,**Advance Policy Questions for Ellen Lord**
Nominee for Under Secretary of Defense for Acquisition, Technology, and Logistics

Department of Defense Reforms

The National Defense Authorization Act for Fiscal Year 2017 included the most sweeping reforms since the Goldwater-Nichols Department of Defense Reorganization Act of 1986.

1. Do you support these reforms?

Yes.

2. What other areas for defense reform do you believe might be appropriate for this Committee to address?

With the leadership of this committee, the FY 2016 and FY 2017 NDAA's enacted by Congress present a unique opportunity to make major, meaningful reforms to the Department of Defense. If confirmed, I know that as we implement these reforms we will find other areas for reform. I look forward to partnering with Congress going forward to properly implement the reforms already on the table, and to identify and implement reform in other areas.

Duties

Section 133 of title 10, United States Code, describes the duties and responsibilities of the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)).

3. If confirmed, what additional duties do you expect that the Secretary of Defense will prescribe for you?

I would expect the Secretary to prescribe duties and functions commensurate with the position of USD(AT&L), and whatever other duties he determines are appropriate.

4. Do you recommend any changes to the provisions of section 133 of title 10, United States Code, with respect to the duties of the USD(AT&L) other than those to be enacted by the National Defense Authorization Act for Fiscal Year 2017?

I do not have any specific recommendations at this time. If confirmed I would expect that in the process of implementing the FY 2017 NDAA reforms that we may identify additional changes that would be worth considering.

Qualifications

If confirmed, you will be responsible for managing an acquisition system pursuant to which the Department of Defense spends roughly $400 billion each year. Section 133 of title 10, United States Code, requires the USD(AT&L) to be appointed from among persons who have an extensive management background in the public or private sector.

5. What background and experience do you have that qualify you for this position?

I have spent over 30 years at Textron, one third with Textron Automotive and two thirds with Textron Systems encompassing both commercial and defense businesses operating domestically and internationally. My experience includes new technology development, transition to manufacturing, low and full rate production, sustainment and product terminations. Portfolios have included hardware systems including embedded software, software products as well as service contracts encompassing contractor logistics support, program based logistics and fee-for-service contracts. Management responsibilities have included attracting, developing and retaining talent along with realigning organizations to streamline and cost reduce operation, in addition to shutting down sites.

6. What background or experience, if any, do you have in the acquisition of major weapon systems?

I have had responsibility for four ACAT 1 programs: Future Combat Systems Unattended Ground Sensors, Intelligent Munition System, Shadow Tactical Unmanned Aircraft System, and Ship to Shore Connector

Relations with Congress

7. What are your views on the state of the relationship between the Office of the USD(AT&L) and the Senate Armed Services Committee in particular, and with Congress in general?

My understanding is that relations between AT&L and the committee could be improved.

8. If confirmed, what actions would you take to sustain a productive and mutually beneficial relationship between Congress and the Office of the USD(AT&L)?

I believe that communication is the bedrock of any good relationship. If confirmed, I intend to establish a regular drumbeat of communication with Congress from various levels within the organization. With good communication, AT&L and Congress can have a productive partnership as we work together to improve the acquisition enterprise.

Defense Reforms

The National Defense Authorization Acts for Fiscal Years 2016 and 2017 enacted sweeping reforms of the defense acquisition system and organizational structure. These reforms restructured the Office of the Secretary of Defense, particularly with respect to the USD(AT&L); returned more authority to the military services for program management; and created additional acquisition pathways. If confirmed, you will be implementing these reforms, while managing the daily operations of the Office of the USD(AT&L).

9. What is your understanding of the major reforms you will be responsible for implementing, if confirmed?

The recent NDAA's include the most significant reforms to the Department of Defense in decades. These reforms are vitally important and I am excited about the opportunity, if confirmed, to partner with Congress in implementing them and extending the reform effort even further.

I believe the major reforms I will be responsible for are ones to drive innovation and regain our technological edge over potential adversaries, to speed our ability to bring capability to the warfighter, and to do so affordably and with accountability. To enable these reforms, Congress has provided a series of management tools and authorities to include alternative and rapid acquisition pathways, better access to commercial and non-traditional suppliers, and provisions to improve acquisition agility. Management and organizational changes such as the restructuring of the USD(AT&L), creation of the CMO, realignment of responsibilities among organizations as well as pushing decision authority to the Services support those overarching goals.

The newly-created Under Secretary of Defense for Research and Engineering (USD(R&E)) has been designated as the Chief Technology Officer of the Department of Defense.

10. What do you believe is the appropriate role of the Chief Technology Officer of the Department of Defense?

I believe that the Chief Technology Officer (CTO) for the Department of Defense should set the strategic technical direction for the Department -- a direction that will ensure that the United States retains its technical superiority throughout the world. The Chief Technology Officer should establish policies for and monitor all defense research and engineering, technology development/transition, prototyping, experimentation and developmental testing. He or she should champion the DoD Science and Technology (S&T) Enterprise (comprised of DoD labs/engineering centers, Federally Funded Research and Development Centers (FFRDCs)/University Affiliated Research Centers (UARCs), industry, academia, and our allies). Additionally, the CTO should maintain a dialog with industry to inform the defense industrial base about the Department's strategic direction while maintaining an awareness of industry internal research and development (IRAD) efforts.

11. Do you believe the USD(R&E) has been provided appropriate authority over the service and agency research, technology development, and innovation efforts and

over the entire Defense research and engineering enterprise? What changes, if any, would you recommend?

The USD(R&E) has been granted the authorities to help set the direction for the Department of Defense, however, FY17 NDAA Section 901 did NOT afford the USD with "…the authority to direct the Secretaries of the military departments and the heads of all other elements within the Department with regard to matters for which the Under Secretary has responsibility." This was a notable difference between this USD and the USD for Acquisition and Sustainment and the Chief Management Officer positions. I do not have any specific additional recommendations at this point, but if confirmed, I look forward to working with this committee closely to ensure that the authorities are appropriate.

This Committee is particularly concerned that the R&E organization will suffer under the weight of the major acquisition bureaucracy and culture.

12. What would you recommend in terms of organizational structure, workforce, authorities, or availability of resources to ensure that the USD(R&E) is able to function as the Chief Technology Officer?

As a completely new organization, the USD(R&E) is being built from the ground up to have a new culture and mindset. Any structure created should support maintaining technical superiority on the battlefield.
Minimal bureaucratic constraints will be placed on the organization with a "less is more" mindset. The workforce will be trained to understand the flexibility available to carry out their work.

13. What relationship should the USD(R&E) have with Service and Defense Agency research and engineering activities?

The USD(R&E) should focus on driving innovation through active and supportive relationships with the Services and Defense Agencies. While the USD(R&E) will set the goals for the Department, this individual will need to rely on the Services/Defense Agencies to achieve those goals. The USD(R&E) will be a champion of new ways of doing business, including utilizing different approaches to acquisition and accepting different levels of risk with new technologies. In so doing, the USD(R&E) will rely on strong relationships with the Services/Defense Agencies to achieve the benefit of rapidly fielded capability to the warfighter.

The newly-created Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) has been designated as the Chief Acquisition and Sustainment Officer of the Department of Defense.

14. What do you believe is the appropriate role for this Under Secretary within the Department of Defense?

Section 901 of the FY17 NDAA specifies that the USD(A&S) shall serve as the principal advisor to the Secretary on acquisition and sustainment, senior procurement executive, and where provided in regulations and procedures, as the Defense Acquisition Executive. The USD(A&S) will appropriately establish policies in acquisition and sustainment, the industrial base, and in procurement that affect the Department as a whole and cut across Service lines.

A&S should focus on improving the workforce and addressing seams between organizations and areas that are not getting proper emphasis in the services and defense agencies. Additionally, A&S should ensure a greater focus on the sustainment costs of weapon systems. I believe these roles are appropriate and consistent with the overall goals to reform acquisition and spur innovation.

15. Do you believe the USD(A&S) has been provided appropriate authority over the Department of Defense acquisition and sustainment enterprise? What changes, if any, would you recommend?

I do not have recommendations for change at this time. However, if confirmed, I will be engaged in implementing sections 901 and 902 of the FY 2017 NDAA and will ensure that the new organization is able to deliver and sustain timely, cost-effective capabilities for the armed forces and the Department. I will recommend changes to Congress as necessary including items that slow the acquisition process and provide little value. I also look forward to the recommendations of the Section 809 panel and am committed to working with Congress on this going forward.

16. What would you recommend in terms of organizational structure, workforce, or availability of resources to ensure that the Office of the USD(A&S) is able to effectively execute its mission?

Getting the right workforce with the right structure and resources is vital to the success of the new A&S. If confirmed, I intend to use all the various authorities that Congress has provided to ensure that the new organization is prepared to succeed. It is my understanding that many of these authorities or resources such as the DAWDF have not been used to their full potential and I want to take advantage of what Congress has given the Department to improve the acquisition workforce. If there are any gaps, I will discuss them with Congress.

17. What relationship should the USD(A&S) have with Service and Defense Agency acquisition and sustainment activities?

Coming from the private sector, I think the corporate model is a good one for the relationship between A&S and the services. Corporate headquarters (A&S) should help set goals for the business units (the services) and then hold them accountable for achieving those goals. Corporate should also manage risk across the portfolio and help spread best practices and new technology across the business units. The relationship between A&S and the defense agencies should vary depending on the agency, but generally shared services should be managed centrally in order to be cost effective. All of that said, I am aware that the Secretary has not made a final determination on these new relationships.

The Department has been slow to act on many of the reforms from the National Defense Authorization Acts for Fiscal Years 2016 and 2017.

18. If confirmed, what steps would you take to ensure that the Department conforms with, and implements, these reforms?

If confirmed, one of my first actions will be to ask for a thorough accounting from the Department on the status of all the AT&L related reforms enacted in the FY 2016 and FY 2017 NDAA's. I would then take action to designate specific responsible individuals with clear plans with metricsto finish implementation. Lastly, I would track the implementation process going forward closely and communicate any issues or challenges to Congress.

19. What changes, if any, would you recommend to these reform-related statutory provisions?

I do not have specific recommendations to offer at this time. However, I believe that the reforms enacted by Congress present a rare opportunity to fundamentally re-think how DoD operates. If confirmed I fully expect to develop additional recommendations as I work with the team to implement the reforms directed by Congress.

Major Challenges and Priorities

20. You will lead the AT&L organization through a historic change. If confirmed, what will be your priorities to prepare AT&L to reorganize effectively into the congressionally-mandated Research and Engineering (R&E) and Acquisition and Sustainment (A&S) organizations in February 2018?

If confirmed, my first priority will be to make sure we have a clear understanding of what the specific objectives are for the new organizations in order to conform to both the spirit of the reorganization and the law. Next, I will focus on ensuring that as we transition we do not increase risk to current operations or critical programs. Third, I will focus on building strong execution and innovation cultures in the two organizations with a bias towards action.

21. A major reason for splitting AT&L was to reform entrenched bureaucracies. If confirmed, how will you go about enacting such change rather than simply splitting the existing bureaucracy across two organizations?

The primary goals of this reorganization – increased speed and accountability – are inconsistent with bureaucracy. This reform effort provides an opportunity to remove layers and reduce red tape while simultaneously increasing ownership and efficiency. To do that, however, we must fix or eliminate any process or organization that inhibits successfully and quickly delivering the product: innovative and affordable equipment for warfighter. If confirmed, I will make rewarding individuals and groups who meet the spirit of lowering the cost, quickly implementing new solutions and embracing new technology to meet warfighting gaps.

22. In your view, what other major challenges will confront the USD(AT&L)?

The overarching challenges facing the USD(AT&L) are to reverse the decline in technology overmatch the nation has enjoyed by bringing new capabilities to the battlefield faster. To restore our overmatch, we must innovate and field new technologies much, much more rapidly. Restoring our technological advantage is the top challenge for USD(AT&L). One of the most burdensome challenges facing acquisition is aligning budgetary timelines and top lines with program decisions. Continuing budget uncertainties, including the impact of the Budget Control Act, incentivize sponsors to be optimistic and underestimate the time, risks, and total costs.

Another major challenge is sustaining warfighter readiness. It's time to elevate sustainment to equal footing with acquisition, especially sustainment accounts for 70% of life cycle costs for many programs. Reliability and maintainability must be part of early acquisition design and development discussions.
Developing open software architecture standards with modular designs with plug and play features must also be a focus.
Determining the correct balance between industry and government for intellectual property rights is critical to a healthy, organic repair capability. Leveraging existing organic sources of support (maintenance, supply, distribution) preserves the readiness of critical infrastructure, and thereby warfighter readiness. However; access to source code continues to be a constraint.

23. If confirmed, what plans do you have for addressing those challenges?

Just as businesses need to bring technology to the marketplace to stay competitive, the Nation needs to bring capabilities to the battlefield. If confirmed, I will use my extensive business background, including in the commercial sector of a leading-edge technology company, to advance reforms and initiatives that support innovation and rapid acquisition. Part of the solution will be to ensure program managers are empowered and the workforce trained to maximize the use of commercial best practices. This will be coupled with robust risk matrices that are reviewed on a regular basis.

I will also work closely with the new leadership structure defined in sections 901 and 902 to rapidly assess and drive critical acquisition decisions to return the U.S. to a position of technological superiority.

Acquisition Organization

24. Do you see the need for any further changes in the relationship between the Office of the Secretary of Defense and senior acquisition officials in the military departments?

Not at this time. However, I will be engaged in the implementation of sections 901 and 902 and will recommend changes as necessary as the new organization stands up.

25. What further steps do you believe are necessary to align authority and accountability in the acquisition system?

This is a critical question and one that I intend to ask at every level of the acquisition enterprise. Authority and accountability must be aligned.

26. What steps do you believe are necessary to promote "delayering" of the bureaucracy, while reducing risk aversion and improving acquisition outcomes?

Industry must continuously root out inefficiencies and excess inside their organizations to survive. We need to do the same for DoD. However, changing a culture will take some time. One critical element will be finding and rewarding individuals and teams who are taking smart risks with success today within DoD. We need to be very clear about expectations and communicate what right looks like.

27. Do we need to create authorities to reward program managers who excel, and penalize those who fail, including termination?

Businesses have the ability to effectively reward success and hold those accountable for unacceptable performance, so it makes sense to apply that thinking in Defense acquisition. We also need to review whether program managers have all of the authority that they need.

28. How should the Department of Defense define and manage concepts like risk and failure so that program managers can succeed by trying new technologies and concepts, learn what works and does not work, and thereby more quickly achieve technological advancements?

All too often, the current system discourages short-term and small-dollar risk and instead produces programs that are decades behind or billions of dollars over budget. Program managers need to be better equipped to balance all types of risk including time, cost and the capabilities truly needed by the warfighters. We need to encourage certain types of risk-taking (fail fast and early) while better avoiding long-term highly expensive failures. All of this comes back to making sure that program managers have the authority they need and are then held accountable for their decisions. Technology roadmaps, open systems architectures, and close teaming with labs and industry on prototyping are best practices that can lead to improved acquisition success.

29. Do you see the need for any additional processes or mechanisms to ensure coordination between the budget, acquisition, and requirements systems of the Department of Defense and ensure that appropriate trade-offs are made between cost, schedule, and performance requirements early in the acquisition process?

From the outside, it appears that the Department struggles to balance cost, schedule and requirements. However, this balance is not easy to strike. If confirmed, I will examine whether additional processes or mechanisms are needed to ensure appropriate trade-offs are made.

30. What do you believe should be the appropriate role of the service chiefs in the requirements, acquisition, and resource-allocation processes?

The Services are responsible to organize, train, and equip their forces. As such, the service chiefs should be involved in all aspects involving those responsibilities to include active engagement in the requirements, acquisition, and resource allocation processes. Users need to be more involved in the life cycle of an acquisition program — not just at the early end of developing requirements. It is at the service chief level where discussions about the balancing of requirements, budget and technological feasibility can take place. Requirements need to evolve and be tailored to meet budgetary and technological realities.

31. What do you see as the potential advantages and disadvantages to giving the service chiefs authority and responsibility for the management and execution of acquisition programs?

The primary advantage is that the service chiefs are responsible for service contributions to war fighting commands and they are in the best position to ensure their capabilities meet warfighter needs. The primary disadvantage is that service chiefs can be incentivized to be overly optimistic as to delivery schedules or costs for new weapons system development. That is why balancing discussions over budget, technology and requirements need to take place to temper potentially over-optimistic views which can happen if one is only focusing on requirements.

32. What do you believe should be the appropriate role of the combatant commanders in the requirements, acquisition, and resource-allocation processes?

I believe the combatant commanders are in the best position to know what the warfighters need on the battlefield. They should have a major role in the requirements process as well as prioritizing their needs. They should have a strong voice in the tradeoffs between specific requirements and cost.

33. Do you see the need for any changes in the structure or operations of the Joint Requirements Oversight Council?

Decisions made during the requirements process directly affect, even drive, the acquisition process and so the requirements process is extremely important. Strong partnerships between the acquisition and requirements communities are essential to acquire suitable and effective weapon systems that are technically achievable within realistic timelines and budgets. If confirmed, I will seek opportunities to build on this relationship and find opportunities for improvement. I understand the USD(AT&L) is an advisor to the JROC now. We will need to consider the addition of the new USD R&E and A&S as advisors to the JROC to increase collaboration as we implement section 901.

34. What improvements, if any, do you believe are needed in the lines of authority and accountability for the procurement of major weapon systems?

The FY 2016 and FY 2017 NDAAs have made changes in the lines of authority and accountability by pushing more decisions to the Services. While I do not see a need for specific additional changes to that structure at this time, I believe that the question of appropriate authority and accountability should be central to the ongoing reform efforts.

35. If confirmed, what steps, if any, will you take to empower program managers to execute major defense acquisition programs and hold them accountable for how well their programs perform?

As I mentioned elsewhere, I believe that for an organization to succeed, it must give its leaders the appropriate authorities and resources and then hold those leaders accountable for the outcomes. If confirmed, I will review the authorities and resources given to program managers and seek to make changes that I believe can be effective in improving acquisition outcomes. In addition and if appropriate, I will recommend legislative changes if the Department requires additional authorities to implement program management-related measures.

36. How will you balance the various needs of research organizations, such as the Defense Advanced Research Projects Agency (DARPA) and Defense Department laboratories, major weapons acquisition organizations, and newer organizations, such as the Strategic Capabilities Office and Defense Innovation Unit Experimental?

Each of these elements of the DoD research and acquisition enterprise have different roles to play in delivering new capabilities. DARPA discovers the future by making pivotal early investments to enable breakthrough technologies for national security. DARPA is able to take on high-risk, high-payoff projects thanks in part to the foundational research efforts of the DoD laboratories, which develop new technologies for a wide range of Service needs. SCO and DIUx play a distinctly different role, focusing on new uses for mature technologies already demonstrated in either military applications or the commercial sector. While SCO seeks to leverage those technologies in ways to produce near-term solutions, DIUx is building new partnerships to leverage powerful commercial products for warfighting capabilities. Unlike DARPA, neither these entities nor the Service labs are directly charged with exploring the farthest frontiers of science and technology—the research domains that have the potential to open entirely new arenas of technological dominance.

The cultures necessary for DARPA, SCO and DIUX to succeed are different than managing a mature MDAP. As such a degree of policy separation and tailoring are likely needed to ensure success of each acquisition organization with appropriate on-ramps to transition technologies and programs from the nontraditional to more traditional acquisition approaches. If confirmed, I will maintain oversight of the entire research ecosystem to ensure an appropriate balance of resources, roles, and risk.

Acquisition Innovation

This Committee, and the Department of Defense, have attempted to promote innovation within the defense acquisition system but have little to show for those efforts.

37. If confirmed, will you support organizations and activities such as DARPA, the Defense Department laboratories, the Small Business Innovation Research program, Defense Innovation Unit Experimental, and the Strategic Capabilities Office?

Yes. Embracing new ways of doing business and piloting new pathways for acquisition are a major aspect of the new USD(R&E) organization. Leveraging capability from wherever we can find it is critical. All activities, whether they are done within the DoD labs, through Small Business Innovative Research, DIUx or the Strategic Capabilities Office should be focused on three key imperatives – maintaining technical superiority, ensuring affordability of our systems/capabilities, and speeding capability to the warfighter.

38. How will you ensure that these organizations and activities are supported institutionally?

The new USD(R&E) organization should be charged with looking globally for capability that can benefit the Department of Defense. It should be part of the fundamental makeup of this organization to champion new ways of doing business, seek technology wherever we can find it, and leverage all ideas that can benefit our warfighters. If confirmed, I will make communication a key imperative so that government and non-government stakeholders receive regular updates on how the USD(R&E) organization is chartered, staffed and measured. I will prioritize showcasing accomplishments of the new organization in order to highlight their contributions.

39. Further, how will you take the best practices developed by these organizations and disseminate them more widely?

The USD(R&E) organization, empowered to take appropriate risks to achieve significant advancements, should seek best practices within the DoD and commercial Enterprise and even champion pilot programs to help identify how these best practices can be applied more broadly. These best practices should be scaled across the community through the establishment of standards and policies within OSD to be implemented by the Services/Agencies. Again, communicating the organization's accomplishments should be a be part of the campaign to re-invigorate research and engineering at DoD.

Section 804 of the National Defense Authorization Act for Fiscal Year 2016 created a middle tier of acquisition to provide a new acquisition pathway for prototyping and rapid acquisition. The Department of Defense is delinquent, by over a year, and has yet to implement this provision of law.

40. Do you support these modes of acquisition and, if confirmed, when will you implement the law and what change management methods will you use to ensure the Department makes use of these pathways?

The defense acquisition system must be able to provide warfighters the capabilities they need as efficiently and effectively as possible. If confirmed, I will ensure the development of new acquisition pathways that will include use of prototyping, rapid acquisition, and other rapid fielding procedures. Sections 804 and 884 provide the Department with significant alternative

acquisition flexibilities that the Department needs to take advantage to address new sources of innovation and deliver capability to the field faster. If confirmed, I will review the regulatory and policy approaches to these two sections of law and make any necessary changes to ensure the Department is implementing them in line with Congressional intent. I will also ensure the Department establishes the requisite policy, guidance and training; and tracks the implementation of these new pathways to ensure effective use and outcomes. A key to this is making sure that the acquisition workforce is trained by active practitioners who can share actual experiences on specific programs.

The National Defense Authorization Act for Fiscal Year 2017 required that the Secretary of Defense establish cross-functional teams to address critical objectives of the Department.

41. What are your views on the potential focus areas and uses for future cross-functional teams?

In industry, cross-functional teams are the norm and something I have consistently used and relied upon. I believe that cross-functional teams should have a continuing role for initiatives that address complex problems and cross organizational lines and I intend to use them regularly if confirmed.

The Department of Defense's response to recent congressional reforms has shown its inability to change. However, the actions of our adversaries and the pace of technological change demand an acquisition system that can innovate, adapt, and respond to new threats and opportunities.

42. If confirmed, what actions will you take to increase the Department's ability to innovate and change at the requisite pace?

In addition to establishing appropriate acquisition pathways and procedures for rapidly deploying capability to our warfighters, it is important that these capabilities are designed in a way that they are flexible in addressing the variety of mission needs, and can evolve with emerging threats and new technology opportunities. If confirmed, I will ensure a strong technical workforce, along with state-of-the-art tools and facilities, and knowledge of threat and global technology advancements, in order to improve the Department's ability to deliver adaptive, innovative solutions, staying ahead of emerging threats.

One concern that industry has indicated is that they do not know what cutting edge technologies to invest in because the Department of Defense fails to properly communicate where the Department wants to go with specific technologies, and is inconsistent in its advancement and funding of major programs.

43. What steps would you take to provide technology roadmaps that industry can rely on when making research and development investments, and to ensure

program consistency to enable industry to make the necessary capital investments to bring program costs down?

I believe transparency between industry and government is critical to deliver the capabilities we need at costs we can afford. Technical exchanges and continuous interaction will help us inform industry to focus their investments, which the government encourages via its support of industry sponsored S&T conferences and our technology roadmaps published on the Defense Innovation Marketplace webpage. We must identify barriers to communication and find ways to address them. If confirmed, I will continue to encourage these engagements with industry, while looking for additional mechanisms for industry interactions, to ensure we can provide the required capabilities at the most efficient cost possible.

Major Weapon System Acquisition

44. Do you believe that the current investment budget for major systems is affordable given the historic cost growth trends for major systems, and the continuing costs of ongoing contingency operations?

I expect our investment budget will continue to be under considerable pressure, particularly if the Budget Control Act caps for defense are not increased. Any significant cost growth in our major systems could have catastrophic consequences.

45. If confirmed, how do you plan to address this issue?

I plan to work closely with the requirements, resource and acquisition communities to ensure our programs are started with achievable cost, schedule and performance goals and that the achievement of those goals is closely monitored as the program proceeds through the acquisition lifecycle. Sections 804 and 884 and other pre-MDAP risk reductions efforts, if implemented correctly, should provide more knowledge to support a more cost effective transition to an MDAP. We need more pre-MDAP prototyping efforts to support a decision on whether to begin an MDAP.

46. What would be the operational impact of a decision by the Department of Defense to reduce purchases of major systems because of affordability issues?

Reduced purchases of major systems means reduced capabilities for the Department. Reduced capabilities mean either that the Department may be unable to conduct some operations directed by the President, or the Department will be forced to conduct operations while accepting greater risk to American lives and treasure.

47. If confirmed, what steps, if any, would you take to address the out-of-control cost growth on the Department's major defense acquisition programs?

If confirmed, I intend to spend a significant amount of time diving into the Department's major defense acquisition programs. Cost growth can be driven by a number of factors, so I would seek to understand where the risk of cost growth exists in each program. Historically, cost growth was

driven by decisions made or not made in the early years of a program. That is why it is extremely important to focus on that early phase of program and technology development, as well as to ensure that requirements and funding assumptions are correct and are stable throughout the life of a program. I believe that program managers should have a good understanding of where they face risk of cost growth and what their options are to prevent cost growth. I would then seek to hold program managers accountable for managing their own programs.

48. What steps, if any, do you believe that the Department should consider taking in the case of major defense acquisition programs that exceed the critical cost growth thresholds established under the "Nunn-McCurdy" provision associated with section 2433 of title 10, United States Code, and section 206 of the Weapon Systems Acquisition Reform Act of 2009 (WSARA)?

Significant cost growth is unacceptable. The Department should find problems and fix them early to prevent significant cost growth. If cost growth still happens, the Department should look hard at either significantly restructuring or canceling the problematic program.

49. Do you see the need for any changes to the Nunn-McCurdy provision, as revised by section 206?

Not at this time.

50. What principles will guide your thinking on whether to recommend terminating a program that has experienced critical cost growth under Nunn-McCurdy?

I would consider all those elements required by law in a Nunn McCurdy certification. First among equals, though, would be a consideration whether the program is essential to our National Security, its continued affordability, the possibility of acquiring an alternative that would provide the same capability, and the management approach for the program moving forward. A default toward cancellation might provide the right type of incentives and accountability for the services and program managers to ensure that we never get into a Nunn-McCurdy situation in the first place.

Technological Maturity

Section 2366b of title 10, United States Code, requires the Milestone Decision Authority for a major defense acquisition program to certify that critical technologies have reached an appropriate level of maturity before Milestone B approval.

51. If confirmed, what steps, if any, will you take to make sure that the Department of Defense complies with the requirements of section 2366b?

If confirmed, I will ensure compliance with all of the requirement of section 2366b for those major defense acquisition programs where the Under Secretary is Milestone Decision Authority.

52. If confirmed, what steps, if any, will you take to ensure that the Assistant Secretary of Defense for Research and Engineering is adequately staffed and resourced to support decisions makers in complying with the requirements of section 2366b?

With the split of USD(ATL) into USD(A&S) and USD(R&E), the Department is taking a close look at how to distribute resources to improve its effectiveness and efficiency. If confirmed, I would continue to work with other members of the OSD staff and Military Departments to ensure the adequacy of resources available for complying with the requirements of section 2366b.

53. Are you satisfied that technology readiness assessments adequately address systems integration and engineering issues that are the cause of many cost overruns and schedule delays in acquisition programs?

If confirmed, I will examine the current process that also addresses systems engineering and integration issues to ensure associated risks are properly identified and managed.

54. Beyond addressing technological maturity issues in acquisition programs, what other steps should the Department take to increase accountability and discipline in the acquisition process?

There are a number of factors that contribute to the failure of programs to meet their schedule, cost and performance goals. There is no "one size fits all" solution that will address all of the factors. They involve all steps of the process, from requirements and technology immaturity, to systems engineering and integration, to production overruns, to many other factors. If confirmed, I commit to addressing these issues, and where necessary, make adjustments to minimize the frequency of these problems and their impacts to project success. I believe that aligning clear, individual responsibility for each milestone, and the inchstones that comprise the milestones, will go a long way towards solving technological maturity issues. Additionally, a cadence of program reviews that includes detailed, quantified risk matrices are crucial to program discipline.

Requirements Process

55. What is your assessment of the Joint Capabilities and Integration Development System (JCIDS)?

If confirmed, I look forward to ensuring the JCIDS works as intended and that the requirements community and acquisition community are partnering to bring the best capabilities to the warfighter at the best price and in a timely manner. I understand there are upcoming changes to the JCIDS process. I believe it is appropriate that responsibilities are being pushed to the Services, with the COCOMs and USD(I) serving as advisors.

56. In your view, has the Joint Requirements Oversight Council been effectively drawing and using input from the systems engineering, cost analysis and program

planning, and budgeting communities as warranted in its deliberations regarding requirements associated with major systems acquisitions?

Strong partnerships between the acquisition and requirements communities are essential to acquire suitable and effective weapon systems. It is through these relationships that systems engineering, cost analysis and program planning, and budgeting is integrated into the JROC discussions and decision making. From the outside it is hard to judge how effective the JROC has been at using these tools. If confirmed, I will seek opportunities to build on these relationships and find opportunities for improvement. We will need to consider the addition of the new USD R&E and A&S as advisors to the JROC to increase collaboration as we implement sections 901 and 902.

Concurrency

Some of the Department of Defense's largest and most troubled acquisition programs appear to have suffered significantly from excessive concurrency – the effort to produce a weapon system, even as it is still being designed.

57. What impact does such excessive concurrency have on our efforts to produce major weapon systems on schedule and on budget?

Excessive concurrency usually results in a great deal of cost and schedule risk. Major programs that have significant concurrency usually end poorly, both for the warfighter and the American taxpayer. In rare cases, urgent operational needs may require concurrency in a program, but the bar should be very high for allowing significant concurrency in a program. A greater focus on technological maturation and prototyping outside of an MDAP program, open architectures, and incremental or phased development are tools to address concurrency and we should consider how to more effectively use these tools.

58. If confirmed, what steps will you take to address this issue?

If confirmed, I will generally oppose major programs that have significant concurrency. In the rare case where urgent needs drive concurrency, I will require that senior leaders pay significant attention to the program on a regular basis.

59. Under what circumstances, if any, do you believe that it is useful and appropriate to require prime contractors on major defense acquisition programs to share in concurrency costs?

When the degree of technical risk is lower and industry is able to participate as part of their normal business interests, cost risk should be shared. If an urgent operational need is driving concurrency and involves great technical risk, sharing concurrency costs will be more difficult and potentially less appropriate.

60. In your view, would a requirement for such cost sharing reduce the likelihood of excessive concurrency in the development and production of major weapon systems?

As mentioned above, I generally think excessive concurrency should be avoided. If concurrency risk is high and industry is unwilling to accept some of the cost as a condition of a production contract, this would indicate that the government should further mitigate development risk before proceeding. If industry is prepared to accept these risks on a shared cost basis, it is reasonable to assume that the level of concurrency is not excessive but we have to be careful that industry truly understands the risk and is not "buying in" to the program...

Contracting Methods

This Committee has acted to ensure greater use of Firm Fixed Price (FFP) and Fixed Price Incentive Fee (FPIF) contracts for major acquisitions.

61. What are your views on the use of FFP contracts versus incentive contracts for appropriately balancing risk and incentives in defense contracting?

I believe that firm fixed price (FFP) contracts are appropriate to fulfill a preponderance of the Department's wide range of contracted requirements – from commodities, to services that can and should be expressed in terms of desired outcomes, to major weapon system production. For industry, FFP contracts offer the ultimate incentive to find the most cost efficient solution since every dollar of reduced cost equates to a dollar of increased profitability. However, in circumstances where the resources that will be necessary to meet the Department's requirements cannot be forecasted with sufficient fidelity, it may be appropriate to use other than an FFP contract. For example, where the Department's demand for a given service fluctuates significantly, or where the design of a system is not sufficiently mature, it would generally be inappropriate to place all the performance and cost risk under an FFP contract on a contractor, as that risk would be passed along to the Department in the form of inflated pricing to cover contingencies that may never materialize. Incentive contracts, such as fixed price incentive (FPI) contracts, can be used to provide for the Government and industry to share equitably in cost savings and risks. From an industry perspective, FPI contracts can be effective in motivating the contractor to realize cost reductions and increase profitability. From the Government's perspective, FPI contracts share one significant feature of an FFP contract—the Government's maximum liability can be bounded by a ceiling amount that can be negotiated based on the degree of risk anticipated.

The Committee has acted to allow for greater use of Other Transaction Authorities, particularly early in the acquisition cycle and for innovative acquisitions. However, the Department of Defense has been reticent to use these authorities. The Committee has in the past been critical of the perceived misuse of Other Transactions Authority for major programs, such as the Army's Future Combat Systems.

62. If confirmed, how will you drive greater use of these flexible authorities while also ensuring they are not abused?

If confirmed, I will drive expanded use of Other Transaction Authorities (OTA) by focusing on and encouraging those DoD requiring organizations that could benefit from access to non-traditional sources of innovative technology that might be adapted, as in the case of prototypes, to enhance the combat capability of our forces. I believe there are opportunities to judiciously employ these authorities more broadly across the Department. However, because the agreements that are formed under these authorities are not required to include standard terms as found in Federal Acquisition Regulation (FAR) based procurement contracts, DoD practitioners in OTA must have the requisite experience and training in order to adequately protect the Department's and taxpayers' interests. I would seek to ensure the authorities are not abused by allocating sufficient workforce development funding to train contracting, legal, and other acquisition personnel and I would look to leverage existing and emerging centers of excellence within the Department rather than expecting all DoD organizations to exercise these authorities. Furthermore, I would diligently carry out my statutory authorities to approve and oversee use of these authorities to ensure that the resultant business arrangements are executed in accordance with the statutory criteria, such as the prerequisites to award follow-on production contracts or transactions to participants in the transaction for a given prototype.

63. Under what circumstances do you believe the use of these flexible instruments is inappropriate?

I believe it would be inappropriate to use OTA to avoid competition or when the same objectives can be achieved using standard processes and terms and conditions and the use of OTAs would either limit competition or increase the time or cost for the effort.

64. Under what circumstances, if any, do you believe that Lowest Price Technically Acceptable contracts are appropriate?

I believe Lowest Price Technically Acceptable (LPTA), as a source selection evaluation approach, is appropriate to competitively acquire products (e.g. commodities and commercial off-the-shelf items), for which the Department could not rationalize value by paying a higher price for performance that exceeds prescribed minimum requirements. I appreciate recent legislation that established a policy to avoid LPTA for specified professional services (e.g. information technology and audit readiness services). For these type of requirements, the Department will likely benefit by making trade-off decisions that consider criteria such as quality, innovative approaches and demonstrated past performance of service providers. I believe however there are certain, significantly less complex, requirements for services that lend themselves to LPTA because "technical acceptability" can be well-defined, there is no value to the Department to pay for higher performance and the Department would realize price savings without compromising results through this approach. We have to be careful not to try and use LPTA to avoid bid protests on more complex endeavors and under no circumstances should we buy MDAPs on LPTA or LPTA-like procedures.

Unrealistic Cost, Schedule, and Performance Expectations

Many acquisition experts attribute the failure of Defense Department acquisition programs to a cultural bias that routinely produces overly optimistic cost and schedule estimates and unrealistic performance expectations. Section 201 of WSARA seeks to address this problem by promoting early consideration of trade-offs among cost, schedule, and performance objectives in major defense acquisition programs.

65. Do you believe that early communication between the acquisition, budget, and requirements communities in the Department of Defense can help ensure more realistic cost, schedule, and performance expectations?

Yes.

66. If so, what steps, if any, would you take, if confirmed, to ensure such communication?

If confirmed, I will stress the importance of early communication among the requirements, budget and acquisition communities to ensure we work together in the early establishment of programs that are cost-effective, technically achievable and affordable. I plan to participate in the Joint Requirements Oversight Council (JROC) where cost-informed and technologically sound decisions can provide savings in time and resources for acquisition programs. I also believe that giving the Service Chiefs a role in acquisition matters should be helpful in creating this dialogue on trade-offs.

67. How will you work with the military services and the requirements community to ensure that requirements are technically feasible and can be achieved within reasonable costs?

If confirmed, I plan to ensure that I or a senior member of my staff is actively engaged in any Department forum where the identification of program cost, schedule and performance objectives are balanced. To that end, I will ensure that the acquisition community is an active and informed participant in JROC meetings when such topics are discussed and will ensure my staff actively participates in service conducted Configuration Steering Boards where requirements, budgeting and acquisition communities work together to craft better solutions to our warfighter needs.

The Department of Defense has increasingly turned to incremental acquisition and spiral development approaches in an effort to make cost, schedule, and performance expectations more realistic and achievable.

68. Do you believe that incremental acquisition and spiral development can help improve the performance of the Department's major acquisition programs?

Yes. The Department needs the ability to use more flexible approaches to get capability to the warfighter quickly. By focusing on delivering improvements more frequently and in smaller "packages", the Department can better manage cost and risk as well as increasing the opportunities for incorporating new technologies. This works especially well in software

intensive systems or modernizing more complex systems, such as the F-35. I strongly support the use of these and other flexible approaches to both improve performance of acquisition and deliver cutting-edge capabilities to the warfighter.

69. What risks do you see in the Department's use of incremental acquisition and spiral development?

The biggest risk in incremental acquisition and other flexible approaches is in aligning expectations and incentives both within the Department and with industry. In today's environment, acquisition programs are expected to be low on risk and high on documentation and reporting. If we are expecting to use more flexible and agile acquisition approaches, the Department needs to find equally flexible, agile mechanisms for oversight and reporting. There will also need to be agreement on risk tolerance and how that is communicated to stakeholders. Finally, the Department needs to find creative ways to ensure that Industry has an equal stake in the success of the program.

70. In your view, has the Department's approach to incremental acquisition and spiral development been successful? Why or why not?

While significant progress has been made in recent years, I believe the acquisition system in its current form tends to dis-incentivize more flexible approaches to acquisition. The burden of documentation and reporting requirements associated with multiple smaller increments is a major challenge. The cycle time to get validated requirements tends to force the Services to "pack more in" to each increment. In order to succeed, the Department needs to implement a more agile flexible process for decision making and leverage the technical talent and expertise resident in our acquisition workforce and systems commands.

71. What steps, if any, do you believe are needed to ensure that the requirements process, budget process, and testing regime can accommodate incremental acquisition and spiral development approaches?

I believe that the Department can improve the use of data and modern management tools to make better, faster investment decisions and increase the impact of incremental development. For example, modern model-based systems engineering techniques replace paper documents with "requirements models" that lend themselves better to analysis and instantly reflect changes to requirements and/or the design. Mission engineering techniques need to be matured for effective analysis of the system-of-systems to improve the integration of individual weapon systems, maximizing the capability of the complete force. The Department needs to take advantage of state of the art architecture, analysis, and management tools to effectively integrate our decision making processes, from warfighter requirements to design and testing, in order to deliver the capabilities the warfighter needs, when the warfighter needs them.

72. How should the Department ensure that the incremental acquisition and spiral development programs have appropriate baselines against which to measure performance?

Incremental and other flexible acquisition approaches should have an initial baseline to measure progress against similar to more conventional acquisition methods. The key to success is understanding the appropriate level of fidelity necessary for this baseline and the associated risks assumed. Additionally, these baselines need to have flexibility mirroring the acquisition approach. The baselines are decision tools that need to be accurate, but allow sufficient change to accommodate good/speedy decision making, not rigid structures that are a burden to the development and act as a disincentive to more incremental and flexible development approaches. This may be the one area that we might need to review Nunn-McCurdy to see if it is sufficiently flexible to allow for incremental programs.

73. Are there any negative impacts or downsides to the use of incremental acquisition and spiral development?

Incremental and other flexible acquisition approaches can be seen as potentially locking a Service in to a proprietary solution and hampering competition if not structured and executed well. Smart use of open architectures and careful management of data rights can often mitigate those concerns. Additionally, there is often a need for an entity to act as lead systems integrator in the more flexible, incremental approaches. While this can be a prime contractor, I believe it is also possible for the Department to act as lead systems integrator, where appropriate. I believe in our technical workforce and the capabilities resident in the warfare centers, system centers, and laboratories; and, if confirmed, I will continue to encourage the military Services to leverage their organic technical capabilities to the maximum extent possible in incremental and flexible acquisition strategies.

Funding and Requirements Stability

The poor performance of major defense acquisition programs has also been attributed to instability in funding and requirements. In the past, the Department of Defense has attempted to provide greater funding stability through the use of multi-year contracts. More recently, the Department has sought greater requirements stability by instituting Configuration Steering Boards to exercise control over any changes to requirements that would increase program costs.

74. Do you support the use of Configuration Steering Boards to increase requirements stability on major defense acquisition programs?

Yes.

75. What other steps, if any, would you recommend taking to increase the funding stability and requirements stability of major defense acquisition programs?

I believe that requirements stability, funding stability, and stability in acquisition strategies are inter-related. Well defined and achievable requirements are the foundation for successful programs. They allow the acquisition community to design solid acquisition strategies with realistic costs estimates. That in turn allows the resource allocation community to provide stable funding profiles. Open, early, and continuing communication among the communities are

critical and requirements creep is the enemy of executing programs on time and within budget. If I am confirmed, I will offer recommendations to improve all aspects of the acquisition enterprise that improve stability.

Better Buying Power Initiative

The Department of Defense's "Better Buying Power" initiative provides acquisition professionals with guidance on how to achieve greater efficiency, enhanced productivity, and affordability in how the Department procures goods and services.

76. If confirmed, what steps, if any, will you take to follow through on this guidance and ensure that it is implemented as intended?

I support the goals of DoD's Better Buying Power (BBP) initiatives – which are to improve DoD's management practices in many dimensions. If confirmed, I intend to evaluate the success of the BBP initiatives and will seek the best ways to drive efficiency, productivity and affordability into the acquisition system while also encouraging innovation. In short, establishing requirements that generate affordable programs that can be executed quickly, while meeting warfighting gaps will be my focus.

77. What is more important—reducing industry profits or reducing taxpayer costs?

Reducing taxpayer costs.

78. What is the appropriate percentage of a major defense acquisition program that should be set aside for the government to manage a program?

There is no single answer to this question as an appropriate scale of oversight depends crucially on three attributes of a program: the degree of technology risk; the structure of the acquisition strategy and, particularly, the scope of the government's management and oversight duties vice the prime contractor; and a program's maturity. The first two elements are part of a program's acquisition strategy and must be tailored to the technological environment, industrial opportunities, and operational circumstances to minimize cost and schedule. Once a program's configuration and industrial circumstances are stable, of course, oversight may be reduced. If confirmed, I will drive efficient and effective program management that has personal accountability as a fundamental element.

79. Are there any elements of the Better Buying Power initiative with which you disagree and which you intend to modify materially or discontinue?

The spirit of BBP is laudable. If confirmed, I intend to evaluate the BBP initiative in order to support and expand on its successes while discontinuing any efforts that are no longer appropriate.

80. Do you think there should be a Better Buying Power initiative focused on systems sustainment?

I want to ensure that the acquisition system is more nimble AND better integrates sustainment in early analysis of alternative and system requirements, design, and acquisition decisions so that the Department is better situated to affordably operate and sustain systems. If confirmed, I intend to prioritize efforts to focus on sustainment costs early and often.

Contracting for Services

81. What is your understanding of how the Department of Defense determines whether to use civilians or contractors for services needed by the Department of Defense?

It is my understanding that the Department has well-established policies and procedures in place, grounded in statute and regulation, to help decision makers at all organizational levels of the Department make determinations regarding the alignment of work among various sectors of its workforce (military, civilian, and contractor) in a manner that ensures the most appropriate, efficient, effective, and assured delivery of capabilities and services to meet the mission. If confirmed, I will work with my counterparts in the personnel community to ensure that the acquisition of contracted services is made in a manner that ensures a balanced and cost effective mix of labor.

82. What is your view on using staff augmentation contracts at headquarters level offices?

I believe that there is a role for staff augmentation contractors at the headquarters, especially to provide niche capabilities and leverage private sector technical expertise. However, I believe that, as with all outsourcing - both in the public and private sectors – the Department must guard against an overreliance on outside sources for core functions and the loss of institutional knowledge and capability.

83. What is your view on the use of OMB Circular No. A-76 to increase public-private competition for determining whether commercial activities should be performed under contract with commercial sources or in-house using government facilities and personnel?

I believe that through competition we can encourage innovation and efficiency in how work is accomplished. I also believe that leaders, managers, and decision makers should always have the maximum flexibility and tools available to them to meet their missions and requirements in a manner that makes the most efficient use of their available budget and resources. The use of A-76 competitions might be a useful tool or process. However, it is my understanding that there has been a prohibition on such competitions for a number of years now, due to long-standing concerns with the process. If confirmed, I will look at our workforce

holistically between military, civil servants, and contractors and seek to understand where the capability shortfalls are and then determine the best approach for addressing these shortfalls.

84. What do you believe is the most important factor for determining whether a services role should be performed by government or contractor personnel: cost, flexibility, efficiency, ability to meet mission, or some combination thereof?

For work that is not considered inherently governmental or sensitive, I believe each of the elements identified should be considered in combination when making decisions regarding the sourcing of work.

Technical Data Rights

85. Do you think that the Department of Defense has appropriate access to technical data packages for weapons systems in development and sustainment?

Access to technical data packages varies by program data needs. The acquisition process must carefully consider the need for data early in the program planning phases, and use mechanisms such as the acquisition strategy, contracting and intellectual property strategies to determine the most cost effective means to obtain the data which is needed. Technical data is critical to acquisition, test and evaluation, sustainment and evolution of systems. If confirmed I intend to ensure the Department has appropriate, cost effective access to the data it needs, but that the decisions will be made on case-by-case bases.

86. Is it worth spending more money in programs earlier in order to obtain technical data packages?

Technical data packages, appropriately containing data for use across the entire lifecycle of a system are key to maintaining cost control in modification, sustainment and maintenance of our systems. It is not a foregone conclusion, however, that more must be spent to acquire these data. Smart decisions must be made, given the unique considerations of programs as they are initiated.

87. How will the use of open systems architectures and acquisition strategies improve the Department's ability to modernize and sustain its systems?

There is considerable value in making incremental changes to weapons systems, enabled by modular architectures and best commercial practices. Benefits include affordability, interoperability, and ability to respond to threat changes or emerging technology opportunities. The DoD should make use of modular, open system approaches to the extent possible, in order to achieve these benefits. If confirmed, I will seek to continue the use of these practices by programs and ensure a foundational set of enabling practices are available in support. These enablers include business and technical practices, contracting and data rights, development of standards, and a trained workforce engaged with the industrial base.

Software Activities and Acquisition of Information Technology

Warfighting capabilities are increasingly software-reliant, and even software-defined—a trend you are no doubt familiar with at Textron given these are the kinds of capabilities that Textron has partnered with the Department of Defense to develop. Business operations—financial management, personnel and pay, and travel—run on IT systems that have been predominantly reliant on software for some time. Despite these trends, and despite being given both the authority and direction to do so, the Department has struggled to implement changes to its acquisition processes that specifically support software activity and IT acquisition, for both warfighting and business operations. This has meant at times that the Department invests billions of dollars and 5-10 years on an IT program—for example, the Expeditionary Combat Support System and more recently the modernization of the Air and Space Operations Center—but delivers no useful capability at all.

88. Please describe your views on how the Department should treat software—specifically, how it should be developed, acquired, produced, and sustained.

I believe the Department must continue to advance its efforts in all aspects of the Software Acquisition Management Lifecycle with an eye towards adopting flexible, tailorable, and collaborative processes that improve speed of capability delivery, reduce risk and minimize cost. Software is integral part of all Department capabilities, be they weapon systems, information enablers or business systems. If confirmed, I will seek to implement software development best practices from both government and the private sector

89. In addition, how is/should it be different from hardware? How should the two be aligned for major efforts that contain both?

Hardware programs must address risks associated with the technology readiness, and manufacturing and production processes. This normally results in a longer acquisition timeline with delivery of warfighting capability at the end of a relatively lengthy acquisition lifecycle. With software, we often use a phased development approach with testable software builds or minimum viable software increments. This allows multiple developers to concurrently code to achieve a faster pace in a series of manageable, intermediate products to gain user acceptable and feedback for the next build or increment while conducting multiple test and integration events

It seems that the Department recognizes the challenges associated with major programs that are comprised of both hardware and software elements. When hardware development is the dominant factor, the design fabrication and testing of the physical prototypes will likely determine the overall schedule. While software can initially proceed on an independent schedule, care needs to be taken to integrate software and software incrementally and as early in the program cycle as possible. The tighter the integration between software and hardware development, the more successful mitigating risks to program cost and schedule performance will be.

90. What do you understand the role of the USD(AT&L) to be with respect to IT acquisition and the software activities of the Department?

It is my understanding that the USD(AT&L) establishes procedures and guidance for programs in the defense acquisition system and ensures the Department maintains the best military in the world through the efficient and effective delivery of capability. For IT acquisition, this means: (1) Establishing policy and standards and guidance for lifecycle acquisition management, as well training and education standards for our acquisition professionals in the newest IT acquisition methodologies and industry best practices; (2) Eliminating roadblocks for our customer base that make it difficult to deliver IT in a rapid fashion; and (3) Advancing our acquisition management capability to be on par with the pace of industry.

91. What do you understand the role of industry to be in this area?

When it comes to IT or software acquisition, the role of industry is to work with the Department, help it learn about new technologies, and engage in prototypes and pilots that move both industry and DoD forward. Industry helps inform DoD of best practices and processes in action for managing and sustaining IT. If confirmed, I would expand usage of existing programs for training with industry to help acquisition professionals gain experience with software acquisition in industry, while gaining valuable insight into business drivers.

92. If confirmed, how do you plan to address systemic and persistent cultural, process, and technical barriers to improving the Department's treatment of software activities and IT acquisition?

If I am confirmed, I expect to draw on my previous experience in industry to address these sizeable challenges. From my understanding, the Department seems to have a historically risk-averse culture, which creates barriers in terms of evolving delivery of software capability in an efficient and effective manner. The Department will only grow more dependent on software and IT and must make significant advances in acquisition management. If confirmed, I would strive to be a change leader in the area of software acquisition management modernization. I will work with the staff, Military Departments and Agencies to understand and eliminate roadblocks to improving software and IT acquisition management. I will increase the level of engagement and training with industry, academia and leading software development experts to improve acquisition processes, policies, standards, workforce and governance. I also plan to encourage more joint efforts and cross-collaboration between the Services and Agencies. We must also learn lessons from the commercial world and apply them to the Department's IT acquisition efforts. If confirmed, I will work to highlight superior performance by employees who demonstrate behaviors that efficiently and effectively deliver software capabilities to the Department and the warfighter.

93. In particular, given that, if confirmed, you will be responsible for implementing congressional reforms establishing an USD(R&E) and an USD(A&S)—how will you allocate responsibility for IT acquisition, especially software activities?

I will carefully review the current Department progress on sections 901 and 902 and actively work to structure both organizations to meet congressional directives and intent.

94. How will you work with the testing community, and with the military services—including the Chief Information Officers?

If I am confirmed, I expect to draw on subject matter experts from all relevant sources. My previous experience in industry has taught me that working with these relevant communities in a collaborative and productive way has significant return on investment. Testing is a critical component of software development and can take many forms. It can be a costly aspect of software delivery, particularly from a time perspective. If confirmed, I would look to work with and challenge the Department's testing communities to evolve their testing procedures and approaches and become more integrated with software development and operations processes. I would encourage the testing community to work with industry to identify new ways of addressing software testing requirements and adopt some of those lean IT principles, and practices. The Military Departments, as the executers of many of the Departments acquisition programs, are pivotal to the successful delivery of software and IT based capability. I will work with them to understand their issues and concerns and identify roadblocks that make it difficult to deliver effectively and efficiently.

Science and Technology

95. What is the Department of Defense's science and technology strategic plan? What are the overall goals and objectives of the Defense research enterprise?

Science and Technology plays a vital role in achieving the Department's goals and in confronting a wide range of challenges and missions. The breadth and depth of the threats we face in all domains, not just physical, require the Department of Defense to cultivate the most technologically equipped military globally. With this in mind, if confirmed, I will work to ensure that the Department's research enterprise is focused on providing the technologies to address current and future threats, reducing the cost of current systems while increasing their capability, and creating technological surprise for our adversaries. I will also focus on delivering capabilities quickly. I believe an 80% solution quickly delivered is far more valuable than an elegant solution that takes much longer to achieve.

96. What, in your view, are the role and value of science and technology programs in meeting the Department's readiness goals, in equipping troops with advanced capabilities, and in mitigating and neutralizing emerging threats posed by our adversaries?

We have the most technologically advanced military in the history of the world because of our science and technology programs, developed through an ecosystem of our DOD Labs, inter-agency labs, industry, academia, and international partners. If confirmed, I will support its continued health in terms of working to obtain highly qualified people, modern facilities, and state of the art equipment as these are critical for future military success.

97. What is the Department's role and responsibility in addressing national security issues through scientific research and development?

With the increasing distribution of advanced capabilities around the world, the Department's research enterprise has an absolutely critical role for ensuring technical overmatch against any potential adversary to address our national security issues. This requires remaining close to the commercial sector and understanding the state of the art in multiple domains.

98. What would you do to bolster coordination between and among the science and technology programs of the military services and defense agencies? Which creative programs would you implement to ensure the services work together in a more collaborative manner?

It is my understanding that the creation of the Communities of Interest (CoIs) within the last five years has enabled scientists and engineers from across the Services and defense agencies to coordinate and work together on mutual technical areas of interest.. If confirmed, I will maintain the CoI construct to ensure cross-cutting technical areas are addressed in a collaborative manner.

99. How would you use science and technology programs to better reduce technical risk and therefore potentially reduce costs and schedule problems that accrue in large acquisition programs?

It is important to create an integrated and inclusive environment in which program offices recognize the Department's science and technology community as an in-house capability comprised of subject matter experts uniquely qualified to answer difficult technical questions about large acquisition program technology risk in a thorough and timely manner. I will strive to do this if confirmed.

100. How do you strike an appropriate balance between near-term focus and investing in revolutionary and innovative research programs? How do you ensure that the Defense research enterprise is poised to serve both short-term and long-term readiness?

Long term research has been, and will continue to be, vital in providing new and innovative capabilities to our warfighters. In addition, near-term needs regularly occur and often with requests to meet immediate and pressing needs of the current fight. If confirmed, I will collaborate with the Department's leadership to allocate funding for science and technology investments at levels that will ensure the Department is able to win today's fight and the fight of the future.

101. What would be your plans for the Third Offset strategy? Which areas would you emphasize and how would you ensure that these new technologies are developed and deployed quickly?

The DoD needs to create capability that assures U.S. dominance against a persistent adversary – whether it be near-peer or insurgent. Technology areas, such as unmanned systems, the use of artificial intelligence to provide decision support for commanders, or the continued push for extremely precise weaponry to mitigate collateral damage are just some of those key areas that we believe will play a large role in maintaining dominance. Capitalizing on the potential of these technologies depends upon adequate and stable budgets to complete

development/procurement and experimentation with the operational forces to ensure that they accept this new technology and understand the capability that it can provide on the battlefield. Additionally, non-traditional organizations like SCO, DIUx, and DARPA should play a critical role in finding, developing, and fielding these new technologies.

Funding for Science and Technology Investments

102. Do you believe that the current funding levels for the Department of Defense's science and technology activities are appropriate? If not, what changes would you recommend?

The DoD Science and Technology (S&T) community has been extremely fortunate to benefit from strong congressional support over the last twenty years. That strong support has resulted in stable budgets. If confirmed, I will continue to emphasize the importance of sustaining our S&T investments as the foundation of capability development and I will make recommendations for changes as necessary.

103. What direction will you provide regarding funding targets and priorities for the Department's long-term research efforts?

Significant efforts across the department over the last 15 years have been focused on shortterm capabilities needed for current combat operations. We need to start emphasizing the longer term. If confirmed, I will work with our warfighters to understand their requirements and work to align our priorities and funding of S&T investments appropriately.

104. What specific metrics would you use to assess whether the Department is making adequate investments in its basic research programs?

Basic research is long-term investment expanding the scientific foundation, which pays off in new technologies critical to the economy, the health of our population, and the Nation's military capabilities. This makes specific and broadly applicable metrics a challenge, but if confirmed, I intend to review our Basic Research Program and would start with the following: does it attract the Nation's leading scientific investigators; is the research world-leading, what is our track record of major discovery and of long-term impact; does it cover fields of research of critical interest to the Department; and is it peer reviewed by a panel of leading experts.

105. How will you assess whether the science and technology investment portfolio is adequate to meet the current and future needs of the Department?

If confirmed, it would be my intent to engage with experts and senior officials to get their feedback, to include the Vice Chairman of the Joint Chiefs of Staff, who is the requirements authority for the Department and represents the warfighter, as well as groups such as the Defense Science Board to provide input for such an assessment.

106. What specific technological areas should the Department prioritize for investment in order to develop next generation operational capabilities?

If confirmed, I will assess the critical capability gaps of the Department and work to identify the technology opportunities to close these gaps. A number of technology areas are clearly priority needs, including artificial intelligence, both defensive and offensive cyber, hypersonics, and directed energy.

107. Given limited resources, what technological areas can be de-emphasized in order to free resources to support priority areas?

If confirmed, it is my intent to conduct a thorough review of our S&T investments and their priorities and make adjustments as necessary in light of the pending Strategic Defense Review and other guidance.

108. What is the role for the Department in developing a pipeline of future scientists and engineers?

DoD seeks to attract, inspire, and develop exceptional STEM talent across the education continuum and advance the current DoD STEM workforce to meet current and future defense technological challenges and the Department in helping to build this future workforce. Scientists and engineers want to work on hard problems and DoD offers some of the hardest problems on the planet. We should emphasize that in our recruitment efforts. We also need to be flexible. We may only be able to keep STEM talent for a few years but should recognize that a strong STEM workforce in the US underpins our national security. The Department offers a wide range of unique opportunities to students who can participate directly in cutting edge research and development through a variety of internship, scholarship, and mentorship programs. Through its continuous initiatives through partnerships with government, industry, and academia, the DoD continues to provide education and outreach initiatives that are unique to DoD's mission, needs, and resources and that are required to build the force of the future needed to serve and defend the Nation.

Department of Defense Laboratories

109. What experience do you have working with Department of Defense laboratories?

As CEO of Textron Systems I have engaged with many parts of the DoD's laboratory enterprise. I have been consistently impressed by the spirit of innovation and the call to service by the DoD's scientist and engineering community. If confirmed, I will be excited to support and continue working with this amazing community in my new role.

110. What metrics would you use to evaluate the effectiveness, competitiveness, and scientific vitality of the Department's research and development laboratories?

Metrics for evaluating the DoD's research and development laboratories must consider the role and mission of the DoD's in-house R&D enterprise. I feel it would be important to engage with end users of the amazing innovations that come out of the in-house labs, engineering centers, and warfare centers because the effectiveness, competitiveness, and scientific vitality of our R&D laboratories is found thorough the impact of the their products and technology provided to the warfighter. Conventional "return on investment" metrics are not necessarily appropriate for national security mission-focused in-house R&D laboratories. If confirmed, I would expect to work with the Services' S&T leadership to develop metrics for assessing laboratory performance.

111. What steps would you take to increase the mission effectiveness and productivity of the Defense laboratories?

If confirmed, I will work with the Services to ensure that the laboratories are getting the resources required to meet their mission objectives of supporting the warfighter's current and emerging technology requirements. The nature of the work conducted at the Department's in-house laboratories requires constant adaptability, and I will work to minimize bureaucratic hurdles and fully utilize congressional authorities and flexibility for the laboratories.

112. How would you enhance the level of technical collaboration between the Defense laboratories and other federal, academic, and industrial scientific organizations?

If confirmed, I will ensure that the DoD laboratories continue to collaborate with academia, industry, and other public/private entities to conduct world-class research in support of the national security of the United States. Authorities given to our science and technology reinvention laboratories by Congress help create an environment that fosters excellence in research, fosters technology transfer between the DoD and academia and industry, reduces costs to the Department, maximizes the use of existing laboratory infrastructure, and promotes economic growth.

113. Do you believe that past investments in research equipment; sustainment, repair and modernization; and facility construction at the Defense laboratories have been sufficient to maintain their mission effectiveness and their standing as world-class science and engineering institutions?

Cutting edge research is conducted throughout the DoD laboratories, but the Department's past investment in the sustainment, repair and modernization of its facilities may not have been sufficient to maintain world-class science and engineering institutions. Many of the department's laboratories were built in the 1940s and 1950s, so aging infrastructure remains a persistent concern. If confirmed, it is my expectation to assess our laboratory infrastructure challenges and to provide the necessary support to ensure our institutions remain world-class.

114. Are you satisfied with the quality of the Defense research, laboratory, and engineering workforce and infrastructure, especially relative to its industry and

academic peers, and global competitors? How do you plan to maintain or upgrade that quality in the future?

The DoD's laboratories must have world-class facilities and the highest quality work force to meet its missions and to allow DoD to better preserve and enhance its technical edge in future decades. To that end constant improvements and investments are required, supported by continuously working to maintain and grow a dynamic and quality work force. These efforts are crucial because the Defense Laboratory Enterprise furnishes the department with an in-house research capability with no commercial equivalent. If confirmed, I plan to encourage the laboratory community to identify priority S&T areas that need enhancement initiatives, and work with the Services to support, maintain, and constantly improve our in-house R&D capabilities and will explore the most appropriate means of achieving these ends.

115. Do you believe that the state of Defense research facilities around the country are having an adverse impact on the ability of the laboratories to recruit and retain a highly-skilled technical workforce?

Recruiting and retaining a high-skilled technical workforce is a challenge for many organizations due to the competitive nature of the field. If confirmed, it is my intent to work with the Services to ensure that the state of the facilities and infrastructure is not only meeting their missions, but is competitive with industry, academia, and other government facilities.

116. What would you do to increase the interaction between the labs and the private sector? Similarly, how would you ensure that a greater percentage of the technologies being developed by the labs transition into programs of record and are expeditiously deployed to the warfighter?

The private sector is a source of incredible innovation, and it has the important capabilities, upon which the DoD relies, for scaling up production of new technologies for deployment to the warfighter. The transfer and transition of technology from DoD labs into the private sector, and the reverse, is a key means of stimulating private sector investment and bridging federal government research with industry development. Close dialog and coordination by our in-house laboratories, acquisition community, and private sector is necessary for expeditious deployment of new technologies in the face of an ever-changing battlefield environment for our warfighters. If confirmed, I will work with our labs and industry to facilitate increased technology transfer and to ensure that the laboratories have the appropriate authorities necessary to foster commercialization and opportunities for accelerating the deployment of technologies into the hands of our warfighters to maintain their technological edge on the battlefield.

117. In your view, have the Defense laboratories struck an appropriate balance between investments in near-term technology programs that are tied to current battlefield needs and investments in longer term, higher risk, and revolutionary capability development?

Both near-term and long-term research by our in-house R&D enterprise are important for meeting current, emerging, and future threats to warfighter missions. If confirmed, I will seek to

find an appropriate balance in near and far term research to ensure sufficient focus on near-term solutions to address current challenges while ensuring adequate funding for our long-term research.

118. What is your view on the quality and relevance of the Defense laboratories as compared to the Department of Energy national laboratories, federal laboratories, academic laboratories, and other peer institutions?

The DoD's Service laboratories have a unique mission that is accomplished by an in-house R&D enterprise: to support the needs of the Service warfighter in the domain in which they fight. To that end, the laboratories, engineering centers, and warfare centers are supremely relevant today and into the future. I have been extremely impressed by the quality of work conducted in-house, and I would compare the Defense laboratories favorably to the Department of Energy national laboratories, federal laboratories, academic laboratories, and others. The DoD's in-house R&D capability is absolutely critical to maintain to meet the warfighter's mission due to the unique requirements generated by DoD's national security mission.

Defense Advanced Research Projects Agency (DARPA)

119. In your view, has DARPA struck an appropriate balance between investments in near-term technology programs that are tied to current battlefield needs and investments in longer term, higher risk, and revolutionary capability development?

It is my understanding that DARPA does not specialize in incremental advances in technology, and that evolutionary work is assumed by other S&T R&D entities including the Service laboratories, SCO, and DIUx. If confirmed, I intend to keep a close eye on the entire DoD research portfolio to ensure it maintains an appropriate balance of near- and longer-term efforts, as well as to provide the necessary support and resources so that DARPA can continue its successful record of investing in and bringing to the warfighter game-changing, high-risk/high-payoff technologies.

120. Do you feel that DARPA has adequately invested in the academic research community?

This is a complex area, with which I am not yet familiar. If conformed I will investigate and make adjustments to the academic research portfolio that are appropriate.

121. What are the major issues related to DARPA investments, management and workforce, and research outcomes that you will seek to address?

If confirmed, I will continue to support DARPA's flexibility and independence, so that the agency can continue to develop technologies that offer new options to the DoD, and may occasionally challenge conventional wisdom. As part of that support I will, if confirmed,

explore the issues that DARPA faces and seek solutions to better enable DARPA to fulfill its mission.

122. Do you feel that DARPA is adequately transitioning its programs to the military services and Defense agencies? If not, how will you address that challenge?

DARPA has a solid record of transitioning its innovative technologies to the DoD and the warfighter, though the route those transitions take varies depending on the technology, Service demands, market forces/commercial interest, and other factors. If confirmed, I will continue to track the transition of DARPA's research into fielding programs. As part of that I will, if confirmed, explore the issues that DARPA faces and seek solutions to better enable DARPA to fulfill its mission.

123. Do you believe that there has been an appropriate level of interaction between DARPA and its intelligence community analog, IARPA, given the overlap in many research areas? How would you enhance that interaction?

My understanding is that program managers from both agencies interact routinely to share information and minimize any possible redundancy. If confirmed, I will strive to maintain this relationship.

124. Do you believe that there has been an appropriate level of interaction between DARPA and the Strategic Capabilities Office (SCO)? How would you enhance that interaction?

Both DARPA and SCO are key elements of our DoD research ecosystem, and I believe their interaction is essential. If confirmed I will study the interaction between the two and ensure that it continues as appropriate and productive.

Technology Transition

The Department of Defense continues to struggle with the transition of new technologies into existing programs of record and major weapons systems and platforms. Further, the Department also has struggled with moving technologies from Defense programs or other sources rapidly into the hands of operational users.

125. What impediments to technology transition do you see within the Department?

Transitioning technology from S&T into Programs of Record and fielding these new technologies for regular use by our warfighters remain critical challenges for the Department. Contributing factors include the rigidity of defense acquisition programs, difficulty in obtaining funding for technology transition, and multiple contracting challenges. If confirmed, I will work to address these challenges to get state of the art technologies into hands of our warfighters.

126. If confirmed, what steps, if any, will you take to enhance the effectiveness of technology transition efforts?

There are a number of activities underway in the Department to enhance the effectiveness of technology transition, such as how technology roadmaps are developed and improvements in connectivity between the laboratory and acquisition communities, joint capability demonstration, and quick reaction procurement processes. If confirmed, I will continue to support these initiatives and look for other opportunities to enhance the likelihood of technology transition.

127. What can be done from a budget, policy, and organizational standpoint to facilitate the transition of technologies from science and technology programs and other sources, including small businesses, venture capital funded companies, and other non-traditional defense contractors, into acquisition programs?

The split of USD(AT&L) into the USD(A&S) and the USD(R&E) provides the Department an opportunity to take a close look at S&T, prototyping, and acquisition processes to identify opportunities to transition technologies more quickly from laboratories as well as from a host of sources in the commercial world. This said, many of the challenges associated with transition align around our tolerance for risk: technology risk, technology maturity risk, testing risk, and cost risk. Use of Sections 804 and 884 prototyping authorities may be helpful tools in tech transition. This will be dependent on funding for these type of efforts. If confirmed, I will work with the teams reviewing current processes, using my commercial experience, to shape new organizational structures and processes in the Department to facilitate technology transition and to manage these and other risks.

128. Do you believe that the Department's science and technology organizations have the ability and the resources to carry technologies to higher levels of maturity before handing them off to acquisition programs?

It is my understanding that it has sometimes been difficult to obtain 6.4 funding for technology transition efforts. That is why it will be important that sections 804 and 884 efforts and 6.4 programs are fully funded to support future technology transition efforts.

129. What steps, if any, do you believe the Department should take to ensure that research programs are sufficiently funded to reduce technical risk in programs so that technological maturity can be demonstrated at the appropriate time?

I believe that the Department must follow a balanced approach that leverages its own research investments together with research by other Federal agencies and the commercial sector (including international developments) to advance technological maturity. It is clear that the Department cannot unilaterally fund all necessary underlying research.

130. What role do you believe Technology Readiness Levels and Manufacturing Readiness Levels should play in the Department's efforts to enhance effective technology transition and reduce cost and risk in acquisition programs?

Technology Readiness Assessments (TRAs) are adequate for addressing systems integration and engineering risks. TRAs are useful in identifying and maturing the Critical Technology Elements enabling the key performance characteristics of advanced systems. They form an essential part of program managers' risk management strategies, planning, and execution. I am not sure how effective Manufacturing Readiness Levels are and, if confirmed, would be interested in reviewing their usefulness. If confirmed, I will continue to make improving risk management of technology, engineering, and integration risks a priority.

Organic Industrial Base

131. What is your assessment of the status of the facilities and workforce in our depots, logistics centers, arsenals, and other elements of the organic industrial base?

Our Organic Industrial Base is an important national defense asset comprised of a diverse and highly skilled workforce spread across a number of discreet depot activities.

If confirmed I will place a renewed focus on the sustainment enterprise and seek to leverage our organic industrial capabilities to ensure a ready and controlled source of technical competence with the resources necessary to support our warfighters. I believe that private-public partnerships will be critical to future success.

132. What role does the organic industrial base play in modernization efforts and in the sustainment of warfighting capabilities?

The organic industrial base role in modernization and sustainment of warfighting capabilities is paramount to the effective and affordable lifecycle sustainment of our weapon systems and equipment. Optimizing the organic industrial base helps maintain core Logistics capabilities for effective and timely response to a mobilization, national defense contingency situations, and other emergency requirements. If confirmed I will seek to expand investment in game-changing sustainment technologies that will deliver increased readiness per unit cost.

Operational Energy

In his responses to the advance policy questions from this Committee, Secretary Mattis talked about his time in Iraq, and how he called upon the Department of Defense to "unleash us from the tether of fuel." He stated that "units would be faced with unacceptable limitations because of their dependence on fuel" and resupply efforts "made us vulnerable in ways that were exploited by the enemy."

133. Do you believe this issue remains a challenge for the Department?

Yes. Disruptions in the delivery of energy to the warfighter could significantly degrade the Department's ability to deploy and sustain worldwide operations.

134. If confirmed, what specific steps will you take to unleash the Department from the tether of fuel?

If confirmed, I would take Secretary Mattis' lead and focus on reducing the dependence of our forces on vulnerable fuel supply chains. To do so, we need to continue to include the risks of our energy dependence in Department decision-making. Within AT&L, I would concentrate on requirements, acquisition, and innovation as key mechanisms for increasing capability and reducing risk associated with operational energy.

135. If confirmed, what priorities would you make for investments in and deployment of operational energy technologies to increase the combat capabilities of warfighters, reduce logistical burdens, and enhance mission assurance on our installations?

If confirmed, I will use the Secretary's focus on readiness and combat effectiveness to guide operational energy investments. The near to mid-term needs of our Combatant Commands should inform Department investments in people, equipment, and installations. I also will look to Joint and Service wargames and scenario analyses to identify long-term risks to our combat capability that can be remedied through changes in how we consume and distribute energy in operations. These "demand signals" for operational energy improvements should then be integrated across requirements, acquisition, and innovation decision-making to quickly and effectively meet warfighter needs.

136. If confirmed, how will you consider operational forces' energy needs and vulnerabilities during training exercises, operational plans, and war games?

As I understand it, the Services and Combatant Commands are already making strides in including the risks of energy disruptions in planning activities. If confirmed, I will ask for a review of operational energy in wargames, exercises, and operation plans to determine the appropriate way ahead. Experiential learning through these types of activities allow the industrial base to bring capabilities they have developed and truly test them with the warfighter. They benefit the government-industry partnership and allow CONOPS and new warfighting strategies to be developed.

Energy and Acquisition

137. How can our acquisition systems better incorporate the use of energy in military platforms, and how, if at all, are assessments of future requirements taking into account energy needs as a key performance parameter?

In general, the earlier we consider energy – or any other attribute – in the development process, the more we are able to effectively influence the design and capability of future systems. As I understand it, the Department is using an analytically informed-energy key performance parameter to improve the capability of the future force. If confirmed, I will review the energy key performance parameter in coordination with the Joint Staff, and consider improvements or changes to the role of energy in acquisition and requirements.

Energy Resiliency in the Fight Against the Islamic State of Iraq and Syria (ISIS)

Back in July 2016 after a coup attempt, the Turkish government cut off power to Incirlik Air Base, which is the primary platform for launching coalition airstrikes in the fight against ISIS. For roughly a week, deployed units had to operate off backup generators, which is expensive and is certainly not the preferred method of operation given the demanding tempo of sorties against ISIS. Recently, the Air Force described an incident (via open source) in which an RPA mission based in the United States was flying a targeting mission overseas. Because of a power outage stateside, the RPA feed temporarily lost visual and the target was able to get "away and is able to continue plotting against the United States and our allies."

138. If confirmed, how would you address and make energy resiliency and mission assurance a priority for the Department of Defense, to include acquiring and deploying sustainable and renewable energy assets to improve combat capability for deployed units on our military installations and forward operating bases?

Whether at permanent installations or contingency bases, assured energy supplies are critical to sustaining a ready and capable force. Moreover, the global reach of our capabilities means that disruptions to energy at facilities and installations at home may have immediate effects on warfighters engaged overseas. I agree with Secretary Mattis that the Department should explore renewable energy technologies and sources that are reliable, cost effective, and able to reduce the risks of dependence on other, more vulnerable sources of energy. I also believe the Department's approach to using third party financing to enhance energy resilience should be continued.

If confirmed, I will seek a review of the risks to energy resiliency and, in coordination with OSD, Joint Staff, Services, and Combatant Commands, consider an appropriate set of initiatives.

139. Do you support the J-4's enforcement of the energy supportability key performance parameter in the requirements process?

Yes. Underpinned by an analysis of how a system will be supported in a future warfighting scenario, the energy key performance parameter helps the Department make holistic decisions about future combat forces and the energy logistics and infrastructure needed to support those forces.

Section 2805 of the National Defense Authorization Act for Fiscal Year 2017 gave the Department new authority to plan and fund military construction projects directly related to energy resiliency and mission assurance, and to help address and mitigate against incidents like Incirlik, not to mention secure micro-grids to help prevent cyber-attacks.

140. If confirmed, will you commit to use section 2805 to support mission critical functions, and address known energy vulnerabilities with projects that are resilient and renewable?

Assured access to available, reliable, quality power to support critical missions is essential to the readiness and mission assurance of the DoD's installations. If confirmed, I will ensure the Department makes use of the Section 2805 authority as well as other applicable authorities to implement energy resilience solutions (including on-site generation, such as renewable energy) to improve the energy security of our bases.

Environment

141. If confirmed, will you comply with environmental regulations, laws, and guidance from the Environmental Protection Agency?

Yes.

142. If confirmed, will you make the same level of investment for the Department of Defense's Environmental Research Programs?

If confirmed, I will review the investment levels for environmental research to ensure it is appropriate to support DoD mission needs.

143. If confirmed, will you work with the Department of Interior and the U.S. Fish & Wildlife Service to find cooperative ways to ensure military readiness and protect the environment on and around U.S. military installations?

Yes. If confirmed, I will work with the other Federal agencies, including the Department of Interior, to ensure military readiness and the environment are protected.

Acquisition Workforce

144. What tools do you believe are needed to further shape the acquisition workforce?

At this time, I believe the Department has a variety of useful tools, and the Congress has been very supportive in providing many helpful authorities which the Department should fully leverage. If confirmed, I will assess the need for new or different authorities and make recommendations to the Congress as appropriate.

145. Do you believe that more flexibility in compensation is needed to attract, recruit, and retain acquisition professionals to work for the Department of Defense?

Yes, I believe more compensation flexibilities would be useful to enable the Department to compete with the private sector for top talent, compensate based on level of contribution, and retain high performing acquisition professionals. If confirmed, I will assess and maximize use of compensation flexibilities to attract and retain the best acquisition workforce possible.

146. Do you believe that federal ethics laws are a barrier to acquisition professionals moving in and out of government?

Yes. A recent Defense Business Board study found that the type of individuals the Department needs in acquisition are "fundamentally different than in the past, and near impossible to recruit." Exchanges of the right talented and innovative people have been hindered due to conflict of interest concerns based in federal ethics laws. We must ensure the intent of the laws is achieved, and at the same time make changes that promote an easier and increased exchange of personnel in and out of government.

147. Do you foresee a need for longer assignments and career flexibility related to the Defense Officer Personnel Management Act relative to active duty acquisition professionals in order to keep them in place longer throughout the life of Major Defense Acquisition Programs on which they are working?

I believe that Program Manager assignment tenure (civilian or military) should be an appropriate amount of time to ensure oversight and accountability is maintained throughout the program execution period.

148. Do you believe that military personnel in the acquisition workforce should get Joint Professional Military Education credit for acquisition courses offered by the private sector or academia in lieu of those offered by the Department of Defense and the Defense Acquisition University?

There may be merit in providing this type of credit, but it would likely be situationally dependent and could require additional overhead to ensure consistent standards across many different institutions. If confirmed, I will assess these opportunities working with other Department leadership.

149. How do you believe the appropriate workforce mix should be determined between contractors, civilians, and military personnel within the acquisition workforce?

We must understand our total workforce requirements (both capacity and capability) needed to meet our strategic needs. We must ensure we have the critical organic capabilities needed for inherently governmental functions and contractor oversight, leveraging innovation and expertise of the private sector.

150. What role can research activities at the Defense Acquisition University and in other organizations play to develop modern acquisition practices and tools, including data analytics and system analysis tools, to support acquisition professionals?

I am interested in how DAU utilizes experienced program managers from both industry and government to identify and implement best practices. If confirmed, I need to better understand the current state of activity.

Research and Development Workforce

151. What is the appropriate role for the Department of Defense in bolstering science, technology, engineering, and mathematics education and workforce development?

The DoD has invested in the future STEM talent pool to meet its unique mission needs, and Federal priorities have been established through a Department-wide strategic plan with an overarching framework. I believe that focusing on developing education and outreach initiatives that are unique to DoD's mission, needs, and resources is vital to building DOD's S&T workforce of the future and if confirmed I will continue.

152. If confirmed, what steps would you take to support efforts to ensure that the nation has the scientific and technical workforce necessary for its national security technological and industrial base?

Delivering technologically advanced systems to our Warfighter requires scientific and technical expertise in both the Government and defense industrial workforce. If confirmed, I will support the goals and objectives of DoD's STEM efforts. I will work with industry to determine best practices for attracting, retaining and developing talent while exploring ways to implement more rotational programs between industry and the government.

153. Do you see a need for changes in areas such as hiring authority, personnel systems, and compensation to ensure that the Department can recruit and retain the highest quality scientific and technical workforce possible? For which changes would you advocate?

The Congress has given the Department a number of authorities to recruit and hire outstanding technical talent. If confirmed, I will monitor the progress of implementing these authorities and the results achieved, and if we are unable to attract the STEM talent needed for our mission, I will engage with Congress on new ideas and new authorities to achieve our talent objectives.

Test and Evaluation

154. Will you make it a priority to ensure that the Department of Defense as a whole and each of the military services specifically, maintain their testing organizations, infrastructure, and budgets at levels adequate to address both our current and future needs?

Yes, if confirmed, I will review the efficacy of existing testing organizations and the infrastructure for experimentation and testing of current technology and capability, as well as whether there is a need to increase investment and/or develop new approaches to testing, training, and experimentation for current and future systems.

155. Would you ensure that all testing organizations, including in the Office of the Secretary of Defense, have adequate resources to accomplish their missions?

Yes. If confirmed, I will ensure our testing organizations have adequate resources to accomplish their missions and support testing of next generation capabilities.

156. Will we be able to develop and deploy next generation weapons systems without a robust test and evaluation capability—including modern testing facilities and a well-trained technical workforce?

The Department needs robust test and evaluation capabilities in order to effectively and affordably field the next generation of weapon systems. Inherent in maintaining these capabilities is ensuring the Department has modern testing facilities and a workforce that can develop, test, and transition capabilities and technology to the warfighter.

A natural tension exists between major program objectives to reduce cost and schedule and the test and evaluation objectives to ensure performance meets specifications and requirements.

157. What is your assessment of the appropriate balance between the desire to reduce new program cycle times and the need to perform adequate testing?

Reducing program cycle times is important to remain technologically relevant and to provide timely solutions to the Services in a world of rapidly increasing and evolving threats. The right balance must be reached between cycle times and testing capabilities to ensure capability that will not fail our warfighters gets to the field rapidly. Important to this balance is reducing the bureaucratic burden slowing the testing community while still maintaining adequate testing to ensure data exists to make sound decisions during product development. Test regimes should be developed in conjunction with program offices and users to ensure that only critical functionality is tested.

158. Under what circumstances, if any, do you believe we should procure weapon systems and equipment that have not been demonstrated through test and evaluation to be operationally effective, suitable, and survivable?

Thorough test and evaluation is critical to capturing suitability and effectiveness deficiencies before systems are fielded and employed in service. Test and evaluation is a crucial component of the acquisition process, and provides insurance to the tax payers that they are fielding systems and equipment that is effective and suitable for the missions they are being procured to fulfill. With that being said there are areas the Department can reduce the level of testing and rigor to expedite fielding of capability. Specifically, in the procurement of equipment where a robust and

mature commercial market exists, there is an opportunity to leverage existing test and user data to support reduced government testing and expedited fielding. Rapid fielding and rapid operational prototyping programs under section 804 will not have the same degree of operational testing as an MDAP. We should outline the role of operational testing and testing organizations in ways so that they learn from these efforts and can improve their capabilities.

Congress established the position of Director of Operational Test and Evaluation to serve as an independent voice on matters relating to operational testing of weapons systems. As established, the Director has a unique and direct relationship with Congress, consistent with the statutory independence of the office.

159. Do you support the continued ability of the Director of Operational Test and Evaluation to speak freely and independently with Congress?

I fully support independent operational and developmental testing offices in the Department. I believe they have an important role in identifying potential vulnerabilities of weapon systems before such systems are purchased in significant quantity or deployed operationally.

160. Do you believe that the operational and developmental testing organizations in the Department and the military services are adequate to ensure an appropriate level of testing, and testing oversight, on major defense acquisition programs?

I believe that the appropriate level of testing and testing oversight exists in the Department.

161. What are your views about the role of the Director of Developmental Test and Evaluation in ensuring the success of the Department's acquisition programs?

I fully support an independent Director of Developmental Test and Evaluation and I feel that position is important to the success of acquisition programs in the Department. A DT&E organization with sufficient autonomy and independence is required to continue to provide independent oversight, and more importantly, engage with the acquisition program management team to develop a meaningful developmental test and evaluation program to provide timely and early reporting on deficiencies, help identify corrective actions, and to inform decision makers with an accurate evaluation of program performance during the acquisition decision continuum.

The reorganization of AT&L mandated in the National Defense Authorization Act for Fiscal Year 2017 does not require the Director of Development Test and Evaluation to be located in a specific organization.

162. How would you ensure that the office, or the functions provided by the Director of Developmental Test and Evaluation, will continue within the Department of Defense?

If confirmed, I will review the best appropriate organizational structure to ensure that developmental test and evaluation is properly addressed at the right levels in the Department.

Cost Analysis and Estimation

163. What role will cost estimation and analyses play in your oversight over acquisition programs?

Cost estimating is a critical element of understanding the resource demands for a program, the schedule implications; and within the context of overall resource availability, informing leadership about the trade-offs necessary to afford the programs within constrained resources. The discipline of the cost estimating process also helps to ensure a well thought out and executable program plan, as well as highlighting areas of risk. I also believe that updating estimates as projects proceed is important to gain insights into program execution. I would also support efforts to collect and maintain relevant data to support cost estimating.

164. What is your assessment of our ability to estimate life cycle costs of major systems?

It is my understanding that life cycle cost estimates are not a core competency of the Department and that there is an opportunity to learn from existing programs and begin to work earlier in the planning cycle for new programs to identify cost drivers. If confirmed, this will be an area of focus.

165. What is your assessment of our ability to estimate life cycle costs of software-intensive and IT systems?

My understanding is that life cycle costs of software-intensive and IT systems are not a core competency of AT&L. If confirmed, I would leverage commercial industry expertise to develop processes to better address these costs.

166. What steps will you take to improve our cost estimation capabilities?

If confirmed, I would work closely with the Director of CAPE to ensure that the cost estimation and cost analysis processes of the DoD provide accurate information and realistic estimates. I would also work closely with the Services and Agencies to ensure they have adequate expertise and capacity to gather the necessary data, evaluate program plans and proposals, and develop deep insights into the costs of acquisition programs to ensure realistic budgeting and proactive management to control cost and achieve savings.

There is growing concern, including from the Defense Innovation Board, that the Department of Defense does not make use of data to control acquisition costs and improve outcomes.

167. Do you think the acquisition programs get access to, analyze, and share data in a manner that supports the cost analysis and evaluation needs of the Department?

Based on my industry experience, I know that a great deal of data is provided to acquisition programs, but I am less familiar with how that data is accessed and shared across the Department for this purpose, but will look into this more deeply, if confirmed. I would also seek to ensure appropriate safeguards are used to address concerns of proprietary and/or other sensitive data and to balance equities between data utility and organizational costs while stressing the importance of cross-functional team evaluation.

Defense Industrial Base

168. What is your view of the current state of the U.S. defense industry?

Overall, the defense industrial base remains vibrant and competitive. That being said, the defense industrial base has been weakened by multiple years of continuing resolutions, sequestration and the BCA. Stable budgets are required to efficiently plan and execute programs to deliver cost effective solutions to the warfighter and allow small, medium and large defense contractors to be healthy businesses. International sales are important for the U.S. defense industry and the Department needs to spearhead efforts to speed up the international sales process.

169. Do you support further consolidation of the U.S. defense industry?

Although I believe that the Department should not have a blanket policy of discouraging further consolidation or divestiture, or encouraging a specific industry structure, it is difficult to foresee supporting further consolidation of our principal weapons-system prime contractors. It should continue to be the Department's policy to oppose business combinations (mergers, acquisitions, or joint ventures) that are not in its ultimate best interest and represent harm to our Nation's security. However, if the Department wants more competition in the future, we may need to look at maintaining the right number of program opportunities that can keep multiple vendors in portions of the defense market. Robust, credible competition is vital to providing the Department with high-quality, affordable, and innovative products. A predictable budget process would alleviate many of the stresses that cause companies to consider collaboration.

170. What is your position on foreign investment in the U.S. defense sector?

As a general matter, I support foreign investment in the U.S. defense sector because of its potential to foster competition that can benefit the Department through increased innovation and lower costs. Having said that, we must carefully consider the national security ramifications of each investment to safeguard our military technological advantage.

171. Are there security concerns for why the Department of Defense should consider maintaining a domestic supply source for certain goods or materials?

My view is that there are potential security concerns that might compel the Department of Defense to consider maintaining domestic supply sources in technology and production areas that support maintaining our technical dominance. These security concerns might be associated

with critical technology areas such as microelectronics, robotics, artificial intelligence, and virtual reality, or security of supply concerns resulting from foreign dependency on products from nations not friendly toward the United States. If confirmed, I will work within the Department and other Executive agencies to assess and identify areas of domestic supply concerns and develop strategies to mitigate these risks.

172. What steps, if any, should the Department take to ensure the continued health of the U.S. defense industry?

A vibrant defense industrial base is critical to maintaining DoD's technical superiority. In order to ensure its health and vitality, the Department must take steps to support existing resource requests and consider investments to mitigate fragile and critical industrial-base sectors such as trusted microelectronics, munitions, and space. The Department must continue: (1) to support initiatives that attract innovative talent; (2) to support policies and programs to foster collaboration, competition, and innovation; and (3) to actively participate in DoD-industry collaboration forums to help increase transparency, incentivize mutually beneficial behaviors, and grow the size and scope of the defense industrial base. If confirmed, I will consider investments to mitigate fragile and critical industrial base sectors, and support policies and programs to foster collaboration, competition, and innovation, to ensure a healthy U.S. Defense Industrial Base.

173. What role, if any, should the Department have in vetting and approving or disapproving such consolidation efforts?

I believe the Department should work closely with the antitrust agencies when they are reviewing proposed transactions. DoD is uniquely positioned to provide input on how diminished competition would affect its interests in weapon-systems acquisition and in providing input on how a transaction might affect national security.

174. To what extent should the Department make more use of commercial technology and commercial industry? How can the Department make itself a more attractive customer to commercial industry?

Where it makes sense, the DoD should use commercial technology as much as possible. The Department needs to understand and then eliminate the barriers that commercial firms see in working with the Department. If confirmed, I will make sure that the Department uses the full extent of its authorities to engage with the commercial market and utilize streamlined contracting practices appropriate to the commercial world.

Manufacturing

175. Do you believe that more attention and resources need to be paid to the development of low cost, advanced manufacturing capabilities?

Yes, more attention and resources are necessary for advanced manufacturing capabilities to ensure affordability and accelerate transition of promising research and development (R&D) into defense-weapons systems. The Department's core strategy of technology overmatch requires the continuous pursuit of innovative, next-generation defense systems and concepts to deter and prevail in conflict.

176. How will you assess the effectiveness of manufacturing technology programs and the manufacturing institutes?

If confirmed, I will work closely with the Department's officials who are the subject matter experts in this area with the goal of continuing and expanding, where it makes sense, the Department's ongoing efforts in fostering manufacturing technologies. Part of this effort will entail leveraging industrial and academic expertise to provide input.

Foreign Military Sales

177. How would you describe the primary objectives of U.S. Foreign Military Sales (FMS)?

FMS is foreign policy and national security program that supports partner and regional security, enhances military-to-military cooperation, enables interoperability, and develops and maintains international relationships. FMS is a key Security Cooperation tool, enabling a full spectrum of capability the Department seeks to provide its foreign partners.

178. Do you believe that FMS are an important element to (1) ensure our friends and allies are adequately prepared to defend themselves and aid us in global security; (2) ensure the preservation of the U.S. industrial base; and (3) increase quantities to drive down costs for the United States and drive up innovation?

FMS is a key tool for the Department to support Security Cooperation mission objectives to build and develop security capabilities for self-defense and multinational operations, ensure access for U.S. forces, and build relationships that promote specific U.S. security interests. FMS also plays an important role in maintaining and strengthening the U.S. industrial base and provides benefits to the Department and to our international partners by decreasing costs through greater economies of scale – further improving the international competitiveness of U.S. defense systems on the world market. In our fiscally constrained environment it is essential to maximize our resources at every opportunity, freeing critical funding to enable future innovation.

179. You have been critical of the speed of the FMS process. If confirmed, what steps will you take to increase the speed of the FMS process while ensuring that the U.S. Government maintains good governance?

Given the cross-cutting nature of FMS, if confirmed, I look forward to working with stakeholders within the Department of Defense, and with industry to support the reforms currently underway in the security cooperation enterprise and I would like to: 1) examine how we can improve requirements planning to minimize the time and costs associated with

developing exportable weapons systems; 2) work with the Military Departments and Agencies to ensure we are doing all we can to hire, train, and retain the contracting workforce essential to the success of U.S. defense acquisition activities – which is, as you know, the same workforce supporting FMS; 3) re-visit our auditing practices that often delay international sales for up to six months, even when similar audits were just conducted on the same product for a different customer.

180. You have also been critical of the regulations governing the export of Unmanned Aerial Vehicles (UAVs), particularly the Munitions Technology Control Regime (MTCR). If confirmed, what steps, if any, will you take to reform the way in which the Department of Defense manages its role in the implementation, in coordination with the State Department, of the MTCR and the sale and proliferation of UAVs?

The global defense market place is evolving rapidly, and if confirmed, I look forward to working with colleagues in the Department of Defense, Interagency, State Department, Commerce Department and Congress to participate in the ongoing review of UAS export policies and guidance, and revise as appropriate**.** Currently, the U.S. industrial base is disadvantaged due to the slow response time to potential international customers. While the U.S. has superior technical solutions, they do not outweigh the sluggish pace of contracting as compared to multiple nations.

181. What responsibility, if any, do you believe the Department generally and the AT&L directorate in particular have to facilitate additional foreign sales of U.S. weapons and equipment?

Often FMS case decisions languish as export licenses and congressional approvals are sought. I believe the DoD can do more to advocate for foreign customers and the U.S. industrial base with the National Security Council, State Department, Commerce Department and Congress, helping to fulfill Secretary Mattis's objective of using Security Cooperation as a policy tool.

The Department has clear responsibility to work with our Foreign Partners and our warfighter to reinforce the importance of addressing capability gaps and maintaining interoperable forces with the U.S. AT&L leadership should simplify and speed up FMS contracting processes so that the U.S. has the opportunity to build partner capability and capacity while strengthening the industrial base.

182. What is the appropriate role for Defense Department officials in the FMS negotiation process with respect to (1) negotiating pricing on behalf of foreign governments; and (2) facilitating the foreign sale of U.S. weapons and equipment?

Based on rules in the Defense Federal Acquisition Regulation Supplement (DFARS 225.7304), a foreign government is not allowed to participate in or even observe negotiations between the U.S. government and the contractor during negotiations over cost or price. As such, a DoD contracting officer is the sole negotiator with Industry. The challenge is for the contracting

officer to maintain appropriate firewalls, be responsive to the customer and maintain close communication with industry. The speed and tenor of the interaction are critical to overall success.

If confirmed, I plan to continue to focus closely on export promotion and advocacy of U.S. defense systems while working across government to achieve a streamlined acquisition process.

183. Should the Department, in coordination with the State Department, create a system to allow the FMS process to be used for programs other than programs of record?

If confirmed, I look forward to supporting ongoing DSCA led efforts to develop processes and funding structures necessary to support the complexities of utilizing the U.S. Government FMS enterprise for sales of items and systems that are not Department of Defense programs of record. There are a number of challenges that would need to be addressed, such as airworthiness certifications, and funding of various technology release and foreign disclosure processes; however this is a critical topic for industry where international sales of "simplified solutions" allows the U.S. to build partnership capability and capacity while bolstering the national defense industrial base.

Ballistic Missile Defense

When the Missile Defense Agency (MDA) was created in 2002, the Secretary of Defense authorized the use of non-standard acquisition rules and requirements generation processes in order to field an initial set of missile defense capabilities on an expedited basis. That fielding has now taken place, although numerous upgrades and corrections are being developed and implemented. Each of the elements of the Ballistic Missile Defense System (BMDS) would normally meet the criteria for a Major Defense Acquisition Program (MDAP), but none of them has been managed as an MDAP. Furthermore, for most of MDA's existence, all of its programs were funded with Research, Development, Test, and Evaluation (RDT&E) funds, even for non-RDT&E activities. Currently, BMDS acquisition programs are overseen by the Director of MDA and by the Missile Defense Executive Board (MDEB), which is chaired by the USD(AT&L).

184. What management and acquisition changes or improvements, if any, do you believe are warranted for the ballistic missile defense programs?

I understand the Presidentially-mandated 2017 Ballistic Missile Defense Review is examining this very issue. This review is expected to re-assess missile defense acquisition authorities to determine if current processes require modification to ensure we can sustain current capabilities and develop new missile defense capabilities. If confirmed, I will review current acquisition oversight authorities following the recommendations of that review to ensure appropriate acquisition processes are in place.

185. Do you believe that the USD(AT&L) should have the same responsibilities relative to the ballistic missile defense acquisition programs as for all other MDAPs?

I believe we must balance authorities with the speed to deliver capability and the critical nature of the threat. If confirmed, I will review current acquisition oversight authorities following the recommendations of the BMDR to ensure appropriate acquisition processes are in place.

186. If confirmed, what steps, if any, would you plan to take to ensure that the ballistic missile defense programs of the Department of Defense follow sound acquisition and management practices and processes?

The current Missile Defense Executive Board (MDEB) acquisition oversight structure, and associated acquisition processes, have been in place for approximately ten years. If confirmed, I will review current acquisition oversight authorities following the recommendations of the BMDR to ensure that we maintain the proper balance between sustainment of current missile defense capabilities and development of expanded capabilities against evolving complex missile threats.

For many years the Department of Defense and Congress have agreed on the principle that major weapon systems should be operationally effective, suitable, survivable, cost-effective, and affordable, and should address a credible threat.

187. Do you agree that any ballistic missile defense systems that we deploy operationally must be operationally effective, suitable, survivable, cost-effective, and affordable, and should address a credible threat?

We must strike a balance among all of these tenets to ensure that we have the capability to defend against current and evolving complex threats. As we see in North Korea, the threat can evolve rapidly, and we must be able to field even marginal improvements quickly in response.

188. If confirmed, what steps, if any, would you take to ensure that the BMDS and each of its elements meet these criteria?

The current Missile Defense Executive Board (MDEB) includes senior executives from across the Department of Defense who are responsible for missile defense activities. If confirmed, I will rely on these MDEB stakeholders to provide independent assessments which will inform my decisions as the Defense Acquisition Executive.

For many years, Congress and the Department of Defense have agreed on the principle of "fly before you buy," namely demonstrating that a weapon system will work in an operationally effective, suitable, and survivable manner before deciding to acquire and deploy such systems. This demonstration requires rigorous, operationally realistic testing, including independent review by the Office of the Director of Operational Test and Evaluation, to provide an accurate assessment of how weapon systems will perform in combat conditions. Historically, testing of the Ground-based Midcourse Defense (GMD) system has been inconsistent and currently has the capability to defend the U.S. homeland from only a small number of intermediate-range or intercontinental ballistic missile threats.

189. Do you agree that ballistic missile defense testing needs to be operationally realistic, and should include assessments by Operational Test and Evaluation, in order to assess operational capabilities and limitations of ballistic missile defense systems, prior to making decisions to deploy such systems?

Yes. The complexities of the current and future missile defense systems demand operationally realistic developmental and operational testing. However, given the rapid development of the threat, senior leaders should have the flexibility to deploy capabilities if needed even if they have not been fully tested.

190. If confirmed, what steps, if any, would you take to ensure that the BMDS, and each of its elements, undergo adequate independent operational test and evaluation?

If confirmed, I will ensure that the Missile Defense Agency (MDA) and the Director, Operational Test and Evaluation continue their coordinated development of the MDA Integrated Master Test Plan.

The Missile Defense Agency has developed ballistic missile defense systems and capabilities and procured inventories of missile defense element weapon systems. However, the military departments are notionally intended to procure, operate, and sustain operational missile defense systems.

191. What do you believe is the appropriate role for the military departments in the procurement, operation, and sustainment of ballistic missile defense systems, and at what point do you believe these systems should be transitioned and transferred to the military departments?

Program responsibility for missile defense systems operations and sustainment should transition from the MDA to the appropriate military department. However, the timing of these transitions is unique to each program and must be aligned with military department programming, planning and budgeting. If confirmed, I will work with the MDA and Military Departments to ensure that programs transition at the right time. If confirmed, I will review current transition processes following the recommendations of the BMDR to ensure appropriate program transition processes are in place.

Nuclear Weapons Council

If confirmed as USD(AT&L), you will chair the Nuclear Weapons Council (NWC).

192. In your view, what are, or should be, the highest priorities of the NWC?

The highest priorities of the Nuclear Weapons Council are to consolidate military requirements, coordinate the National Nuclear Security Administration (NNSA) with the relevant stakeholders in the Department of Defense, and provide the necessary capabilities for the warfighter, all while

ensuring a safe, secure and effective nuclear weapons complex, including the infrastructure resident in the Department of Energy.

193. What changes, if any, do you believe should be made to the operations of the NWC?

If confirmed, I will review the operations of the Nuclear Weapons Council and make appropriate changes and/or request any legislative language to ensure the NWC has the necessary authorities and responsibilities to maintain the nation's capability to develop, field, and ensure the safety, security, and effectiveness of our nuclear weapons.

194. If confirmed, what role do you expect to play in the development of the Nuclear Posture Review?

The Secretary of Defense directed the Deputy Secretary and Vice Chairman of the Joint Chiefs to lead the 2017 Nuclear Posture Review. I understand the AT&L staff is actively supporting this effort. If confirmed, I will ensure that AT&L continues supporting the development of the NPR and its implementation.

195. Do you agree that modernization of each leg of the nuclear triad and the Department of Energy nuclear weapons complex is a critical national security priority?

Yes. I fully support both Departments' ongoing efforts to modernize the nation's nuclear forces and nuclear weapons complex. If confirmed, I will work with the Air Force, Navy and NNSA to ensure we successfully execute the planned modernization efforts and address emerging and future threats to deter our adversaries.

196. Do you support the Long Range Stand-Off Weapon (LRSO) and its timely replacement of the AGM-86 Air-Launched Cruise Missile?

I understand the ongoing Nuclear Posture Review is examining questions regarding cruise missile capabilities. If there is a requirement to retain the capabilities of the Air-Launched Cruise Missile (ALCM), which is at the end of service life, the LRSO is the logical successor for a timely modernization of that component of the nation's nuclear forces.

Logistics and Readiness

197. If confirmed, what steps, if any, would you take to ensure that life cycle maintenance requirements and sustainment support are considered in the acquisition process for new Department of Defense systems?

Sustainment costs need to be considered at the start of a program to include:
- Specifying reliability and maintainability in technology risk reduction and detailed design contracts, while holding program managers and vendors accountable to specifications.

- Acquisition of technical data for Service Contracts that require technical data to support sustainment. To be clear, I'm not talking about data rights, which involve negotiation between government and industry. I'm talking about specifying and exercising the delivery of technical data for which rights are agreed upon.
- Validating the organic sustainment infrastructure is properly structured and resourced to support the necessary sustaining activities.

If confirmed, sustainment would feature prominently in the programmatic decisions under my purview.

The National Defense Authorization Act for Fiscal Year 2009 requires the Department of Defense to conduct life-cycle cost analysis for new capabilities, including the fully burdened cost of fuel during the analysis and evaluation of alternatives in the acquisition program design trades.

198. Do you believe that the fully burdened cost of fuel is an appropriate factor for the Department to consider in the evaluation of acquisition alternatives?

Yes. In addition to an analytically-informed energy key performance parameter used in a system's requirements, I understand that the DoD includes the fully burdened cost of energy in decisions for programs where the fully burdened cost is a significant discriminator among alternatives. Together, these tools help the Department make decisions about future forces, logistics, and infrastructure that account for the risks of supporting these systems under combat conditions.

Base Realignment and Closure

The Secretary of Defense has requested another round of Base Realignment and Closure (BRAC). However, he has stated that he is not confident in the analysis that was performed indicating the extent of excess capacity. As you know, the most recent round of BRAC cost tens of billions of dollars to execute and is widely considered a failure as a cost savings exercise.

199. Do you believe we need another round of BRAC?

I believe another round makes sense. Any large organization should review its infrastructure from time to time, and DoD is no exception. A lot has changed in the decade or so since the Department's last review.

200. If confirmed, what changes, if any, would you recommend to the BRAC statute to ensure a more efficient and effective BRAC process?

I understand that the Department's current BRAC language proposal prioritizes efficiency and cost savings. If confirmed, and if Congress authorizes a new BRAC round, I will work to ensure the Department maintains those priorities.

Congressional Oversight

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

201. Do you agree, if confirmed, to appear before this Committee and other appropriate committees of Congress?

Yes.

202. 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 USD(AT&L)?

Yes.

203. 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 in a timely manner?

Yes.

204. Do you agree to provide documents, including copies of electronic forms of communication, in a timely manner when requested by a duly constituted committee, or to consult with this Committee regarding the basis for any good faith delay or denial in providing such documents?

Yes.

205. Do you agree to answer letters and requests for information from individual Senators who are members of this Committee?

I agree to respond appropriately to letters and requests for information from members of this Committee.

206. If confirmed, do you agree to provide to this Committee relevant information within the jurisdictional oversight of the Committee when requested by the Committee, even in the absence of the formality of a letter from the Chairman?

I agree to respond appropriately requests for information from the Committee.