Defense Reforms

The Goldwater-Nichols Department of Defense Reorganization Act of 1986 and the Special Operations reforms have strengthened the war fighting readiness of our Armed Forces. They have enhanced civilian control and the chain of command by clearly delineating the combatant commanders' responsibilities and authorities and the role of the Joint Chiefs of Staff. These reforms have also vastly improved cooperation between the services and the combatant commanders in the strategic planning process, in the development of requirements, in joint training and education, and in the execution of military operations.

Have your views on the importance, feasibility, and implementation of the Goldwater-Nichols Act reforms changed since you testified before the Committee at your confirmation hearing on June 27, 2001?

Answer: No, my views have not changed. I remain firmly committed to the complete and effective implementation of the reforms brought about by the Goldwater-Nichols Act.

Indeed, with regard to acquisition, I believe that the Congress was remarkably prescient and thoughtful in allocating responsibility for requirements to the Service Chiefs and responsibility for acquisition to the Service Secretariat. This allocation creates a creative tension, which ensures competition and creativity as well as best value for the taxpayer. I believe proposals to change this aspect of Goldwater-Nichols by shifting acquisition to the Service Chiefs would be a disservice to the President and our nation’s taxpayers. The debate over requirements, technology, cost and capability should begin at levels below the President and the Secretary of Defense. There is great risk in such a change of even further overstating of requirements, growing unfunded requirements lists, and further escalation in the cost of weapon systems.

Do you see the need for modifications of any Goldwater-Nichols Act provisions based on your experience as Assistant Secretary of the Navy for Research, Development, and Acquisition? If so, what areas do you believe might be appropriate to address in these modifications?

Answer: I do not see a need for modifications of Goldwater-Nichols in the areas affecting acquisition. The civilian and military roles defined in the Act produce a healthy tension that balances war fighting needs with taxpayer interests.

Based on my experience as the Department of the Navy Acquisition Executive, I would be strongly opposed to recent studies proposing modifications that would shift acquisition program management to the Service Chiefs. For the sake of the taxpayer, there needs to be a constant debate at all working levels between the acquisition team - led by Presidential appointees - and
the requirements community - led by the Service Chiefs and the Joint Staff. The debate should encompass available technology, cost, affordability, delivered capability, joint options, and alternative solutions.
**Duties**

**What is your understanding of the duties and functions of the Director of Defense Research and Engineering?**

Answer: The DDR&E is the principal staff advisor to the Under Secretary of Defense (AT&L) and to the Secretary and Deputy Secretary of Defense for research and engineering matters. The DDR&E serves as the Chief Technology Officer for the Department of Defense.

**What background and experience do you possess that you believe qualifies you to perform these duties?**

Answer: I believe that my responsibilities and service as the Assistant Secretary of the Navy for Research, Development and Acquisition coupled with my experience as a professional staff member on the Senate Appropriations Defense Subcommittee as well as experience working in a variety of positions in industry provides me with a strong and extensive background in research and engineering issues.

**Do you believe that there are actions you need to take to enhance your ability to perform the duties of the Director of Defense Research and Engineering?**

Answer: If confirmed, I will review the current duties outlined in DoD Directive 51343Director of Defense Research and Engineering to ensure that the directive provides the necessary authorities and flexibilities to develop research and engineering opportunities to enhance military capabilities.

**Assuming you are confirmed, what duties and functions do you expect that the Secretary of Defense will assign to you?**

Answer: If confirmed, I expect the Secretary to assign me duties and functions commensurate with those of a Chief Technology Officer, and any others as he may deem appropriate.
Relationships

Section 139a of title 10, United States Code, and DOD Directive 5134.3 discuss the responsibilities and functions of the Director of Defense Research and Engineering. Other sections of law and traditional practice also establish important relationships outside the chain of command. Please describe your understanding of the relationship of the Director of Defense Research and Engineering with the following:

A. The Deputy Under Secretary of Defense.

Answer: If confirmed, I will work closely with the Deputy Under Secretary to provide advice and assistance commensurate with the role of a Chief Technology Officer, including development of policies for rapid technology transition, science and technology investment priorities and funding levels, and current and future military capabilities.

B. The Under Secretary of Defense for Acquisition, Technology, and Logistics

Answer: The DDR&E is subject to the authority, direction and control of the USD(AT&L). If confirmed, I expect to be a key player in OUSD(AT&L) and provide the leadership for the research and engineering community.

C. The Under Secretary of Defense for Intelligence

Answer: If confirmed, I will work to foster a close working relationship with the Under Secretary of Defense for Intelligence to ensure our research and engineering needs are synchronized across the Department.

D. The Under Secretary of Defense (Comptroller/Chief Financial Officer)

Answer: If confirmed, I will work closely with the Under Secretary of Defense (Comptroller/Chief Financial Officer) to ensure investment in research and engineering is in balance with the overall priorities of the Department.

E. The Service Secretaries

Answer: If confirmed, I will work to foster a close working relationship with the Military Department Secretaries to ensure their research & engineering priorities, and technology investments are supporting the overall Department goals and are in balance.

F. The Service Acquisition Executives

Answer: Research and Engineering is the first step in the overall acquisition process, so I view the Service Acquisition Executives as a primary customer of research and engineering. If confirmed, I will work closely with the Service Acquisition Executives on research and engineering matters.
G. The Director of the Defense Advanced Research Projects Agency.
Answer: If confirmed, I will exercise authority, direction and control over the Director of the Defense Advanced Research Projects (DARPA) and work with DARPA to ensure their efforts are supporting the overall Department research and engineering goals.

H. The Director of the Defense Technology Security Administration
Answer: If confirmed, I will work with the Director of Defense Technology Security Administration on technological issues pertaining to international acquisition and export activities.

I. The Joint Staff
Answer: Research and Engineering provides new operational capability options to the war fighter. I view them as another primary customer of research and engineering. If confirmed, I will work closely with the Joint Staff on issues relating to research and engineering with the goal of understanding the requirements process and specific capability needs in order to ensure our war fighters are affordably equipped with superior war fighting capabilities.

J. Director, Defense Test Resource Management Center.
Answer: If confirmed, I will work with the Director, Defense Test Resource Management Center to consider technology options and alternate procedures for enhancing the test and evaluation of DoD systems.

K. The Director, Operational Test and Evaluation.
Answer: If confirmed, I will work with the Director, Operational Test and Evaluation to consider technology options and alternate procedures for enhancing the test and evaluation of DoD systems.
**Major Challenges**

In your view, what are the major challenges that will confront the Director of Defense Research and Engineering?

Answer: Major challenges to the DDR&E come from several different factors that shape technology development. The first is to maintain our superior war fighting capability in a fiscally constrained environment. The second challenge comes from balancing near- and far-term technology efforts to provide technology solutions to today’s problems and new capabilities for tomorrow’s force. A third major challenge is the pace and globalization of technology development. Finally, providing technology to meet the immediate and future war fighter needs for the Global War on Terrorism represents an urgent challenge. Across this set of challenges, we must ensure the taxpayer’s dollars are invested in priority areas and provide a good return on that investment for the nation and our war fighters. If confirmed, I look forward to focusing research and engineering efforts to identify and address these and other emerging challenges.

Assuming you are confirmed, what plans do you have for addressing these challenges?

Answer: If confirmed, I would do my best to address the challenges identified. As a starting point, I plan to review RDT&E programs and processes with emphasis on coordinating investment strategies, leveraging technology from all sources (including commercial), and pursuing more effective transition of RDT&E results into affordable acquisition programs. I will, of course, work closely with the RDT&E community. I also expect to be an integral part of the OSD team and to work closely with the Joint Staff, Services and Agencies, and the Congress to get optimum value from our RDT&E investments.

What do you consider to be the most serious problems in the performance of the functions of the Director of Defense Research and Engineering?

Answer: If confirmed and appointed, I will review the initiatives, processes and performance of the DDR&E organization and the DoD research and engineering enterprise in an effort to ensure that the enterprise is best positioned to provide superior oversight and results on the Department’s research and engineering programs. Based on my experiences, I believe that key challenges to performing the functions of DDR&E are the budget process and its lack of funding flexibility, the current requirements generation processes, the resistance to change and greater jointness, and the need to attract, retain and empower highly capable people.

If confirmed, what management actions and time lines would you establish to address these problems?

Answer: If confirmed, I would do my best to position the organization for success as expeditiously as possible.
Priorities

If confirmed, what broad priorities would you establish in terms of issues which must be addressed by the Director of Defense Research and Engineering?

Answer: If confirmed, I would develop and refine priorities to address the major challenges facing the DoD research and engineering program.
Investment in Science and Technology

The fiscal year 2006 budget request for Science and Technology (S&T) is less as a percentage of the total Department budget than the fiscal year 2005 budget request for S&T programs. The fiscal year 2006 budget request for S&T is also below the previous year's requested level and requires a certification to Congress in response to fiscal year 2000 defense authorization legislation.

What role should the Director of Defense Research and Engineering play in the detailed development and coordination of service and agency S&T investment strategies, programs, and budgets?

Answer: The Director of Defense Research and Engineering must ensure that the Service programs are in balance with the overall Department goals, must collaborate with other federal departments and agencies to ensure DoD programs are complementary with other S&T programs in the federal government, and must seek to balance S&T programs between competing near-term and long-term needs.

What, in your view, is the role and value of S&T programs in meeting the Department's transformation goals and in countering irregular, catastrophic, traditional, and disruptive threats?

Answer: The DoD S&T program has a long history of developing superior technologies and capabilities to address the current and future security threats. The Department’s investment in S&T has historically given our forces the technological superiority to prevail over predicted threats and the agility to adapt quickly to unanticipated threats. I believe this role is still valid in today’s strategic environment. As the pace of global technology availability increases, with a commensurate increase in the pace of threat evolution, the role of a well balanced S&T program is more important than ever.

Are there any S&T areas that you view as underfunded by the Department?

Answer: If confirmed, I will review in detail the DoD S&T portfolio to assess appropriate levels of investment for specific technology areas. I expect to see shifts in S&T investments in response to changing needs and opportunities on a continuing basis. Areas where I see our needs increasing are in technologies that can help us defeat the tools and tactics of terrorists and lower acquisition and life-cycle costs.

In your judgment, will the funding levels in these areas affect the Department's ability to meet the threats of the future?

Answer: If confirmed, after the review of the DoD S&T portfolio, I will take appropriate action, if necessary, to balance the investment. I believe S&T funding is important to our future capabilities, and I would be concerned if funding levels ever became seriously out of balance with the rest of our Defense program.
Basic Defense Science

A recent National Academy of Sciences study entitled *Assessment of Department of Defense Basic Research* noted that "the need for discovery from basic research does not end once a specific use is identified, but continues through applied research, development, and operations stages. ... DOD should view basic research, applied research, and development as continuing activities occurring in parallel, with numerous supporting connections throughout the process. ... Senior DOD management should support long-term exploration and discovery and communicate this understanding to its research managers."

Given the continuing nature of basic research and the broad implications and applications of discovery-focused and innovation-focused sciences, what criteria would you use to measure the success of these programs and investments?

Answer: If confirmed, I would review the National Academy of Sciences study to consider their conclusions and assess the benefits of new measures and criteria. By its very nature, the output of basic research is difficult to track. It may take many years to produce results, it may be an apparent dead end that reappears in an unexpected application, and it is almost impossible to forecast which of the seeds we plant will bear fruit. In general, basic research output can be measured in at least three areas: (1) New knowledge--publications in reference journals, (2) Intellectual capital -- students supported, degrees awarded, (3) Tech transitions -- new knowledge (scientific findings) picked up in technology and development programs by the Services and industry. One overarching goal is to ensure organizations funded by DoD and the broader research community possess an understanding of our broad areas of need. Effectively communicating these defense priorities will provide a general direction from which to pursue scientific discovery. If confirmed, I expect my additional criteria will include measuring the quality of DoD-sponsored research through the various peer reviews and external review panels the Department uses and ensuring that our investments emphasize technology areas where it is essential that DoD be the world leader.

How would you determine whether there is an adequate investment in basic research to develop the capabilities the Department will need in 2020?

Answer: I’m not aware of any accepted formula for determining the appropriate level of investment for basic research. I do however recognize that past investments in basic research have been vital to the war fighting advantage we have today. The appropriate level of basic research investment today should be viewed with an eye on historical impact, taking into account that stability of funding is paramount in the effective execution of the basic research program. If confirmed, I look forward to working with this Committee to ensure that DoD S&T investment is adequate and in balance with the overall DoD investment strategy.
Coordination of Defense S&T with Other Agencies

The Department of Defense currently executes approximately 8 percent of the total federal basic and applied research portfolio.

Do you believe the mechanisms of coordination between federal civilian agencies and the Department are adequate to ensure that the military can best leverage the advances of agencies such as:

- **National Science Foundation on defense needs for basic science?**
  
  Answer: Adequate coordination and collaboration processes appear to exist. If confirmed, I will ensure that dialogue between the Department and the National Science Foundation is open and transparent to our decision making.

- **National Aeronautics and Space Administration on hypersonics and other space research and the viability and availability of testing facilities?**
  
  Answer: Adequate coordination and collaboration processes appear to exist. If confirmed, I will ensure that dialogue between the Department and the National Aeronautics and Space Administration is open and transparent to our decision making.

- **National Institutes of Health on areas in which military medical research and vaccine development overlap with civilian medical needs?**
  
  Answer: Adequate coordination and collaboration processes appear to exist. If confirmed, I will ensure that dialogue between the Department and the National Institutes of Health is open and transparent to our decision making.

- **Intelligence Community in setting defense research priorities to prepare for future threat environments?**
  
  Answer: Adequate coordination and collaboration processes appear to exist. If confirmed, I will ensure that dialogue between the Department and the Intelligence Community is open and transparent to our decision making.

- **Department of Homeland Security on homeland defense and national security-related science?**
  
  Answer: Adequate coordination and collaboration processes appear to exist. If confirmed, I will ensure that dialogue between the Department and the Department of Homeland Security is open and transparent to our decision making.
If confirmed, how would you work with other federal agencies and the Office of Science and Technology Policy to improve coordination?

Answer: If confirmed, I would continue to keep an open dialogue with other federal agencies and the Office of Science and Technology Policy.
**Defense Laboratories and Test Facilities**

The Director of Defense Research and Engineering is responsible for the oversight of matters associated with research and engineering and the technical workforce at Defense laboratories operated by the military services or other Department components.

If confirmed, how would you work to ensure that the DOD laboratories facilitate development of capabilities to meet the needs of the acquisition and war fighting communities?

Answer: If confirmed, I would support close collaboration between the acquisition, technology and operational communities to identify current needs and to anticipate future operational needs arising from a changing national and world security environment.
Technology Strategy

The Nation is confronted with a dispersed enemy which is expert at using relatively simple, inexpensive technology to achieve destructive and disruptive results. The Committee has focused on creative prediction of, and adaptation to, continuously changing threats. Past investments in long-term research have resulted in the Department's ability to rapidly advance technologies and solutions from the laboratory to confront emerging threats.

What are the weaknesses, if any, of the current Defense S&T strategic planning process?

Answer: If confirmed, I will review the Department’s S&T strategic planning process to ensure continued consistency with broader DoD goals and objectives as well as look for opportunities to inject technology options into DoD plans as appropriate. As an observer and participant in these processes, I can tell you one of the weaknesses in terms of advancing technologies, especially in technology areas of rapid change, is the lack of funding flexibility and the extended timelines of our requirements and budget processes.

If confirmed, how would you work to ensure that strategic plans are utilized during the budget planning and programming process?

Answer: If confirmed, I will use the strategic guidance to work with DoD components to align S&T investments in concert with DoD goals and objectives.
**Technology Transition**

The Department’s efforts to quickly transition technologies to the war fighter have yielded important results in the last few years. The Department’s fiscal year 2006 budget proposes increases across a spectrum of technology transition programs. Challenges remain, however, in integrating the transition of new technologies into existing programs of record and major weapons systems and platforms.

**What challenges exist in technology transition within the Department?**

Answer: One of the principal challenges to transition is the lack of funding flexibility and the extended timelines of our requirements and budget processes. Successful transition requires an appropriately mature technology, a user need, an insertion window in the program of record and budgeted resources for implementation. This alignment is hard to achieve and maintain, and the gap between S&T and acquisition often needs bridge funding in the execution year. DoD has a limited number of technology transition programs and amount of funding to bridge these gaps, and we have used those tools effectively in recent years.

The Military Services have made strides in focusing their S&T investments on key gaps in their future core military capabilities, and in accelerating critical technologies to end users. It remains a challenge to preserve and apply resources to long-term technology areas that promise substantial return beyond the current fiscal horizon. Transition of proven technologies underpinning uniquely transformational and joint capabilities also continue to be a challenge demanding careful oversight.

**What is the role of the Director of Defense Research and Engineering in facilitating communication between technical communities, acquisition personnel, and end-users to speed technology transition?**

Answer: DDR&E brings the overarching perspective to orchestrate complementary technology development efforts and foster productive inter-agency projects. With a view of research, development and engineering investments across the Department, DDR&E can bring diverse projects into focus on specific evolving needs. DDR&E is a focal point for rapid transition of technologies into fielded systems and an advocate for innovative technical solutions to Defense-wide goals such as energy independence. I would add the resource sponsor community to that list, and state that the role of the DDR&E is to work closely with all of those communities at the DoD corporate-level and at the Service- and Agency-level to make sure our S&T portfolios include transition-oriented investments and processes that bring the key stakeholders into alignment with a transition agreement. In the Navy, we use a process called Future Naval Capabilities. An important DDR&E role is to find best practices and facilitate their broad implementation in DoD.
Venture Capital Strategies

In recent years, several components of the Department of Defense have attempted to follow the lead of the intelligence community by using venture capital firms to make investments in developing technologies.

What role do you believe that venture capital firms should play in DOD’s investments in developing technologies? What advantages and disadvantages do you see in the use of venture capital strategies?

Answer: Venture capital firms can provide DoD with additional knowledge of innovative, emerging commercial technology areas relevant to DoD needs, particularly in areas of rapid commercial innovation. Venture capital firms can also provide early insight into technology companies that might not otherwise engage with DoD, potentially expanding DoD’s sources for products and ideas. Venture capital firms are good sources of technical and business judgment in the areas where they invest, and are well attuned to where the commercial market will be in a few years. It is important to note, however, that the venture capital objective is to make money, while DoD’s objective is visibility of, and access to, emerging technologies. The various ongoing DoD programs are all considered experiments, and DoD is investing at a level that is very low compared to large venture capital firms. It will take a few more years for DoD to understand the advantages and disadvantages of the various strategies. I believe, however, that the commercial success of US venture capital firms is a strong argument for continued DoD learning from the venture capital community. If confirmed, I will review our strategies, and the terms and conditions, for our venture capital and investments.

Are there particular categories or types of technology for which the use of venture capital strategies are or are not appropriate?

Answer: Venture capital firms and strategies work well in technology areas in which there are significant commercial markets. Venture capital firms focus on portfolio companies that have high commercial potential and on an exit strategy for investors to recoup their investment in a few years. Prime technology areas are information and communication technologies as well as biotechnology. Many DoD technology needs may not present significant commercial opportunities, and high profit margins are not consistent with current acquisition law and regulations. DoD interaction with venture capital firms is likely to be most appropriate in areas where we need COTS or COTS-derivative solutions and want to be positioned to be an early adopter.

When DOD does decide to use venture capital strategies, what steps do you believe the Department should take to ensure that DOD funds are invested in technologies and companies that properly reflect national defense priorities, avoid the potential for conflicts of interest by industry partners, and ensure that the Department’s investments are not diluted?

Answer: I believe there is significant value in communicating DoD’s operational challenges and technical interests to non-traditional DoD supplier companies affiliated with the venture capital
community and in identifying and fostering adoption in the near-term of technology solutions
from non-traditional supplier companies. If confirmed, I will explore means to ensure DoD
Funds are invested in technologies and companies that properly reflect national defense
priorities, avoid potential conflicts of interest, and ensure DoD’s investments are not diluted.
The Tango Bravo program is a collaborative effort managed by the Defense Advanced Research Projects Agency (DARPA) and the Navy with the goal of incorporating advanced technologies into submarines. Some of these technologies, such as shaftless propulsion and weapons exterior to the pressure hull, could enable development of smaller and less expensive submarines, with equal or greater capabilities.

What is your understanding of the technical maturity of the technologies being developed under the Tango Bravo program?

Answer: The technical maturity of the component technologies varies. However, the integration of these technologies into systems that meet the requirements for submarine use is relatively immature. For example, much work has been done with electric motor technology to make them smaller, lighter and more powerful. However, very little work has gone into making them quiet and reliable enough in a harsh seawater environment to be suitable for submarine propulsion or control applications. Tango Bravo is looking to evaluate this in sufficiently large scale to obtain credible results.

When do you think some of these technologies could be ready for design into a new class of submarine, or spiraled into the current class of submarines under construction?

Answer: Tango Bravo is expected to produce measurable results in 36 months and conclusions in 48 months (i.e. by 2009). The final results of the technology demonstrations will be carefully examined by the Navy to determine the appropriate follow-on actions. Depending on the success of the demonstrations and the follow-on development required, 2009 is the earliest that the technologies would be available for inclusion in a design effort.
International Research Cooperation

What is your assessment of the value of cooperative research and development programs with international partners?

As technology advancement becomes increasingly global, these cooperative programs become increasingly important to DoD.

In your view, what are the obstacles to more effective international cooperation, and, if confirmed, how would you address those obstacles?

International industry involvement is essential, and this means that intellectual property control, export controls and other business issues can become obstacles. If confirmed, I would look to pilot programs with our allies to develop best practices.

How will increased international technology cooperation affect our domestic defense industrial base?

Our defense industrial base operates in a global economy and will be strengthened by well formulated international technology cooperation programs.

How should DOD monitor and assess the research capabilities of our global partners and competitors, and of the global commercial sector?

This is an important issue for the 21st century, when we can reasonably expect that many technical advances will originate outside the US. I believe this is an issue of strategic importance, and if confirmed, would look to the Defense Science Board or a similar advisory body to take a fresh look at this long standing issue.
**Test and Evaluation**

Rapid fielding initiatives, spiral development, the balance between operational and developmental testing, a reorganization of the budgeting process for the major ranges and test facilities, and requirements for joint testing strategies are a few of the challenges facing the Department’s operational, test, and evaluation activities and the newly created Defense Test Resource Management Center.

**What are your views on the adequacy and effectiveness of the Department's test and evaluation activity?**

**Answer:** Test and evaluation is a critical component of the Department’s research, development and acquisition process. It is imperative that our test facilities, ranges, and processes provide the best possible support to the development and fielding of our weapon systems. I believe the Department’s current test and evaluation processes are adequate and effective. If confirmed, I would like to evaluate potential improvements in developmental test and evaluation efficiency.

**What is the impact of rapid fielding requirements on the standard testing process? For small systems? For large systems?**

**Answer:** Rapid fielding requirements have and will continue to stress the standard testing process for all systems. However, rapid fielding is imperative in our efforts to equip our troops with unmatched capability and limit the risk posed by agile or asymmetric threats.

If confirmed, I will work closely with the USD (AT&L) and the DOT&E to ensure testing requirements are satisfied.

**What role should the Department's test and evaluation organization play in setting criteria for listing of equipment, like armor, in the General Services Administration catalog?**

**Answer:** Criteria for listing equipment in the General Services Administration catalogue should stem from input from all communities involved, including T&E, whenever appropriate.
Small Business Issues

The Small Business Innovative Research (SBIR) program accounts for approximately $1 billion in defense research grants annually.

If confirmed, how would you work to ensure that the program serves a useful purpose in meeting the Department's research goals?

Answer: If confirmed, one of my priorities would be to thoroughly review the SBIR program and to evaluate any adjustments which could enhance the value of SBIR investments to the Defense Department, our war fighters, taxpayers, and the participating businesses.

What guidance or direction do you consider necessary regarding transition of the research results of these programs to major weapons systems and equipment?

Answer: If confirmed, I would continue to encourage the transition of successful SBIR projects through: conferences, such as the recent DoD Phase II and Beyond conference which brought together successful SBIR companies with major defense contractors and Service Program Executives; and increased emphasis on Phase II transition through our Phase II Enhancement Program. The DoD Phase II enhancement program allows the defense component to provide additional SBIR funding when the company attracts non-SBIR mission funds to transition research results to specific systems. I believe the best practices that have made the Navy effective in SBIR transitions could have benefits. These include strong involvement by PEOs and SYSCOMs in defining SBIR topics, training and assistance to small businesses to facilitate transition, and holding forums to showcase SBIR products to acquisition programs and other potential investors. If confirmed, I plan to conduct a thorough review of the SBIR program to consider the adequacy of current policies and evaluate enhancements to better enable transitioning research and linking SBIR projects and participants with major weapon system acquisition programs.

What emphasis would you place, if confirmed, on participation by the acquisition community in setting research priorities for the SBIR and in accepting new solutions into existing programs of record?

Answer: If confirmed, I will continue to actively involve the acquisition community in identifying its research needs and transition opportunities for all research including SBIR. I would expect to increase the emphasis on SBIR coordination and linkage with the acquisition community.

In your judgment, are modifications needed to the Department's SBIR program to ensure it meets the Department's goals and is updated to support research costs of the small business community?

Answer: It is too early for me to make a recommendation. More study is needed to formulate an opinion. However, one of my priorities, if confirmed, will be to review all aspects of the SBIR
program and evaluate opportunities to improve the program’s effectiveness. Specifically, I want to review DoD policies and applicable statutes to see if changes could further facilitate transitions and small business opportunities. I see transitions and linkage of small businesses to larger acquisition programs as a major benefit to both DoD and small businesses. If confirmed, I will work with this Committee and the Small Business Administration to address the fiscal factors impacting the SBIR program.
**Technical Workforce and Laboratory Personnel Management**

The Department's research and development laboratories perform unique functions in serving national security missions and do not readily fit into the general operational management structure. Congress has enacted legislation granting special authorities to the Secretary of Defense for flexible management and personnel demonstration experiments at the laboratories and has exempted the demonstration laboratories from inclusion in the National Security Personnel System until 2008.

**What are your views on the most effective management approach for these facilities?**

Answer: If confirmed, I will support continuation of approaches that support and enable the operational excellence and relevance of our laboratories to better meet war fighter requirements.

**In your view, does the Department have adequate technical expertise within the government workforce to execute its designated acquisition and technical development missions?**

Answer: I believe the Department has adequate technical expertise within the government workforce to execute its technical mission. However, the demographics of our technical workforce suggest a large number of retirements in the next ten years. Thus, we must take appropriate steps to address this issue and to assure that the Department will have access to the scientists and engineers necessary to maintain our technical expertise. I believe the current operational superiority of DoD is a result of the continued technical expertise of scientists and engineers in the U.S. If confirmed, I will work to assure we have the right mix of talent, expertise, and skill to continue to meet our needs in the Department of Defense.

**What particular workforce challenges does the office of the Director of Defense Research and Engineering have?**

Answer: Replenishing the technical workforce as the current scientists and engineers retire will be a challenge. As always, when we replace those retiring from our current technical workforce we are in competition with America’s private sector. However, we now face an additional challenge. America’s students are not as interested in science and engineering as they were almost 50 years ago. The number of U.S. citizens choosing to study science and engineering in our universities is declining relative to the numbers that we are educating from other countries. Since most of our technical employees require security clearances, we must assure the Defense Department can attract sufficient numbers among those that can qualify for clearances. Ensuring we have an adequate supply of technical talent to meet the needs at the Department now and in the future remains a continuing challenge to DoD. If confirmed, I will place a priority on addressing this challenge.
Defense Science Board Study

Have you reviewed the ongoing work of the current Defense Science Board Task Force on the Roles and Authorities of the Director of Defense Research and Engineering? If so, what are your views of this work and, if confirmed, how would you plan to utilize the findings of the Defense Science Board Task Force?

Answer: I have not reviewed the ongoing work from the Defense Science Board Task Force on the Roles and Authorities of the Director of Defense Research and Engineering. If confirmed, I will review the findings and work with the leadership of the Department of Defense on determining what findings and/or recommendations should be implemented.
Congressional Oversight

In order to exercise its legislative and oversight responsibilities, it is important that this Committee and other appropriate committees of the Congress are able to receive testimony, briefings, and other communications of information.

Do you agree, if confirmed for this high position, to appear before this Committee and other appropriate committees of the Congress?  
Yes.

Do you agree, if confirmed, to appear before this Committee, or designated members of this Committee, and provide information, subject to appropriate and necessary security protection, with respect to your responsibilities as the Director of Defense Research and Engineering?  
Yes.

Do you agree to ensure that testimony, briefings and other communications of information are provided to this Committee and its staff and other appropriate Committees?  
Yes.