule is a significant alternative to the Defense Federal Acquisition Regulations (DFAR) draft rule issued on April 22, 2010. Both rules transfer the regulations from FAR Part 9, which handles contractor's qualifications to FAR Part 3, which addresses improper business practices. Both rules seek to address OCI on a contract-by-contract basis, with the FAR rules empowering the contracting officer to detect and address OCI early in the process. Beyond these similarities the proposed FAR and DFAR rules have stark differences. FAR rules focus on the performance relationships that introduce OCI like bias, impaired objectivity and unequal access to information. The proposed FAR rule looks at OCI based upon potential harm to the integrity of the procurement system or OCI that can damage the government's business interest. Here the proposed rule departs from established case law in defining the types of OCI. While NDIA has no objection to reframing how OCIs are categorized, the selected criteria seem somewhat confusing and in need of further clarification and definition.

Further, the proposed FAR rule does not consider unequal access to "nonpublic" information to be an OCI, as this policy guidance was moved to FAR part 4. Here the proposed FAR rule gets a bit confusing. NDIA agrees that preventing offerors from enjoying a competitive advantage as a result of access to "nonpublic" information is important. However, the approach of this rule seems confusing, and if implemented could chill dialogue between industry and agency officials at a time when the fiscal realities demand an increase in dialogue. NDIA urges that the final rule on OCI address these significant differences.

### **Ensure that the Government has full Access to Commercial Products and Services**

It is critical that the federal government has full access to new and emerging commercial technologies and that those technologies can be acquired using existing commercial item acquisition practices embedded in current law and regulation. These realities are grounded in the recognition that defense procurement cycles from development to completion for government unique products sometimes take many years to realize operational fielding. In contrast, commercial product and technology cycles move much faster, typically within a 12 to 18 month business cycle, usually as a result of ongoing, incremental development and market pressures on industry to compete and deliver superior products and services. Irregular warfare threats have created an environment where potential enemies have been able to rapidly adapt and apply commercially available products and technology to maximum effect against US forces in the field. We must be able to maintain pace with those threats by supporting and improving the existing commercial item acquisition process infrastructure that allows DOD to take advantage of the best and most advanced commercial technology and to place that technology in the hands of our war-fighters quickly.

Accordingly, federal regulations governing the acquisition of commercial products and services must remain flexible to permit the acquisition of new and emerging commercial technologies. This includes giving government acquisition professionals the flexibility to exercise preferences for commercial items by utilizing all available contract types, crafting innovative risk management strategies, engaging with industry on profit policy and generally adopting/endorsing existing commercial item acquisition practices in areas such as the use of pricing data, performance of market research and the use of commercial products and services in the drafting of requirements. While these objectives seem clear, legislation and a growing number of regulatory restrictions threaten the potential for government to timely acquire commercial products

and services from the private sector in a manner designed to maximize our technological warfighting edge.

NDIA continues to advocate for limits on proliferation of government unique acquisition requirements that ignore the commercial marketplace and that undermine our government's full and free access to the best commercial products and services. NDIA objectives call for a number of important legislative and regulatory changes described below that empower the federal acquirers to rely on commercial solutions using proven commercial practices. Collectively these goals encourage more commercial companies to enter the federal marketplace.

- Protect proprietary intellectual property (IP) and technical data
- Establish permanent simplified acquisition authority for commercial items
- Define commercial services
- Revise the competition requirements for time and materials contracts
- Restrict the growth of (FAR and DFARS) regulation over commercial item pricing documentation
- Ensure that commercial item acquisition regulations are consistent
- Encourage increased government market research capabilities

### **Maintain a Workforce of Highly Trained Acquisition Experts**

The DoD requires trained acquisition professionals to lead military program offices — most importantly, the service acquisition executives. It seems counterintuitive that a key acquisition position would be filled by someone who is not an expert. On many occasions, waivers are provided to individuals who lack the requisite education or experience to hold a key acquisition position. The problem is that we haven't institutionally treated acquisition as a profession.

The acquisition professional needs to articulate the exact impact of the operators' requirements in terms of cost, schedule and performance. The referee for this process needs to be the chief of the military service. Additionally, industry should participate in the process with adequate legal and ethics guidelines and processes to prevent any bias in future competitive acquisitions.

Growth of the DoD workforce seems to be contradictory with the recent initiatives on cost reduction and productivity; however, some growth in personnel seems necessary and prudent. Everyone agrees that shortfalls in the government acquisition

work force must be fixed. Of particular concern is having sufficient expertise in key areas such as systems engineering, contracting and program management. Along with all of this have been scattered industry complaints about the government recruiting industry employees. Although defense officials deny the accusations, it must be acknowledged that the only place where the government can recruit qualified acquisition workers is industry.

### **Establish a Disciplined Approach to Requirements**

In a *Harvard Business Review* article titled "Delusions of Success"<sup>2</sup> the authors say "in planning major initiatives, executives routinely exaggerate the benefits and discount the costs, setting themselves up for failure." In the dedication to meet the challenge to "do more without more" DoD will have careful planning to conduct. Developing the requisite data and bid packages for acquisitions will require drawing upon the knowledge and experience of the existing industrial base. The past few years of experience have seen major acquisitions face delays due to the workload of preparing solicitations which can withstand the test of a post award protest. NDIA can play a key role in establishing the new norms for a revised approach to acquisition and be a trusted partner in sustaining industry capability while maintaining a competitive landscape.

NDIA believes that when developing acquisition plans, key issues should be addressed up-front to determine the cost and value of competitive procurements:

- What is the time and expense to prepare the RFP, review by contracts and legal staff, etc.?
- What overhead expense will the government indirectly absorb from contractors who develop extensive proposals, and in many cases, demonstration assets?
- Has the cost and time for the evaluation of the proposals, the questions, reviews, orals, etc. been included in the budget and timeline?
- What is the likelihood and cost of a potential protest?
- Does the risk profile of the program allow sufficient time for an inexperienced company to perform at an unreasonably low bid price?
- What are the potential industrial base outcomes, e.g., will the competitors remain competitive after a major program is awarded?

In order to meet its requirements for leading-edge capabilities, DoD must provide industry better access to requirements and also develop programs which include an adequate mix of work and funding to sustain a capable workforce and physical infrastructure. Industry has the capability to provide leading-edge

<sup>2</sup> by Dan Lovallo, Daniel Kahneman: Harvard Business Review Jul 01, 2003.

technologies, system design and integration, and long-term support for systems. Available funding needs to be applied to maximize the delivery of products in a restricted budget environment through cost reductions including increasing the efficiency of the business process. Achieving this change will require a revitalized effort by government and industry.

#### **Use Low Price Technically Acceptable Source Selection Processes Appropriately**

NDIA is aware there is growing concern resulting from DoD's expanded use of a Low Price Technically Acceptable (LPTA) source selections process to acquire technically complex requirements. Budget reduction realities and insufficiently staffed acquisition organizations continue to support the tendency by federal agencies to expand their use of LPTA source selections in the acquisition of complex technical services. While LPTA source selection is acceptable in the acquisition of non-complex services such as janitorial, grass cutting, mail handling and snow removal, LPTA source selections are inappropriate for complex engineering services. The acquisition of complex technical services requires that considerations such as schedule, technical expertise, past performance, unique credentials and skills required be considered and that additional evaluation factor trade-offs exist along with assessing a reasonable price. Technical services such as engineering maintenance for mission critical systems (air traffic control, missile systems, aircraft, nuclear plants) or services supporting airframe system integration and retrofits, medical care, test and evaluation and engineering development do not lend themselves to source selection based on lowest price with minimally acceptable technical standards.

The budget challenges are real and as we work to reduce spending, it is important to select the contractor who can provide the requisite capability and talent at the desired quality levels and at a reasonable price. The DFARS 215.605 (c) states (inter alia) "in competitive acquisition of services, evaluation and award should be based, to the maximum extent practicable on best overall value to the government in terms of quality and other factors". Best value procurement means to determine which proposal offers the best tradeoff between price and performance where quality is considered an integral performance factor.

NDIA supports the proper use of LPTA source selections. Improper use of LPTA source selections have the potential of wasting budgets and can result in government not receiving the required services or result in poor service and quality. It is important the government not sacrifice needed technical quality for low price and minimally acceptable standards to

advance expedient contracting. In addition, the government should consider split awards that together meet LPTA requirements and achieve cost savings.

#### **Improve the Use of Earned Value Management Systems**

NDIA continues to support the objectives of DoD and other federal agencies to resolve earned value management systems (EVMS) implementation issues and to help program managers effectively manage their programs. Industry and the DoD, however, face unique challenges in meeting these objectives.

NDIA believes there should be a consistent set of program management processes across operating units that improves data quality, allows cost efficiencies through the standardization of processes and related training, and results in a stronger, more resilient industry to support our armed services. The potential for industry to upgrade information technology systems and to constantly improve and expand the availability of integrated program management information to internal and external users requires governmental support for processes that facilitate such improvements.

In 2012, NDIA will continue working with OSD, the Defense Contract Management Agency (DCMA), Defense Contract Audit Agency (DCAA), other DoD components and the Government Accountability Office (GAO) to help industry understand and adapt to DoD's changing environment, while working with civilian agencies to mature their EVMS knowledge and use. Specific items to be addressed are:

- Support the OSD office of Performance Assessment and Root Cause Analysis in the resolution of issues with industry and DoD components;
- Work with civilian agencies to utilize and deploy program management best practices as well as improve the efficiency and management effectiveness of EVMS deployment;
- Collaborate on the resolution of disparate EVM documentation emanating from multiple sources;
- Initiate an effort to streamline, consolidate, and strengthen EVMS guidance for use across industry and the government;
- Balance the operational approach of the DCMA EVM Center with the realities of the current contracting environment;
- Clarify that EVMS is a management process supporting program management and owned by individual companies;
- Engage at all levels of DoD and industry to jointly improve the use of EVM by program managers;

- Recommend revitalized EVMS training and certification processes, working through industry and educational institutions;
- Encourage more focus on the integrated baseline review (IBR) process, including pre-award IBRs;
- Recommend and encourage reciprocity of EVMS acceptance among all government agencies;
- Maintain the ANSI/EIA 748 standard, Earned Value Management Systems (current version), and the various Guides and agreements published. These documents will periodically undergo review for adequacy and any necessary changes will be made.

# 4

## ISSUE 4: Pursue Efficiencies While Maintaining the Industrial Base to Ensure Military Readiness

### STEM and Manufacturing Workforces

America's military strength remains vital to preserving the nation's interests and sustaining international stability. While much of this strength is derived from the professionalism and skills of America's armed forces, the technologically superior military platforms developed and produced by the US defense industrial base has been vital to ensuring a superior fighting force. In both peace and war, America's defense industrial

base has allowed the US to meet the full spectrum of missions the military has been called upon to fulfill. Securing America's military dominance for the decades ahead will require an industrial base that can retain a highly skilled workforce with critical skill sets and sustained investment in platforms to respond to any potential threat. This industrial base requires active management. The nation would be ill served, indeed, in a future crisis by a crippled industrial base that lacked the requisite skills base and capital standing to respond with alacrity to the demands that are placed upon it.

The US defense and homeland security industries face challenges in filling some of the best and most critical technical jobs in our country. The US is not producing enough graduates trained in science, technology, engineering, and mathematics (STEM) who qualify for security clearances. The graduates we do produce are not representative of the population of the US, reducing the diversity of the workforce that feeds innovation and creativity. The problem of a smaller, less diverse STEM workforce presents a serious risk for national security over the next decade, as baby boomers retire without an employable talent pipeline to replace them.

This is critical to sustain our national security supremacy and improve the technical competitiveness of America's workforce. In recognition that the national defense workforce is not just made up of scientists and engineers, NDIA has engaged with other partners such as the Manufacturing Institute to develop the Manufacturing Skills Certification System, announced by President Obama on June 8, 2011. This is the first step in bringing sorely needed jobs back on-shore, and strengthening our manufacturing base to reduce the likelihood of another near term recession.

There is a problem in the U.S. with the perception of manufacturing. In a recent survey by the Manufacturing Institute and Deloitte, 81% of respondents believe that America's manufacturing base is either important or very important to their standard of living and to economic prosperity, and 77% think the U.S. needs a more strategic approach to the development of its manufacturing base. However, only 30% of respondents would encourage their children to pursue a manufacturing career. The perception is that manufacturing is something akin to an iron foundry in the year 1900, but the reality is a manufacturing workforce is as likely to use a keyboard as a wrench, and operates in a clean, safe environment. The government needs to take actions that would change this perception, particularly in the middle grade levels. A high-caliber workforce is needed for manufacturing, particularly in the defense sector where the workforce is aging.

One of the top issues facing the nation as the new advanced manufacturing field evolves is recruiting students into these careers and getting US universities to elevate manufacturing R&D to the same level as other technology grand challenges. We must help students understand that manufacturing in the 21st century and beyond will be as much design focused as it is process focused, and that “virtual manufacturing” will be done as part of the product development process by computer savvy, highly skilled advanced manufacturing engineers to optimize the design for the factory that will produce the widget, regardless of where in the world the factory is located. In addition, as the product development process becomes more model-based, new technical training will be required in both the “blue” and “white” collar advanced manufacturing workforce that allows the transition from a paper to a model based world.

Further, government, industry and academia must put in place programs, beginning this year, to rapidly increase the number of trained and certified cyber professionals and increase cyber-literacy and awareness within the workforce. A clear gap exists between the supply of cyber professionals and the current demand for them from both the government and industry. There is, in addition, an insufficient number of trained, experienced cyber professionals, who are cleared or clearable, to satisfy the demand. Therefore, government and industry are often forced to compete for the same talent, reducing our collective ability to secure our networks and data.

We must also keep our focus on the broader scope efforts to increase the scientific, technical and mathematical literacy of all students that are graduating from high school (and increase the number that do make it to graduation as well). Ultimately, it is imperative that we increase the number of students who are prepared and excited to enter vocational, undergraduate and graduate programs in STEM fields. With industry, government, and community involvement, NDIA believes this can be achieved and our national security workforce will be sustained and strengthened. To succeed, we as stakeholders in the national security of the US must develop and support unique, exciting, and inspiring ways to encourage young Americans to pursue STEM careers.

### **Manufacturing and the Industrial Base**

US national security depends heavily upon our domestic manufacturing capabilities and the DoD relies upon the US defense industrial base for leap-ahead, innovative technologies with which to equip our warfighters. It is critical to understand that in the defense sector, if the government doesn't fund a particular system, industry will abandon the effort, including

the underlying industrial capabilities. Workforce and resources will move on to other funded programs. The segment that is not funded will eventually wither and industry will lose that capability, and once lost, these domestic capabilities take substantially more time and funding to regain. The US industrial base is in crisis and needs attention, and based upon several key studies, the US defense industrial base is facing a similar and parallel crisis. Moreover, the current government procurement policies will not produce the competitive, responsive, efficient and innovative industrial base that is required to face these challenges.

NDIA believes there are five main themes that need to be addressed to sustain a successful manufacturing policy:

- Strategic manufacturing capabilities for national security
- Research and development in manufacturing
- Preservation of the small and medium enterprise base
- A highly effective manufacturing workforce, and
- A capable, responsive U.S. munitions industrial base.

One of the most critical balancing acts within the industrial policy domain is between open market competition and the creation or subsidizing of a domestic industrial capability. Industrial capabilities in manufacturing processes, raw materials, components, and technologies are disappearing from the US every day in the form of off-shoring, business failures, supplier mergers, material shortages, global environmental restrictions and lack of demand. In some cases, disappearing domestic capabilities can be replaced with overseas suppliers, but this is not possible for defense-essential capabilities, where access to domestic sources is a national security requirement. The current DoD industrial policy is to rely on market forces (competition) to create, shape, and sustain the industrial, manufacturing, and technological capabilities necessary to provide our fighting forces with systems that can engage and win full-spectrum warfare. However, when absolutely necessary, the DoD will intervene to create and/or sustain competition, innovation, and essential industrial capabilities. If intervention is warranted, the DoD can use mechanisms such as direct investment in supplier infrastructure, leveraging R&D investments, procurement assistance, purchase commitments, or collaboration with other federal agencies to drive growth in domestic vendor demand.

One vital program which provides direct support for defense essential manufacturing capability is the Title III program, part of the *Defense Production Act (DPA)*<sup>3</sup>. The Title III program provides a set of broad economic authorities, found nowhere else in law, to incentivize the creation, expansion or preserva-

<sup>3</sup> Public Law 81-774, September 8, 1950

tion of domestic industrial manufacturing capabilities for technologies, components and materials needed to meet national security requirements which are determined through extensive evaluation as both defense essential and in need of support.

Another critical strategic industrial base issue is the need for steady, long-term access to affordable raw materials. Sometimes, having domestic manufacturing capability is not enough, as in the case of secure access to raw materials. A US industrial base can depend too heavily upon materials which are not readily available or affordable, causing additional cost, schedule or failure. The GAO concluded that the DoD lacks a consistent, department-wide framework to monitor its supplier base. Policy is needed on this topic establishing a federal-level working group to identify and act upon the multiple options, such as stockpiling, pursuing trade violation cases, developing domestic/alternate sources, or entering into long-term purchase commitments.

Other key concerns for defense manufacturing including the growing problems with counterfeit parts, environmental regulations, and visibility into the lower levels of the supply chain. Counterfeit parts are increasingly finding their way into the defense supply chain, particularly for legacy systems with longer life cycles. A key enabler for reducing counterfeit components is dealing with domestically based trusted suppliers, using a qualified vendor list. Trusted suppliers keep record of all transitions and thus can trace parts back to the original equipment manufacturers (OEMs). However, in cases of obsolescence, there are no longer parts available from the OEM, and sources are used to procure these parts which do not have clear provenance. The DoD is defining both processes and technologies which can assist the procurement workforce in spotting and rejecting counterfeits.

Similarly, there are a growing number of environmental regulations establishing de-facto global restrictions on critical manufacturing materials. A recent NDIA white paper, "Maintaining a Viable Defense Industrial Base," lays out the dangers of global manufacturing standards, such as the elimination of lead-based solder and hexavalent chromium corrosion coatings. In the case of solder, the substitute lead-free solders are much less reliable than traditional tin-lead solders for aerospace and defense applications that involve harsh operating environments and long operating lives. Also, the US is increasingly unable to obtain commercial off-the-shelf (COTS) electronics that contain tin-lead solders and finishes. Further, pure tin finishes, being increasingly used by COTS electronics suppliers as a low-cost approach to avoid the use of lead, are prone to the random growth of "tin whiskers" that can lead

to unpredictable short circuit failures. The solution demands focused investment in the development of alternative materials that offer performance equal to or better than the ones replaced, and a clear DoD policy determining how to identify and apply alternatives.

Manufacturing research and development is literally the core of an innovation machine that this nation's economic engine is founded upon. Specifically, 70% of industrial R&D is performed by manufacturing-based companies, and the bulk of that R&D is applicable to manufacturing processes and procedures. This R&D results in the application of new technologies, new materials, and overall increased productivity within the manufacturing processes. All of these advances can make US manufacturing more competitive within the global market, but only if the results of the R&D stay in the US and add to the gross domestic product for a significant period.

Manufacturing has always been the catalyst for innovation, with the flattening of the world as globalization unfolded over the last two decades, creating new challenges and paradigms for designing, developing, and manufacturing the next generation of complex aerospace and defense systems. For example, as US companies off-shored manufacturing and moved into system integrator roles a tremendous reliance was placed on all elements of the global supply chain enterprise to efficiently and cost effectively produce and deliver products on time to the system integrators responsible for delivering the end products to the customers. Unintentional or not, this industrial base landscape shift has divorced design and manufacturing activities during system development, making it even more important to have advanced modeling and simulation (M&S) based analysis tools and systems engineering methodologies available and feeding into an integrated roadmap for manufacturing research and development.

Having these advanced M&S-based capabilities would enable design and industrial engineers to identify potential producibility concerns during the "fuzzy" front-end of the design process where the flexibility exists to pursue alternative design concepts that will satisfy both affordability and performance constraints. These M&S-based approaches have been used within the engineering domain for the past two decades, with low and high fidelity numerical simulations replacing and/or reducing the amount of prototype testing required during the design and development effort. However, comparable M&S-based methods capable of predicting the underlying physical mechanisms driving complex aerospace and defense system producibility issues are severely lacking with a unified manufacturing M&S roadmap and investment strategy needed to

mature design capabilities in this important area as part of the larger digital manufacturing transformation that is occurring.

A recent white paper was released by the NDIA Manufacturing Division highlighting the need for more advanced M&S-based analysis capabilities that can be used to drive manufacturing considerations to the left in the systems engineering process and provide a means to “design out” manufacturing risk by providing a means to identify and quantify producibility concerns.<sup>3</sup>

The federal government has a role in the determination of R&D priorities, development of R&D clusters, investments for national security, and leveraging/incentivizing private industry investment. A crucial need at the macro level is the planning and management of a collaborative and highly connected research enterprise which spans large and small businesses, academia, and government research labs. Recent studies of best in class foreign R&D strategies have concluded that developing regional “clusters” of specialized R&D partners provides the most effective model for government, academic and industry innovation, and increases the probability of transition to domestic manufacturing capabilities. These clusters also offer the highest leveraging potential for government investment and have proven to drive associated capital investment in regional facilities and infrastructure. Government policy should support the formation and management of these clusters by offering a centralized process for creating and developing them and provide for collaboration between these clusters utilizing a ‘hub and spoke’ model. Collaboration between the clusters offers innovation and product development opportunities that drive technology transition into complex systems, which offer the greatest benefits.

With respect to manufacturing R&D for national security, the DoD has a single program that is legislatively chartered to develop and transition manufacturing processes and fabrication required for the production and support of defense systems known as the DoD Manufacturing Technology (ManTech) Program. For over 50 years, the ManTech Program has been DoD’s investment mechanism for staying at the forefront of defense essential manufacturing capability. The ManTech program consists of four major areas:

- Effective management and delivery of processing and fabrication technology solutions;
- Active support for a highly connected and collaborative defense manufacturing enterprise;
- Active support for a strong institutional focus on manufacturability and manufacturing process maturity;

- Active support for a healthy, sufficient and effective defense manufacturing infrastructure and workforce.

The effectiveness of this joint services program is well demonstrated in a recent report to Congress that identified over 100 projects funded by ManTech from FY03-FY05 which have been implemented and yielded a cost avoidance of \$6.3 billion. However, the investment in the ManTech program, currently averaging \$210 million level in the President’s FY11-FY16 budget, is not at the level required to effect substantial changes in the defense industrial base. A 2006 Defense Science Board study on the ManTech program concluded that the proper investment level for ManTech should be 1% of the DoD RDT&E budget, or about \$700 million. This investment level would enable the DoD to pursue technical solutions for the most pressing defense manufacturing and industrial base problems facing the US today and in the future. Even in a declining budget environment, funding should be preserved for programs which have demonstrated the ability to both enhance the department’s capabilities and substantially reduce the cost of acquisition and support.

Although there have been many studies of industrial matters, none has produced a comprehensive overview of defense manufacturing issues. Also, much of the reporting has been anecdotal, and no study has compiled a list of manufacturing and process vulnerabilities such as single-source suppliers. A cooperative study between government and industry needs to be done. The recently conducted Sector by Sector, Tier by Tier (S2T2) assessment will develop a baseline of data across a wide swath of industry (including aircraft, shipbuilding, space, ground vehicles, missiles, missile defense, services, and information and communications technology). Sustained efforts will maintain and strengthen the data over time, and in the future, the database and methodology will serve as a starting point for the DoD’s wide variety of industrial assessments. The anticipated reservoir of knowledge will contribute to better acquisition decisions, help ensure realistic program objectives and reduce programming swings that disrupt industrial base investment. It will also contribute to DoD’s merger, acquisition, and divestiture reviews and other industrial base policies.

<sup>3</sup> “21st Century Manufacturing Modeling & Simulation Research and Investment Needs,” NDIA Manufacturing Division White Paper, May 2011. <http://www.ndia.org/Divisions/Divisions/Manufacturing/Pages/default.aspx>

# 5

## ISSUE 5: Adopt a Comprehensive Whole-of-Government Approach to Cyber Policy

*“Cybersecurity threats represent one of the most serious national security, public safety, and economic challenges we face as a nation.” - 2010 National Security Strategy*

Although the executive branch has identified cybersecurity as one of the most serious economic and national security challenges, it has also acknowledged that this threat is one that the government and the nation as a whole are not adequately prepared to counter. This recognition has spanned numerous years, and two administrations. The President’s Comprehensive National Cybersecurity Initiative (CNCI) establishes 12 sub-category initiatives that collectively seek to: 1) provide a front line of defense against immediate threats, 2) defend against the full spectrum of threats, and 3) strengthen the future cybersecurity environment. An important aspect of CNCI is to provide funding “within the federal law enforcement, intelligence, and defense communities to enhance such key functions as criminal investigation; intelligence collection, processing, and analysis; and information assurance critical to enabling national cybersecurity efforts.”

In March 2011, the President also articulated a Cybersecurity Legislative Proposal (CLP), which sets out legislative goals for protecting the American people, the nation’s critical infrastructure, federal government computers and networks, and for establishing a framework for protecting individuals’ privacy and civil liberties. Congress has drafted legislation, such as S.413, which is consistent with the President’s CLP. However,

there has not been any major piece of cybersecurity legislation passed concerning this serious economic and national security challenge. While the executive branch has set forth a cyber policy, it has not aggressively or effectively focused its efforts. Simple questions, such as, “who is responsible or in charge?” and, “what is critical infrastructure as it relates to cyber?” have not been answered. Risks and effects from cyber intrusion in supply chains must continue to be addressed in collaboration with industry. Industry is where the supply chains reside, and they must have say in how this issue is addressed. Under the current environment, industry and various government agencies have been left to their own solutions; cooperating *ad hoc* and taking a stance that is generally viewed as reactive rather than proactive.

The most effective government department in combating the threat of cybersecurity to date has been DoD. In July 2011, the department released its Strategy for Operating in Cyberspace (SOC). As the strategy states, “[DoD] depends on cyberspace to function...[and] uses cyberspace to enable its military, intelligence, and business operations, including the movement of personnel and material and the command and control of the full spectrum of military operations.” The SOC’s five initiatives are:

- Treat cyberspace as an operational domain;
- Employ an active defense concept;
- Partner with other federal departments and the private sector;
- Build international partnerships for cyber defense;
- Develop and invest in training and technology.

While the DoD has been criticized for publically advocating an active defense strategy, it marks the first time a major government entity has established a wide-ranging strategy on cyber security. Our reliance as a nation on cyberspace cannot be overstated. Unfortunately, the rapid growth of this reliance has not been matched by commensurate security and information assurance capabilities. As a result, our networks and data remain vulnerable to cyber attack.

NDIA believes the nation must have a comprehensive whole-of-government approach to cybersecurity strategy, coherent and coordinated implementation plans, supporting legislation and regulation, and adequate funding if the goals of the CNCI are to be realized. This internal “mobilization” within government and industry, which has been compared by some to the Manhattan Project or the Apollo program, must reflect the sense of urgency concerning cybersecurity that has been long recognized by our leaders. If industry is to be able to

rapidly migrate, redeploy, and reuse unique, effective state-of-the-art capabilities, then the speed of information dissemination needs to more closely match that of the threat. Across the board there needs to be better integration of cybersecurity capabilities through all government entities, horizontally and vertically, and a comprehensive approach that encompasses our people, processes and technologies.

There remains an overwhelming need for broadly deployed processes which are marked by speed and brevity, characterized by accurate and actionable threat information, and accompanied by tools with which to combat the threat. The cybersecurity crisis affects the whole of the defense industrial base, and more needs to be done. NDIA advocates the broadest possible collaboration and sharing of cyber threat information consistent with our national security needs sharing on a broader and more encompassing scale (horizontally and vertically, tactical and strategic, government to government, government to industry, industry to government, industry to industry, etc.).

DoD must embrace the US defense and security industry as a full partner in equipping and enabling our nation's warfighters, defending our nations' networks and data, and defeating the cyber threat. Traditional barriers to closer DoD-industry collaboration, such as lack of trust, laws and regulations that discourage full disclosure of information, fears of bad publicity and subsequent corporate de-valuation, and silos and turf wars within government agencies must be aggressively attacked and overcome.

Expansion of the Defense Industrial Base Cyber Protection Pilot beyond its current level of participation would provide opportunities for greater outreach, awareness and understanding of the threat. Not only does it make good tactical sense for government, but industry is in great need of the powerful leverage that shared information will bring for protection to their networks. A broad expansion to small businesses, financial companies, network infrastructure providers, software and hardware producers, as well as attention to the serious supply chain risks involved is warranted. Additionally, such leadership is lacking in other parts of the government.

There are understandable challenges in expansion of the pilot program in the form of how we deal with classified, proprietary, and controlled but unclassified information. These challenges must be tackled and overcome. For a corporation, it not only means improved protection of sensitive national security information they have been entrusted with, but also protection of their own corporate integrity. The potential business

penalties in terms of perception by markets of publicly traded corporations who experienced a breach and loss of intellectual property or private customer information is of great concern to business executives and legal staff who must address government and shareholder concerns.

Government and industry are essentially fighting an improvised, disjointed and unguided defense against powerful, focused, and determined enemies. NDIA believes that enabling legislation with supporting funding is needed from Congress, followed by effective and focused leadership and implementation from the executive branch. These steps should be completed no later than June of 2012. In the interim, the executive branch should use its ample power to begin to standardize a true "active" defense against cyber threats.

# 6

## **ISSUE 6: Enable International Competitiveness of US Industrial Base**

### **Support the Administration's Export Control Reform Initiative**

NDIA strongly supports administration efforts to reform the outdated US export control system. This effort is essential to supporting America's manufacturing capability, sustained leadership in innovation, new technology development, and

global competitiveness. While many important and overdue reforms can be accomplished administratively, without new legislation, NDIA urges continued close coordination and dialog among all agencies, industry and Congress to ensure that the proposed changes and reforms--particularly the option of a single licensing agency--can be implemented in a way that will protect selected key US technologies while at the same time allowing US industry to be more competitive in the international defense market. An open dialog and a structured, balanced approach that incorporates Congressional, regulatory, and industrial inputs as new export control approaches are developed will go a long way to avoid any unintended consequences from these changes. Removing needless barriers to international trade by creating a positive US Munitions List, moving many items that have no military national security concerns to the control of the Commerce Department, and by publishing the regulations needed to implement the UK and Australia defense treaties are examples of this effort that will help to bring common sense, efficiency, transparency, and predictability to the US export control system, resulting in tangible benefits for US security and competitiveness.

#### **Improve Defense Technology Transfers Among U.S. Partners and Allies**

NDIA recognizes and supports the evolving requirements of coalition operations to attain our national security objectives. Supporting those operations requires well trained and equipped coalition partners employing materiel and tactics that are fully interoperable and supportable in a timely manner during combined exercises and combat operations. Additionally, US forces should have the benefit of advanced technologies developed by friends and allies outside the US but which offer near term opportunities as force multipliers. Both efforts require the ability to share in the advantages offered by the timely transfer of defense articles and technology among trusted partners and allied nations. Efficient sharing of defense technologies is critical to winning today's conflicts and ensuring readiness for tomorrow's challenges. Technology sharing is rightfully subject to export controls, but those controls must be administered in an efficient, predictable and transparent manner. The administration's Export Control Reform Initiative, and Technology Security & Foreign Disclosure initiative, both supported by NDIA, should significantly enable improvement in defense technology transfers among our partners and allies. In addition, it is imperative that the DoD contracting process be expedited to operate at the speed of war.

#### **Put UK and Australian Defense Trade Cooperation Treaties into Practice**

NDIA applauds the Senate for ratifying the two treaties and

appreciates Congress approving associated implementing legislation. The treaties offer strong potential to enhance defense cooperation and exports to the United Kingdom and Australia. The challenge is to move these promising vehicles from behind closed government doors to wide-spread application by defense companies in all three countries. NDIA believes the treaties protect our national security and address fundamental problems in our current system of sharing technology with our close allies. NDIA understands these treaties will require a separate set of licensing and record-keeping procedures. Therefore, it is important that implementation of these treaties be accomplished in a manner that enhances and does not degrade or further complicate the existing export administration process. Failure to balance legitimate regulatory concerns and operational utility risks leaving companies with an unappetizing choice between the cumbersome, but well understood, International Traffic in Arms Regulations (ITAR) and a new vehicle perceived as promising but cumbersome and less understood than ITAR.

#### **Support Transatlantic Defense Industrial Cooperation**

NDIA supports the continued emphasis devoted by NATO to the importance of Transatlantic Defense Industrial Cooperation (TADIC) as recommended by the NATO Industrial Advisory Group (NIAG) and endorsed by the Conference of National Armaments Directors (CNAD). The successful TADIC Conference in October 2011 co-sponsored by the CNAD and NIAG recognized the importance of the administration's efforts to streamline export control procedures and the European Union's efforts to revise its export control directives to avoid unnecessary duplication and enable simpler and faster export licensing for inter-allied transfers, while meeting valid national security requirements through robust export control, industrial security, intelligence sharing and law enforcement measures. As US, Canadian and European defense budgets continue to be challenged by the mandate for budget austerity, there should be increasing opportunities for enhanced transatlantic defense industrial cooperation and collaboration. The role of industry during these austere times will be critical for NATO to achieve its smart defense initiatives of multinational approaches for capability development.

#### **Support Security Cooperation Reform Initiatives**

Notwithstanding the critical collaboration and necessary debate associated with enabling and authorizing applicable law, regulation and policy, the subsequent execution of approved US security cooperation programs becomes fundamentally a "business management exercise" in the eyes of the participating clients and providers, both government and industry. To that end, DoD/Defense Security Cooperation Agency (DSCA)

has continuously sought to transform its supporting Security Cooperation/Foreign Military Sales (FMS) business processes and generally speed the process from program conception to delivery to effectively build partner capacity/capability and strengthen defense relationships. NDIA endorses these security cooperation reform initiatives.

### **Increase Congressional Notification Threshold**

The FY 2003 *Foreign Relations Authorization Act* modestly increased the thresholds for Congressional notification of FMS and licensed transfers to NATO member states, Australia, Japan and New Zealand. In a March 2005 legislative request, the administration recommended substantial increases to the arms sales and export notifications thresholds, from \$50 million to \$100 million for defense articles or services; \$14 million to \$50 million for major defense equipment; and from \$200 million to \$350 million for defense design and construction services to these countries. NDIA continues to support these recommended increases which will accelerate the process by reducing the number of Congressional notifications of smaller sales.

It is critical to strengthen the small business industrial base, maximizing the efficiencies and innovative solutions that small businesses provide to all federal agencies supporting the security of our nation. NDIA's focus is on fortifying existing small business programs, removing obstacles to effective competition, and improving acquisition strategies by employing meaningful incentives and accountability in connection with small business utilization.

### **Improving Small Business Acquisition Strategy**

To grow a strong, viable defense industrial base, small businesses must be allowed to compete meaningfully for the billions of dollars spent by defense-related federal agencies to procure goods and services. The small business community provides unique capabilities that are delivered in an agile, efficient and effective manner. While Congress has mandated a 23% small business goal for government contracting—and each agency has its own individual goal to achieve this overall result—actual performance year after year has fallen short of this statutory requirement. To help the federal government remedy this shortfall, NDIA recommends the following:

- Increase the weight given to small business utilization when acquisition decisions are made.
- Base annual incentive fees on the prior year's small business utilization.
- Incentivize contracting officers to incorporate SBIR-developed technologies whenever possible in future development.
- Identify areas in the defense industrial base where small business will have a significant impact in strengthening the nation's security.
- Incentivize agencies to exceed small business utilization goals.
- Increase the DoD's small business goals to match other Executive Department goals

### **Challenges for Small-to-Medium Sized Enterprises**

The lower tiers of the supply base provide approximately 70% of the value of US defense systems, and much of the innovation and invention is found in these tiers. Thus, the health of the US defense industrial base has to focus not only on the prime contractors and OEMs, but also on the small and medium enterprises, which are difficult for the DoD to discover, track, and ensure their viability. A survey to identify key challenges for small- to medium-sized enterprises (SMEs) to participate in the defense industry was conducted in 2010 by the NDIA Manufacturing Division. This survey of nearly 100 manufacturers, carried out by the division's Supply Chain

# 7

## **ISSUE 7: Increase Awareness, Opportunity and Utilization of Small and Mid-Tier Businesses in Government Contracts**

Network Committee, specifically targeted domestic SMEs that are currently or had been in the past involved as suppliers in supply chains. The full survey is available on the NDIA website, and shows some disturbing trends and barriers from the perspective of the SMEs. When taken in total, the findings point to the need for action now if the defense industry is to benefit from the presence of a strong, vibrant and healthy supplier base in the future.

Whether it is identifying the opportunity, qualifying as a supplier, submitting quotes or handling the ongoing reporting, current procedures require more time and money from the SMEs than do other comparable industries. NDIA recommends specific actions in this area and include:

- Explore ways to more efficiently describe needs and then proactively match them with manufacturer capabilities;
- Streamline and standardize manufacturer qualification requirements across all government agencies;
- Eliminate all non-value added activities, particularly those that flow down to the SMEs.

#### Impact of Regulatory Costs on Small Businesses

A major concern for NDIA is to expand small business participation in procurements by DoD, DHS, and other federal agencies. Small businesses play an important part in the overall U.S. economy, representing more than 99% of all employers, including 51 percent of private-sector workers. Small businesses represent 44% of the total U.S. private sector payroll, employ 40% of high tech workers (such as scientists,

engineers, and computer programmers) and make up 97.3% of all identified exporters (30.2% of known export value)<sup>4</sup>. Small businesses account for nearly all of the self-employed, which comprise seven percent of the work force. Small businesses play a role in federal contracting with about 33.3% of federal prime and subcontract dollars

According to a recent study prepared for the Small Business Administration, as of 2008 small businesses (defined as firms with 20 or fewer employees) face an annual regulatory cost of \$10,585 per employee, which is 36% higher than the regulatory cost facing large firms (defined as firms with 500 or more employees). Compliance with environmental regulations costs 364% more in small firms than in large firms and the cost of tax compliance is 206% higher in small firms. For small manufacturing firms, regulatory compliance cost per employee is more than double the compliance cost for medium-sized and large firms. NDIA fully recognizes the need for rules and structure when doing business with the federal government; however, the disproportionately high burden imposed on small business is a major decision factor for small businesses that are in, or would like to be in, the federal marketplace.

In the legislation and rule making process, NDIA strongly urges Congress and the administration to take into account the regulatory costs faced by small businesses. Small businesses are widely recognized as an economic engine and are our single largest source of innovation and new technologies. As the following chart details, they face

<b>Annual Cost Per Employee of Federal Regulations by Firm Size</b>				
Type of Regulation	Cost All Firms	Fewer than 20 Employees	20-499 Employees	500 or More Employees
All Federal Regulation	\$8,086	\$10,585	\$7,454	\$7,755
Economic	\$5,153	\$4,120	\$4,750	\$5,835
Environmental	\$1,523	\$4,101	\$1,294	\$883
Tax Compliance	\$800	\$1,584	\$760	\$517
Occupational Safety and Health Homeland Security	\$600	\$781	\$650	\$520

Source: The Impact of Regulatory Costs on Small Firms, by Nicole Crain and Mark Crain, 2010. U.S. Small Business Administration, Office of Advocacy

<sup>4</sup> Source: U.S. Department of Commerce

# National Defense Industry Association Statement of Defense Industry Ethics

## Preamble

NDIA Member Companies should adhere to the highest ethical standards and seek to place the defense industry at the forefront of business ethics in America. At a minimum, NDIA members must adhere to applicable laws and regulations governing the conduct of their business. Moreover, entrusted to our care are the lives of Armed Forces Personnel who bear the ultimate risk for their Country to provide security to their fellow citizens. Thus, our common ethical mandate is a higher imperative than our individual business interests. This statement of ethics is intended to capture that mandate by setting forth common ethical principles and emphasizing particular practices that NDIA members may use to put those principles into action.

## Mission

NDIA shall serve in a leadership role in setting high ethical standards for the industry and communicating industry efforts in this area to the public and government officials. NDIA will work with its membership to facilitate the practices set forth below.

## Common Ethical Principles and Practices for NDIA Membership

NDIA members should aspire to the following ethical principles and make every effort to implement the following practices:

- Advance national security by promoting trust among the Defense Industry, our government customers, the U.S. public and our men and women in uniform.
- Strengthen the integrity of a federal procurement system that encourages competition, rewards technical innovation and ensures that American fighters have the decisive advantage on the battlefield and wherever else our nation's enemies may be found.
- Operate our businesses from a foundation of ethical readiness where economic pursuits do not overtake our responsibility to our soldiers, sailors, marines, and airmen, while acknowledging that America's technological and military preeminence are sustained by promoting the financial health of the defense sector.
- Contribute to the common good of our industry and promote industry ethics whenever and wherever possible by sharing best practices in ethics and business conduct among NDIA members and including ethics training in NDIA sponsored events.
- Implement effective ethics programs for company activities at home or abroad. When contemplating any international sale to a governmental or quasi-governmental buyer, it is imperative that effective measures be undertaken to ensure full compliance, not only with the letter, but also the spirit of the Foreign Corrupt Practices Act, as amended, and the FCPA's bar against improper payments to foreign officials.

- Establish effective mechanisms of control over employees and agents operating overseas to promote ethical conduct based upon principles, not geographic location.
- Protect U.S. national security when performing contracts with foreign parties by committing to compliance with U.S. export control licensing regimes, and with all anti-boycott and embargo requirements.
- Establish corporate integrity as a business asset, rather than a requirement to satisfy regulators, by making ethics integral to all aspects of corporate life and culture to create an environment where employees aspire to do the right thing.
- Recognize that self-governance is key to management's commitment to abide by ethical standards. Accordingly, charge Corporate Boards with responsibility for creating an environment where ethical conduct is the order of the day, including developing and implementing a corporate-level process or procedure to review company best practices, policies, and procedures governing ethics.
- Demonstrate the Company's and its leadership's commitment to ethics by making the Chief Executive the top ethics officer.
- Implement a formal company ethics program that includes a written code of conduct to communicate institutional values and expectations and guide employees and management in their decisions and conduct.
- Organize training programs as an integral component of company ethics programs to commit employees to the Company's written code of conduct, encourage them to discern the difference between right and wrong, and to act on that knowledge despite pressures to compromise standards.
- Establish and communicate procedures for employees to identify and report suspected violations of the code of ethics without fear of retribution, establish mechanisms to promptly and effectively communicate violations to the government, and promote full cooperation with government investigations.
- Ensure that employee reports of ethics violations receive immediate and objective attention from Company leadership by establishing a reporting system that promptly, within twenty-four (24) hours, informs the Chief Executive or his designee of any allegation that raises ethical implications.
- Establish written remedial measures for prompt and appropriate corrective action, including disciplinary measures, where instances of unethical conduct are discovered.

## **Vision**

America's leading Defense Industry association promoting National Security

## **Mission**

**ADVOCATE:** Cutting-edge technology and superior weapons, equipment, training, and support for the war-fighter and first responder

**PROMOTE:** A vigorous, responsive, government – industry national security team

**PROVIDE:** An ethical forum for exchange of information between industry and government on national security issues

## **Motto**

Strength through industry and technology

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Ms. Mary Ann Gilleece  
Chair, Education and Lobbying Committee  
NDIA Board of Directors

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