

Advance Policy Questions for William Roper
Nominee for Assistant Secretary of the Air Force
for Acquisition, Technology, and Logistics

Department of Defense Reforms

The National Defense Authorization Acts for Fiscal Year 2017 and 2018 included the most sweeping reforms since the Goldwater-Nichols Department of Defense Reorganization Act of 1986.

Do you support these reforms?

Yes. I support the acquisition reforms Congress recently enacted, and if confirmed, I look forward to assisting the Secretary and Chief of Staff in fully implementing these provisions.

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

None at this time. However, if confirmed, I will keep evaluating the Air Force's acquisition processes—as well as the impacts of the recent acquisition reforms—to advise the Committee on any additional reforms or authorities that may be needed.

Section 911 of the National Defense Authorization Act for Fiscal Year 2017 required the Secretary of Defense to establish cross-functional teams to address critical objectives of the Department.

Do you agree that the Department must be able to integrate its diverse, functional capabilities well in order to successfully defend the nation from increasingly complex and dynamic security threats? Will you meet this requirement to the best of your abilities?

Yes. Many problems facing our military today are too complex for single systems—or even single Services—to address. Cross-functional teams provide a valuable mechanism for ensuring all Departments assets are brought to bear. If confirmed, I will ensure the appropriate use of cross-functional teams to address Air Force challenges as well as that Air Force equities are used to help solve Department challenges.

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

Cross-functional teams can be valuable tools when issues cut across historically separate boundaries. Given the increasing complexity and interconnectivity of Department challenges, cross-functional teams should become a staple of its solution process.

The Weapons Systems Acquisition Reform Act (WSARA) of 2009 established a set of program management and systems engineering practices that have attempted to better control acquisition costs and schedule.

What is your assessment of the reforms established under WSARA?

These reforms are an important component of the total acquisition reforms enacted by Congress, including those in the 2016 and 2017 National Defense Authorization Acts. If confirmed, I will fully implement all acquisition reforms, including those directed in the 2009 Weapons Systems Acquisition Reform Act (WSARA).

Duties

Section 8016 of title 10, United States Code, states the Assistant Secretaries of the Air Force shall perform such duties and exercise such powers as the Secretary of the Air Force may prescribe and that the principal duty of the Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics (SAF(AQ)) shall be the overall supervision of acquisition, technology, and logistics matters of the Air Force.

What is your understanding of the duties and functions of the SAF(AQ)?

The Assistant Secretary of the Air Force for Acquisition, Technology and Logistics is the Service Acquisition Executive (SAE) for the Air Force: the senior position authorized to exercise, on behalf of the Secretary, overall responsibility for acquisition functions within the Air Force to include enforcing all relevant acquisition regulations, policies, and procedures; serving as the Milestone Decision Authority for programs delegated to the SAE; and leading the acquisition workforce. Additionally, the SAF(AQ) is responsible for managing the Air Force science and technology program.

What recommendations, if any, do you have for changes in the duties and functions of the SAF(AQ), as set forth in section 8016 of title 10, United States Code, or in Department of Defense regulations pertaining to functions of the SAF(AQ)?

None at this time. If confirmed, I will continue to evaluate the duties and authorities of the SAF(AQ) and recommend needed changes to the Department and Congress if required.

If confirmed, what additional duties, if any, do you expect will be prescribed for you?

None at this time. If confirmed, I expect the Secretary of the Air Force to direct me to perform the duties of the SAF(AQ) and fully implement the recent acquisition reforms.

Do you believe that there are actions you need to take to enhance your ability to perform the duties of the SAF(AQ)?

I believe my technical education and experience have prepared me to perform the duties of the SAF(AQ) if confirmed. My current role as the Director of the Strategic Capabilities Office allows me to work closely with the Service Secretaries and Chiefs, Combatant Commanders, Office of the Secretary of Defense, and Congress on some of our nation's most difficult military challenges. If confirmed, I will continue cultivating these relationships to maintain the readiness and lethality of the Air Force.

Qualifications

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

As a physicist and mathematician with over 12 years of experience leading development of advanced military systems, I bring a strong technical background to this position. When I was a researcher at the Massachusetts Institute of Technology (MIT) Lincoln Laboratory, I worked numerous technology areas that are critical to the current and future Air Force: radar and infrared sensors, stealth, counter stealth, tactical aircraft, drones, air defense, directed energy, and space systems. Then, as the acting Ballistic Missile Defense Architect, I managed the Missile Defense Agency's black programs and designed new capabilities, many of which are fielded today. Now, as the founding Director of the Strategic Capabilities Office (SCO), I work with each Service to create new, disruptive capabilities by repurposing, teaming, or adding commercial technology to their current platforms. Many of SCO's programs—swarming drones, advanced navigation, manned-unmanned teams, and arsenal planes—provide lower cost or faster development and fielding options than traditional acquisition approaches by leveraging slimmer requirements, operational prototyping, and rapid contracting. SCO has allowed me to refine this process that encourages prudent, upfront risk-taking to keep flawed, overwrought, or risky designs out of the acquisition pipeline. Training and empowering programs managers to use these upfront tools is the lifeblood of SCO. If confirmed, I look forward to applying these lessons to the Air Force.

Major Challenges and Priorities

In your view, what are the major challenges that you would confront, if confirmed?

If confirmed, I look forward to assessing the Air Force Acquisition enterprise. It is clear a major challenge facing all Services, including the Air Force, is the affordability of maintaining readiness while simultaneously modernizing the Force. This challenge is only compounded by the accelerating rate of both foreign military development and commercial technology, which mandates a faster acquisition approach than the one currently in use. Achieving speed and agility will require a culture of smart risk-taking and increased use of commercial technology when appropriate. I am especially concerned about the growing disparity between commercial and government software practices. As more military systems, especially the Air Force's, rely on software for their performance, the ability to update it rapidly and continually, especially in the dawning era of artificial intelligence, is paramount.

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

Overcoming the challenges requires putting people, not cumbersome processes, in charge; empowering them with the tools, training, and authorities to succeed; and creating a sense of urgency driven by mission. If confirmed, I plan to effect this by delegating decisions to the lowest feasible level, empowering decision makers with increased opportunities for design trades, experimentation, and prototyping to ensure flawed concepts do not become programs of record. I will also encourage greater use of commercial and dual-use technology, especially when it is likely to keep improving without government investment. Finally, I will ensure the Air Force designs for upgradeability, especially of its software.

From my experience, when acquisition professionals are given a clearly-articulated mission; design trade space; tools, like experimentation and prototyping, to explore it; rewards for speed and prudent risk-taking; and maximum decision authority over their programs, urgency, creativity, and accountability are natural byproducts.

What do you consider to be the most serious problems in the performance of the functions of the SAF(AQ)?

I believe balancing the needs of readiness with those of modernization is a serious problem facing all Services, including the Air Force. If confirmed, I believe maintaining frequent interaction between requirers, acquirers, and users will be critical for producing “good enough” solutions that can successfully fulfill today’s missions without sacrificing future development.

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

If confirmed, I will immediately review the state of the Air Force’s acquisition process and workforce to assess its ability to implement the acquisition reforms authorized by Congress in 2016 and 2017 and achieve priorities set by Secretary Wilson and Chief Goldfein. Based on the findings, I will implement all necessary management actions to improve the speed, efficiency, and culture of Air Force acquisition. Though I will be open to the advice of Air Force acquisition team, I expect to review the health of all major Air Force programs, the state of acquisition workforce, and level of delegated decision making in the acquisition process. I will also look for opportunities to apply best practices from my innovation experience at the Strategic Capabilities Office. I will remain open and transparent with the Committee and Congress on my findings and recommend additional reforms should they be needed.

If confirmed, what broad priorities will you establish and how will you measure progress in achieving these priorities?

If confirmed, I will review the priorities currently in place to ensure they enable the broader Air Force Priorities set by Secretary Wilson and Chief Goldfein. Where changes

are needed, I will clearly articulate the intent of the change, timelines for implementation, and metrics for monitoring success.

Relations with Congress

What are your views on the state of the relationship between the Office of the SAF(AQ) and the Senate Armed Services Committee in particular, and with Congress in general?

I view Congress, and the Senate Armed Services Committee in particular, as a partner with the Office of the SAF(AQ) to ensure that today's Air Force is ready to fight and win and that tomorrow's remains just as dominant. If confirmed, I look forward to strengthening this partnership, providing feedback on the recent acquisition reforms, and ensuring significant return on investment for the taxpayer dollars entrusted to the Air Force.

If confirmed, what actions would you take to sustain a productive and mutually beneficial relationship between Congress and the Office of the SAF(AQ)?

Throughout my career, I have found frequent communication with members of Congress and staff essential to the health of programs and organizations. If confirmed, I will work closely with Congress on all matters related to Air Force acquisition, provide frequent and timely updates on Air Force programs and acquisition reforms, and cultivate a relationship based on open communication.

National Security Budget Reductions/Sequestration

The original discretionary caps imposed by the Budget Control Act (BCA) will be in effect for Fiscal Years 2018 through 2021, unless there is agreement to change budget levels.

In your assessment, what would be the impacts of continued implementation of the BCA discretionary caps through 2021 on the Air Force and national security?

I believe continued Budget Control Act caps and Continuing Resolutions would have drastic impacts on the Air Force's combat readiness, modernization, infrastructure, and people. In my experience, these funding instabilities takes the reins out of the hands of the military, forcing delays, decreased readiness, cost growth, and a dissatisfied workforce.

If confirmed, by what standards would you measure the adequacy of the Air Force funding for programs under your purview?

If confirmed, I will routinely assess the cost, schedule, risk, required performance, and funding of programs under my purview to ensure Air Force readiness without mortgaging investment in future capabilities and modernization. I am particularly interested in assessing and improving the adaptability/upgradeability of Air Force systems: the ability

to update easily and continually, especially software. The power of combining ubiquitous networking, computing, memory, and common software is self-evident in commercial technologies, like smartphones: designs spiral rapidly; components plug-n-play; and software improves as it is used. It is hard for me to imagine the Air Force retaining long-term dominance and readiness if faced with adversaries who can update their systems more quickly, so if confirmed, I will do my utmost to ensure the Air Force is as ready, lethal, and adaptable as possible.

Acquisition Reform

The National Defense Authorization Acts for Fiscal Year 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 Under Secretary for Acquisition, Technology, and Logistics; returned more authority to the Services for program management; and created additional acquisition pathways. Many of these reforms will affect your role as the Service Acquisition Executive for the Air Force if you are confirmed.

What is your understanding of these major reforms?

I believe the primary intent of these reforms is threefold: (i) returning greater control of programs to the Services by enhancing the requirements role of the Chief of Staff and the authorities of the Service Acquisition Executive over Major Defense Acquisition Programs; (ii) creating new prototyping, experimentation, and rapid fielding pathways; and (iii) expanding previous pathways, like Other Transactions.

The net result intended is a streamlined acquisition process, with an empowered and accountable workforce, capable of delivering systems faster and on cost. If confirmed, I intend to leverage these authorities—and their intent—by delegating decisions where appropriate, increasing prototyping to “fly before we buy”, and leveraging flexible contracting authorities to speed development and, thereby, responsiveness to warfighter needs.

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

If confirmed, I will be responsible for all reforms for which authority and implementation responsibility is assigned to the Air Force. I will also be responsible for supporting, firstly, USD(AT&L) and, subsequently, the USD(R&E) and USD(A&S) on reforms for which they are responsible.

The Department of Defense has been slow to act on many of these reforms. What steps would you take, if confirmed, to ensure that the Air Force conforms with, and implements, these reforms?

If confirmed, I will review where the Air Force stands in implementing these reforms. I

am already pleased with some of the initial steps taken by the Air Force but will look for areas to make improvements and speed results.

Given your experience at the Strategic Capabilities Office, what opportunities are there for scaling some of the practices used in that organization to solve the much larger and more varied set of Air Force acquisition challenges?

There are many opportunities. I believe the Strategic Capabilities Office's (SCO's) process for concept development and prototyping could be applied broadly to Air Force acquisition. Because prototyping enables early development and testing, it is a natural conduit for risk-taking and fast failure prior to creating programs of record. It also produces valuable "hard data" to anchor life-cycle cost and management estimates while also sharpening the industry base. In general, I believe keeping flawed, costly, or technologically-unsupported concepts from becoming programs of record will cure many ills of Air Force acquisition.

I also believe SCO's approach for repurposing systems and using commercial technology could convey. In my current role, I have repurposed or upgraded numerous Air Force systems, but I believe this could be home-grown inside the Air Force itself.

Finally, I believe SCO's use of machine learning and artificial intelligence can, and should, convey to most Air Force programs. Given how radically even narrowly intelligence machines could change the nature of conflict, no Service can afford to get behind this power curve.

What roles do you see for developmental planning, prototyping, and experimentation for fielding of future Air Force capabilities?

Development planning, experimentation, and prototyping are critical to improving agility and being innovative. Without them, there is no safe zone to explore concepts, collect data, and fly before buying. Consequently, they provide the natural bridge between new technologies and new programs of record across the so-called transition "valley of death".

How can the Department of Defense and the Air Force better access and integrate commercial and military technology to remain ahead of its potential adversaries?

In several ways. Firstly, the Department of Defense (to include the Air Force) should strive to create more interplay and feedback loops between acquisition and requirements. When a well-intentioned requirement significantly drives cost or schedule, the risk/reward of pursuing it should be reassessed as a general practice. This is especially important for commercial technologies developed without any warfighter input or influence. Failing to create better processing to converge on "good-enough", vice perfect, solutions will likely result in future warfighting being denied the full operational benefits of commercial technologies.

Secondly, the Department and Air Force should adopt best industry practices on designing for frequent upgradeability, especially of software. Increasing the openness of architectures and commonality of software layers across programs will significantly increase both opportunities for leveraging commercial technology and the overall size of the industry base with which the Department is able to work.

If confirmed, you will be the first SAF(AQ) to serve since the major acquisition reforms of the National Defense Authorization Acts for Fiscal Year 2016 and 2017.

In what ways would you use these new authorities to fulfill the duties of the SAF(AQ) differently than your predecessors?

If confirmed, I will use the authorities from The National Defense Authorization Act for Fiscal Year 2016 and 2017 to improve speed and agility in our acquisition programs, foster greater innovation in Air Force research and development programs, and reduce unnecessary or duplicative oversight by delegating decision-making to the lowest level practicable.

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

None at this time. If confirmed, I will evaluate current acquisition processes and the effectiveness of the recent acquisition reforms and advise the committee of any additional reforms or authorities that may improve speed, agility, or accountability.

If confirmed, what steps will you take to improve accountability in acquisition management?

Accountability and empowerment go hand-in-hand. If confirmed, I will delegate decision authorities, where feasible; clearly articulating each program's objectives, milestones, and performance metrics so they can be managed without guesswork; and provide tools—like broader design trade space, experimentation, and prototyping—to tackle risks early. I have watched this model work successfully in the Strategic Capabilities Office, where program managers are handed both the reins and responsibility. I firmly believe empowered people—vice stringent processes—are what increase accountability in acquisition programs.

How would you propose to hold acquisition officers accountable for failing to follow acquisition laws and regulations?

If confirmed, I will make certain that, as we increase the speed and agility of Air Force acquisition, full compliance with laws and regulations remains of utmost importance to ensure the trust of Congress and the taxpayer. I will take failures to follow acquisition laws and regulations seriously and will remedy them with all authorities at my disposal.

Are you ready to accept full responsibility as the Air Force’s Senior Acquisition Executive for major defense weapons programs and high-dollar information systems, knowing that you will be the one accountable for both successes and failures of those programs?

Yes.

If confirmed, what steps will you take to improve oversight in the requirements determination, resource allocation, or acquisition management processes?

If confirmed, I will work to create more interplay and feedback loops between requirements, resourcing, and acquisition. It has been my experience that programs evolve during their early years. Having the freedom to revisit unwieldy designs, requirements, or funding plans when presented new data should lead to stronger programs. To encourage this, I will strengthen connections with the USD(AT&L) and subsequent Under Secretaries, Chairman and Vice Chairman of the Joint Chiefs of Staff, Chief of Staff of the Air Force, and the Air Force acquisition workforce.

What are the best practices, policies, or authorities that you used while at the Strategic Capabilities Office that are unavailable to the SAF(AQ), but that you would like to have at your disposal if you are confirmed?

Although I am a Principal Staff Assistant to the Secretary of Defense, I have no unique acquisition authorities as the Director of the Strategic Capabilities Office (SCO). Many of the reforms highlighted by Congress—delegated decisions, prototyping, and agile acquisition pathways like broad area announcements and other transactions—have contributed to the success of SCO. If confirmed, I hope to continue leveraging these reforms inside the Air Force.

What additional acquisition-related reforms do you believe this Committee should consider?

I support the reforms mentioned by Secretary Wilson before the Committee on 7 December 2017: exploring funding flexibility to enable better software development; reforming the Government Accountability Office protest process; and streamlining duplication of effort wherever possible. Additionally, I am concerned about losing access to top technical talent in an era where most technologies are being developed in private industry. Though I hope the Department is able to recruit and retain top career scientists and engineers, I firmly believe we must look for opportunities to create temporary assignments in Defense using new rapid hiring authorities. Though this clearly presents challenges, future warfighters need access to top technical talent in this country. If confirmed, I will work with the Department and Committee on potential ways to achieve it.

Cost and Schedule Estimates

The Government Accountability Office (GAO) has reported that the use of unrealistically optimistic cost and schedule estimates by the Air Force and the other military departments is a major contributor to cost growth and program failure.

Do you believe that the use of unrealistically optimistic cost and schedule estimates leads to program disruptions that drive up program costs and delay the fielding of major weapon systems?

Yes.

What steps do you believe the Air Force should take to ensure that cost and schedule estimates are fair and independent, and provide a sound basis for Air Force programs?

I believe that in order for cost and schedule estimates to be fair and independent, they should be built by a skilled and experienced workforce whose accountability is distinct from the program office and who use appropriate cost models, informed by data whenever possible. In formulating estimates for major programs, it is prudent to seek multiple independent estimates, compare them, understand differences, and ensure that any risks highlighted by this approach are either included in the program budget or mitigated through the program's contract strategy and risk management plan.

As the Director of the Strategic Capabilities Office, what, if any, processes did you have in place to ensure the appropriate use of cost information to establish realistic estimates?

As an organization using rapid prototyping to accelerate capability development, SCO programs begin by building cost estimates for discrete, well-defined, short-term prototyping efforts. If the prototyping effort is successful and continues to full-scale acquisition, the actual costs from the prototyping phase are used to build low-risk, well-informed cost estimates for both production and sustainment of the capability. This has been a major contributor to SCO's high transition rate of advanced capabilities into Service programs of record.

Software Activities and Acquisition of Information Technology (IT)

Warfighting capabilities are increasingly software-reliant, and even software-defined. 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 of Defense 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.

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

I share the view that many of the Department’s software development efforts have struggled. Further, I believe that, in most cases, the Department’s approach to software development is outdated.

Especially in the case of business systems, it is clear that the Air Force should exclusively use commercial products and services, except where extraordinary circumstances dictate otherwise. For warfighting IT systems, I also believe that commercial technology could be leveraged much more aggressively than it is currently, including commercial clouds.

Additionally, I believe the Department, including the Air Force, must fundamentally shift how it develops IT by adopting a commercial approach to software development and sustainment. For example, most commercial IT contains layered software where more-foundational layers (e.g., operating systems) are broadly deployed so that user-interfacing layers (e.g., applications) can be tailored for local use without huge or duplicative expense. This modular approach removes the requirement for individual application developers to have full system knowledge, which speeds delivery and opens the door to agile, small-scale development at the tactical edge (i.e., DevOps). U.S. Airmen deserve the speed and agility this approach to software would provide.

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

In many ways, the principle difference is that software developers should view their deliverable as an environment or platform vice product. No one would pigeonhole Android or iOS as stationary products because they are designed to be rapidly and continually updated, especially at user-interfacing layers. This has spawned development tools that now empower millions of coders writing applications. This is a different design philosophy than hardware.

When the two are coincident in a program, I believe the software environment should increasingly influence the design and interfaces of hardware. The benefits, like plug-n-play, are currently appreciated by Airmen in the technology in their homes; it is time to convey that benefit to the battlefield.

What do you understand the role of the SAF(AQ) to be with respect to IT acquisition and the software activities of the Air Force?

I understand the role of the Service Acquisition Executive (SAE) is to ensure effective and efficient development, delivery, and sustainment of IT capability. To accomplish this, if confirmed, I will strengthen IT-related partnerships, emphasize leveraging best

commercial practices, and foster a culture shift from risk aversion to risk management leveraging recent acquisition reforms.

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

It is very important that we see industry as partners with the government in developing and delivering military capability, each with a role to play. This partnership must remain in proper balance to deliver capabilities effectively in a way that benefits companies, warfighters, and taxpayers. If confirmed, maintaining this balance as well as expanding the Air Force's industry base will be top priorities for me.

If confirmed, and given your vantage point as Director of the Strategic Capabilities Office, how do you plan to address systemic and persistent cultural, process, and technical barriers to improving the Air Force's treatment of software activities and IT acquisition?

If confirmed, I plan to bring in many lessons learned from SCO. Of particular note is fostering a culture of urgency, creativity, risk management and solution-orientation. This includes delegating decision authorities to the lowest appropriate level and instituting agile internal controls so that IT resources are effectively managed. I also believe increased and frequent education on modern software development and technologies like cloud, big data analytics, and machine learning could empower program managers to make better software decisions. If confirmed, I will review acquisition workforce education and work with the USD(AT&L) and subsequent Under Secretaries to ensure proper training for the complex, ever-changing IT world in which we live.

How will you work with the testing community, the Air Force's Chief Information Officer, and with the other Services—including their Chief Information Officers?

The Service Acquisition Executive is responsible for ensuring effective development and delivery of IT capability, which requires frequent collaboration with all partners and stakeholders influencing the product. If confirmed, I will collaborate with the Air Force's Chief Information Officer (CIO), Service Leadership, DoD CIO, and testing community to ensure the timely delivery of effective IT systems under my purview.

What major improvements would you like to see made in the Air Force's development and deployment of major IT systems?

I believe the Department, including the Air Force, must fundamentally shift how it develops IT by adopting a commercial approach to software development and sustainment. For example, most commercial IT contains layered software where more-foundational layers (e.g., operating systems) are broadly deployed so that user-interfacing layers (e.g., applications) can be tailored for local use without huge or duplicative expense. This modular approach removes the requirement for individual application developers to have full system knowledge, which speeds delivery and opens the door to agile, small-scale development at the tactical edge (i.e., DevOps).

If the Air Force could shift to this philosophy of software development, many commercial technologies, like artificial intelligence and machine learning, would naturally follow. I believe artificial intelligence will be a delineator on tomorrow's battlefield, so I am anxious to see the Department and Air Force find a path to realize it.

What are your highest priority IT or software-related initiatives?

If confirmed, my highest IT-related priorities are adopting commercial approaches to software development and sustainment, maximally leveraging off-the-shelf commercial technologies, like clouds, and incorporating machine learning into Air Force IT.

If confirmed, how will you encourage process and cultural change in organizations so that they maximize the benefits that new enterprise IT systems can offer in terms of cost savings and efficiency?

If confirmed, a best practice from SCO that I would seek to implement in Air Force acquisition is fostering a culture of urgency, creativity, empowerment, and risk management. This includes delegating decision authorities to the lowest appropriate level and instituting agile internal controls so that IT resources are effectively managed to tackle key risks as early as possible. I plan to assess the culture, processes, and skills of the enterprise and take steps to ensure they speed—vice impede—effective outcomes.

What is the appropriate relationship between the Air Force's efforts to implement enterprise IT programs and supporting computing services and infrastructure to support Air Force missions and efforts being undertaken by the Defense Information Systems Agency?

The Air Force should have a seamless relationship with the Defense Information System Agency (DISA). For example, it is my understanding the Air Force currently works with DISA on Joint Regional Security Stacks that move Air Force bases to a single-security architecture. Given ubiquitous interfacing software drives performance and efficiencies in commercial IT systems, the Air Force should strive, wherever possible, to reap its benefits and seek partnerships in doing so.

How will you ensure that appropriate business process reengineering is undertaken and accomplished before initiating new business systems, IT program development, and deployment?

If confirmed, I will work with the Air Force acquisition team, CIO, and deputy chief management officer to ensure proper business reengineering is completed prior to initiating new business systems and IT program development. Whenever possible, I will ensure business processes, and corresponding systems, are informed and influenced by those successful in commercial industry.

What role will the Air Force's research and testing enterprise play in the

development and deployment of Air Force business IT systems?

I understand the Air Force's research and testing enterprise plays an important role in the development and deployment of Air Force business IT systems. By providing feedback prior to fielding, the test enterprise ensures systems meet performance objective and can interoperate. This allows more seamless transitions.

Contracting

This Committee has acted to ensure greater use of firm fixed price (FFP) contracts for major acquisitions.

What are your views on the use of FFP contracts versus fixed price incentive firm target contracts for appropriately balancing risk and incentives in defense contracting?

I know the Committee fully appreciates the breadth, depth, and diversity of acquisition efforts falling under Air Force purview. Regarding the use of contract types, I believe it important to match the most appropriate contract to the scope of work and objectives contained within it. To execute acquisition programs as efficiently and effectively as possible, I prefer to use the contract type expected to balance delivering both high value to the U.S. taxpayer and speed and lethality to the warfighter. If confirmed, I will strive to make every dollar the Air Force spends count.

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 reluctant to use these authorities.

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

I applaud the Committee for their expansion of Other Transaction Authorities (OTAs), which I have leveraged in the Strategic Capabilities Office. It is my understanding that the Air Force has used, and continues to use, OTAs for research and prototyping. If confirmed, I will ensure the Air Force continues to follow all Congressional direction regarding OTAs.

What additional authorities might you pursue?

None at this time. However, if confirmed, I will engage with the Committee to address any additional authorities that may be needed in the future.

Multiyear Procurement Contracts

Section 2306b of title 10, United States Code, provides the criteria Congress expects will be met to exercise multiyear contract authority.

What types of programs are appropriate for the use of multiyear contracts?

I believe multi-year contracts are appropriate if the business case indicates they will provide significant savings and if there is a strong commitment to the procurement. The economies of scale linked to multiple years have potential to generate savings and can present strong incentives for suppliers to reduce negotiated price and cost. Because they create a multiple-year funding commitment with penalties, programs must meet all criteria in 10 U.S.C. § 2306b(a)(1)-(6) and obtain specific legal authorizations for the contract should their amount exceed \$678.5M. Additionally, the program and contract must also conform with stipulations in 10 U.S.C. 2306(i)(3).

If confirmed, will you ensure that the Air Force fully complies with the requirements of section 2306b?

Yes.

What is your understanding of the requirement that a multiyear contract result in “significant savings” compared to the cost of carrying out a program through annual contracts?

It is my understanding that the business case should demonstrate that the “significant savings” associated with a multiyear contract would outweigh the risk of committing government funds in advance. Although 10 percent is often touted as the rule of thumb, each potential multi-year contract should be evaluated on its own merits of providing value both for the warfighter and taxpayer.

What is your understanding of the requirements regarding the timing of a Department of Defense request for legislative authorization of a multiyear procurement contract for a particular program?

It is my understanding the President’s Budget is submitted with requests to enter multi-year contract that will be initiated in either in current or following year.

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 the Department’s programs or other sources rapidly into the hands of operational users. Especially given your experience as Director of the Strategic Capabilities Office:

What impediments to technology transition do you see within the Air Force?

In my current role, I find prototyping an invaluable tool for getting new concepts over the so-called “valley of death” between science and technology and programs of record. Successful prototyping requires thinner, mission-level—vice thicker, design-level—requirements, fixed budgets and schedules, a culture that embraces failure, and flying what you intend to buy. Increasing the funding, authorities, and encouragement of this type of prototyping should help increase technology transitions in the Air Force.

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

If confirmed, I will facilitate clear communication of capability gaps and promising technologies between the warfighter and technology communities. I will further champion the continued investment in innovative technologies and concepts. For technologies pursued, I will emphasize early analysis, systems engineering, and integration to guide development and leverage prototyping to reduce risk when needed. I will also look to collaborate with the broadest set of organizations, including small businesses, start-ups, and universities, so that our nation’s best ideas and technologies are on the table.

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?

Firstly, broadly implement the recent acquisition reforms that include new and expanded acquisition pathways (e.g. broad area announcements, other transactions) that make it easier for small companies to work with the government. Secondly, pursue open architectures whenever possible so that system components—where small businesses, venture capital-funded companies, and other non-traditional defense contractors can play the largest role—can be competed and upgraded at industry speed. Thirdly, apply modern software development standards so that digitally-focused companies can more easily work on military system in targeted areas. These three things should be encouraged wherever possible.

What are some capabilities in other Services or agencies that you would consider repurposing for the Air Force’s missions?

In my current job, I have repurposed both Air Force systems for other Services and other Service systems for the Air Force. If confirmed, would continue to leverage all available systems and technology to improve the Air Force. Specific options I have in mind are currently classified, but I would be happy to share them with the Committee in a closed setting.

Defense Capabilities

What is your opinion on the necessity to modernize Air Force weapons systems in light of current and emerging threats?

It is paramount. Game-changing technologies of the past—satellites, GPS, stealth, and net-enabled weapons to name a few—are no longer the purview of the United States only. The technology exclusivity we enjoyed in the past is ending, compounded by emerging countermeasures to these technologies. It is critical the Air Force modernize before it is too late to do so.

What are the most critical capabilities the Air Force needs to prioritize over the next 10 years?

My full answer would be classified, but long-range strike, artificial intelligence, manned-unmanned teaming, advanced networking, and energy—both directed and stored—are certainly components. Of all new capabilities facing the Air Force, artificial intelligence, led by machine learning, could be the most impactful, changing all facets of conflict in all domains. If confirmed, I would do all in my power to make the Air Force the bellwether of this new breed of capability.

If confirmed, how will you contribute to keeping Air Force acquisition costs under control and schedules on time to ensure the U.S. taxpayer receives the best defense capabilities for their precious and scarce defense dollars?

If confirmed, I will review Air Force program costs, schedules, and performance and seek to emplace better cost safeguards. In general, I believe increased prototyping and experimentation can reduce the number failed expensive programs. I also believe commercial technologies, designs, and practices can play a large role in reducing cost so that taxpayer dollars go further.

Nuclear Enterprise

What are your views on the necessity of maintaining a nuclear triad?

Maintaining the U.S. nuclear deterrent is critical. As long as nations that wish us harm continue to pursue weapons of mass destruction, the penalty of using them against us must be too severe to contemplate their use.

What are your views on the condition of the ground-based leg of the nuclear triad, and the urgency of the need for its recapitalization?

If confirmed, I will assess the current state of the ground-based leg of the nuclear triad and closely monitor the operational and sustainment issues influencing the timeline for replacing the Minuteman III.

What priority would you give to the following Air Force nuclear modernization

programs within the overall Air Force acquisition budget over the next five to ten years: the Ground Based Strategic Deterrent, the Long Range Standoff Weapon, a nuclear-capable variant of the F-35, and modernization of the nuclear command and control infrastructure?

I believe ensuring a capable nuclear deterrence is top priority for the Department. If confirmed, I will review each Air Force nuclear modernization program to ensure it is properly managed to meet the needs of our warfighters and nation.

What are your views on the contracting strategy for the Ground Based Strategic Deterrent and the Long Range Standoff Weapon?

I have not been involved in the contracting or execution of these two programs but am aware they are important parts of maintaining the effectiveness of our nuclear deterrent. If confirmed, I will review and monitor these two programs to ensure they are managed to meet the needs of our warfighters and nation.

F-35 Joint Strike Fighter

If confirmed, you will be the responsible service acquisition executive for the Joint Strike Fighter (JSF) program.

In your view, does the current management structure of the JSF program provide the optimal alignment of accountability and responsibility? Why or why not?

I am aware that Congress directed the Secretary of Defense to submit a report assessing alternative management structures for the F-35 Program. If confirmed, I will review the analysis conducted in support of this report to inform my opinion.

What changes, if any, would you recommend to the current management structure?

If confirmed, I look forward to reviewing the F-35 program and providing the best course of action that might improve its management structure.

What is your view of the proposed strategy for Follow-On Modernization (FOM), dubbed Continuous Capability Development and Delivery (C2D2)? In your view, is the strategy achievable and affordable? Why or why not?

If confirmed, I will review the C2D2 effort to ensure it is both achievable and affordable and will work closely with the Department, Air Force, Navy, and Marine Corps to improve the F-35 program and its enhancements.

In your view, how will the Air Force afford the sustainment of its planned fleet of 1,763 F-35As?

I am aware that that the Air Force is reviewing the sustainment costs of the projected F-

35A fleet. If confirmed, I will review these costs and associated sustainment strategy and explore ways to reduce sustainment cost with the Navy, Marine Corps, and international partners. I believe sustainment is an area where commercial technologies and practices can play a large role to reduce cost.

What changes would you recommend to the JSF sustainment strategy?

If confirmed, I will review the JSF sustainment strategy and explore ways to improve it.

Bomber Inventory

In recent testimony before this Committee, in response to a question from Chairman McCain on how many bombers the Air Force needed to fulfill the national military strategy, General Goldfein stated, “We predict approximately 175 is what we are going to need.”

What is your assessment of the required number of bombers needed to fulfill the National Defense Strategy?

My understanding is that the current bomber force structure requirement is 175 and that this number will be reassessed after the new National Defense Strategy is released. If confirmed, I look forward to participating in this assessment.

Do you support a re-engine strategy for the B-52 to extend its service life?

I am aware the Air Force's B-52 re-engineering assessment is ongoing and expected to complete later this calendar year. If confirmed, I will ensure the Air Force evaluates engine replacement options comparing a service life extension program or engine enhancement program to determine the most cost-effective approach that meets mission requirements. I will also work with Congress to ensure the suitability of the chosen approach.

B-21 Long Range Strike Bomber

On October 27, 2015, the Air Force announced the award of the engineering and manufacturing development (EMD) contract for the new B-21 bomber. The National Defense Authorization Act for Fiscal Year 2017 directed enhanced reporting of B-21 program cost, schedule, and performance data to GAO for more frequent assessments and focused oversight.

If confirmed, what will be your role in the management of the B-21 bomber program to ensure cost, schedule, and performance remain on track?

If confirmed, I will work closely with the Air Force leadership, the Rapid Capabilities

Office, and Northrup Grumman to understand current or projected challenges or risks. I will seek opportunities to address risk earlier where feasible.

If confirmed, do you commit to proactively assess ways to increase the transparency to the American public of the B-21 program?

Currently running an office whose capabilities are often classified, I understand the value of not empowering adversaries with understanding of U.S. military systems. That said, it is also critically important to be as open and transparent with the American taxpayer as possible, assuring them funds are spent necessarily and wisely without risking the future lethality of the force.

If confirmed, I will work closely with the Secretary of the Air Force and the Chief of Staff to review security considerations and recommend release of pertinent information as quickly as prudence would dictate. As the Air Force has to date, I will also keep the Congressional Defense Committees informed of progress on these reviews.

Presidential Aircraft Replacement (PAR)

The Air Force’s total cost estimate for PAR program development is \$4.3 billion in “then-year” dollars. After President Trump stated, “costs are out of control, more than \$4 billion,” the Boeing CEO stated his company will, “get it done for less than that...we’re going to make sure that he gets the best capability and that it’s done affordably.”

If confirmed, how will you ensure the Air Force will keep the development costs “less than that,” especially as the Air Force plans to sign a development contract with a cost-plus reimbursement structure?

If confirmed, I will work closely with Boeing and Air Force leadership to determine options for cost control within this program.

E-8 Joint Surveillance Target Attack Radar System (JSTARS) Recapitalization Program

The Air Force is currently in source selection to select a follow-on platform for the JSTARS mission.

What is your view on the need to replace the current JSTARS fleet?

I am not fully briefed on the JSTARS Recapitalization program. If confirmed, I will work with the warfighter and requirements communities to ensure the Air Force strategy best meets their needs while managing costs.

Replacement of the E-4B National Airborne Operations Center (NAOC)

The E-4B will be reaching end of life in the late 2020s. This is a unique asset for

performing the full range of the Secretary of Defense's title 10 responsibilities, including nuclear command, control, and communications. There is concern that a possible split of the missions of the NAOC amongst separate future aircraft could cause a loss of functionality among the E-4B's current mission sets.

What are your views on the E-4B replacement program, and will you ensure that any replacement program ensures that the Air Force will retain the ability to perform the full E-4B mission set as required now and in the future?

I understand the Air Force will conduct the Analysis of Alternatives for the replacement of the E-4B, beginning in Fiscal Year 2018. The analysis will also encompass C-32A recapitalization, as well as the Navy's E-6B fleet. If confirmed, I will keep the committee informed of the results of this review.

If you have determined at any time that the acquisition of the E-4B replacement will not meet Joint Staff requirements, will you promptly inform the congressional defense committees of your determination?

Yes.

Munitions

Air Force munitions inventories, particularly those of precision guided munitions, have declined significantly due to high operational usage, insufficient procurement, and a requirements system that does not adequately account for the ongoing need to transfer munitions to our allies and operations short of major combat, such as in the current operations in Afghanistan, Iraq, and Syria.

If confirmed, what steps would you take to ensure the Air Force has sufficient inventories of munitions to meet combatant commanders' needs?

If confirmed, I will work closely with Combatant Commanders to understand their needs and ensure Air Force munition inventories meet them. Maintaining stable funding over time will be important to enable greater options to purchase efficiently and manage the industry base and its capacity. Consequently, I believe ending the Budget Control Act caps and Continuing Resolutions would significantly improve all Service's ability to manage their munitions inventories.

If confirmed, what steps would you recommend to bolster the munitions industrial base's depth and surge capacity?

If confirmed, I will review the state of the munitions industrial base and look for opportunities to improve both capacity and efficiency of purchases. I will also look to leverage commercial technology, where appropriate, to lower weapons cost and stretch dollars further.

Space

According to a recent study by GAO, fragmented leadership has undermined the Department of Defense’s ability to deliver space capabilities to the warfighter on time and on budget. One repeated cause for concern has been fractured decision-making and many layers of bureaucracy.

Do you believe the existing space acquisition structure is sufficient? If not, what changes do you believe are appropriate?

Given that space is now a contested warfighting domain, the Department must change its approach to space-based capabilities to ensure they are available when needed. If confirmed, I will review the space acquisition structure through this lens to ensure its adequacy for addressing these new challenges.

Do you support more competition in the launch of Department of Defense payloads?

The Air Force is committed to space launch competition if there is more than one certified launch service provider capable of launching the payload. I support this position.

The National Defense Authorization Act for Fiscal Year 2017 prohibits the use of Russian rocket engines after December 31, 2022. Are you committed to ending U.S. dependence on the use of Russian rocket engines as soon as possible, perhaps even before December 31, 2022?

If confirmed, I will follow Congressional direction in the 2017 National Defense Authorization Act and help the Air Force end U.S. dependence on Russian rocket engines.

Cyber and Electronic Warfare

Cyber operations are an issue that cuts across many departments and agencies of the Federal Government, from the intelligence community to the Department of Defense, the FBI, Homeland Security, the State Department, the Justice Department, and so on. This fact, and the complexities associated with the cyber domain, severely challenges the ability of diverse agencies to integrate and collaborate effectively.

Do you believe the Air Force is organized and postured appropriately to address the full spectrum of cyber threats to the Air Force’s air, space, and cyberspace operations?

If confirmed, I will review the Air Force’s cyber posture to determine its adequacy for addressing the full spectrum of threats. Given cyber is now a domain evolving faster than traditional acquisition timelines, I expect it—as a member of the broader set of software-enabled capabilities—is an area where new acquisition reforms will be needed. I look forward to working with the Committee on improving the Air Force’s cyber capabilities.

Do you have recommendations for improving Air Force acquisition of offensive and defense cyber capabilities?

I believe the Department needs to improve its acquisition of software, including cyber capabilities. This is an area where commercial development and sustainment processes could significantly speed fielding and upgrades while also lowering cost. Additionally, the speed of conflict in the cyber domain motivates—and will eventually necessitate—the use to artificial intelligence to protect U.S. Government, Department, and Air Force equities and provide operators with insight of events happening in fractions of seconds. I believe artificial intelligence is an area the Air Force should increase its investment, and, if confirmed, I will place high priority on doing so in the cyber domain.

In light of the Defense Department’s recent release of its electronic warfare (EW) strategy, and considering the Air Force has relied upon Navy and Marine Corps EW capabilities since retiring the EF-111 Raven aircraft in 1998:

What should be the appropriate Air Force contribution to U.S. EW capabilities?

The Air Force should work collaboratively with each Service on non-kinetic capabilities. As the boundary between electronic warfare and cyber continues to blur, non-kinetic effects should no longer be considered or developed in a vacuum to ensure warfighters have the maximum number of options at their disposal.

Air Force Information Technology Programs

The Air Force was pursuing an upgrade of its Air and Space Operations Center—AOC 10.2, and that program last year experienced a Critical Change (Major Automated Information System equivalent to a Nunn-McCurdy critical program breach) that resulted in development costs doubling and a three-year delay. The Air Force has since begun implementing a new approach that incorporates modernizing the existing version, AOC 10.1, in small increments of minimally useful capability.

What major improvements would you like to see made in the Air Force’s development and deployment of major IT systems?

In general, I would like to see the Department improve its acquisition of software by adopting more modern development, upgrade, and sustainment practices. If confirmed, I will review the Air Force’s development of major IT systems, including the Air and Space Operations Center (AOC) program.

How will you encourage process and cultural change in organizations so that they maximize the benefits that new enterprise IT systems can offer in terms of cost savings and efficiency?

If confirmed, I will review the Air Force’s process for acquiring IT systems and

encourage, wherever possible, the use of commercial products and practices to improve cost and performance. Where feasible, I will use workforce training and industry engagements to motivate the benefits new enterprise IT systems can offer.

What is the relationship between Air Force efforts at implementing enterprise IT programs and supporting computing services and infrastructure to support Air Force missions, and efforts being undertaken by the Defense Information Systems Agency?

The Air Force should have a seamless relationship with the Defense Information System Agency (DISA). For example, it is my understanding the Air Force currently works with DISA on Joint Regional Security Stacks that move Air Force bases to a single-security architecture. Given ubiquitous interfacing software drives performance and efficiencies in commercial IT systems, the Air Force should strive, wherever possible, to reap its benefits and seek partnerships in doing so.

How will you ensure that appropriate business process reengineering is undertaken and accomplished before initiating new business systems and IT program development, and deployment?

If confirmed, I will work with the Air Force acquisition team, CIO, and deputy chief management officer to ensure proper business reengineering is completed prior to initiating new business systems and IT program development. Whenever possible, I will ensure business processes, and corresponding systems, are informed and influenced by those successful in commercial industry.

What role will the Air Force's research and testing enterprise play in the development and deployment of Air Force business IT systems?

I understand the Air Force's research and testing enterprise plays an important role in the development and deployment of Air Force business IT systems. By providing feedback prior to fielding, the test enterprise ensures systems meet performance objective and can interoperate. This allows more seamless transitions.

What do you see as the relationship between the Air Force and DIUX?

The Air Force should always seek to work the best, most-innovative companies. Program managers should use DIUX as a mechanism to find non-traditional companies that could contribute to their programs.

Where do you believe the best opportunities for collaboration and joint execution exist between the Air Force and DIUX and DDS?

I believe the best opportunity for collaboration between the Air Force, DIUX and DDS is in software-related capabilities. Software is increasingly the difference-maker in commercial technologies, so the Air Force should seek to work with the broadest set of

developers, including non-traditional companies.

Air Force-Related Defense Industrial Base

What is your assessment of the current state of the industrial base that supports the Air Force?

It is my understanding that both the Air Force and Department assess the health of the industrial base, which I will review if confirmed. However, I worry that decades of defense industry consolidation have, by nature, reduced competition and innovation in many defense programs and also reduced Department surge capacity for emergencies requiring mobilization. Furthermore, as more technologies are being developed outside the U.S. government, our military acquirers are working with an increasingly smaller percentage of our nation's innovation workforce. These two trends compound to form an overall trajectory that should concern Department, Air Force, and Congressional leaders.

What is your understanding and assessment of the systems and processes for identifying, evaluating, and managing risk among the entities that form the Air Force industrial base?

I am aware there are processes for assessing the industrial base, but I am not fully briefed on their findings or methodologies. If confirmed, I will review both to ensure Air Force acquisitions are informed by the current and future health of the industrial base.

How should Air Force acquisition leaders consider impacts on the industrial base when addressing requirements for recapitalization or modernization of major end items such as ships, aircraft, munitions, or key repair parts?

I am aware the Air Force weighs impacts on the industrial base when considering major actions, like recapitalization or modernization of major end items. If confirmed, I will review the sufficiency of Air Force industry base considerations in acquisition and work with the acquisition workforce to ensure the Air Force has multiple sources from which to acquire critical systems.

If confirmed, what changes, if any, would you pursue in systems and processes to improve identification, monitoring, assessment, and timely actions to ensure that risk in the Air Force-relevant sectors of the defense industrial base is adequately managed in order to develop, produce, and sustain technically superior, reliable, and affordable weapons systems?

None at this time. However, recent acquisition reforms by Congress provide new tools, like increased prototyping authorities, for maintaining the industry base in between major program awards. If confirmed, I will continue to assess the health of the Air Force's industry base and the processes for managing it. Should additional reforms be needed, I will work with Secretary Wilson, Chief Goldfein, USD(AT&L) and subsequent Under Secretaries, and Congress to address them.

What steps should the Air Force take to maintain access to critical elements of the defense industrial base?

I believe the Air Force should continue monitoring its industrial base to identify potential risks early, use competitive prototyping as a means to sharpen the industry base in between major acquisitions, and adopt modern design practices, especially of software, to enable the Air Force to work with a broader range of U.S. technology companies.

Science and Technology

What is your understanding and assessment of the role that science and technology programs have played and will play in developing capabilities for current and future Air Force systems?

Science and technology are part and parcel of the U.S. Air Force. Current aircraft, satellites, and cyber tools drew from a wide pool of technologies, operationalized them, and produced a cutting-edge Force on which warfighters have relied. Looking ahead, I believe technology will continue to play as important a role in ensuring the U.S. controls the skies.

If confirmed, how would you ensure that successful Air Force science and technology programs will transition to operational warfighting capabilities?

I believe recent acquisition reforms that encourage increased prototyping will significantly improve Air Force science and technology transitions if applied appropriately. If confirmed, I look forward to working with the Air Force Research Laboratory and Program Executive Offices to improve the Air Force's prototyping process and get cutting-edge technology over the "valley of death" and into the hands of warfighters.

Laboratories and Warfare Centers

What has been your experience in working with the Air Force's labs and warfare centers?

I have enjoyed a good working relationship with the Air Force's laboratories and warfare centers on prototyping efforts that get technologies out of labs and into operators' hands. One example currently underway is Avatar: the teaming of semi-autonomous drones with fighters.

What steps will you take to assess and enhance the interaction of the labs, warfare centers, and acquisition community?

If confirmed, I will increase interaction between labs, warfare centers, and acquisition to ensure both technology and human factors (e.g., concepts of operations, training) are pursued to control costs and enable maximum performance of Air Force systems.

Senior Military and Civilian Accountability

While representative of a small number of individuals in the Department of Defense, reports of abuses of rank and authority by senior military and civilian leaders and failures to perform up to accepted standards are frequently received. Whistleblowers and victims of such abuses often report that they felt that no one would pay attention to or believe their complaints. Accusations of unduly lenient treatment of senior officers and senior officials against whom accusations have been substantiated are also frequently heard.

What are your views regarding the appropriate standard of accountability for senior civilian and military leaders of the Air Force?

Senior Air Force leaders should uphold and demonstrate the highest standards of behavior, role-modeling the expected behavior of accountability at all levels. All allegations of inappropriate conduct should be taken very seriously, and senior leaders should be held accountable for their actions.

That said, accountability and empowerment go hand-in-hand. It is not reasonable to hold people accountable for things beyond their control, especially in the early stages of a program where risk-taking and “fast failure” should be encouraged. I firmly believe empowered leaders—with tools to identify and address risks while they are small and manageable—are what will increase accountability in acquisition programs.

If confirmed, what steps would you take to ensure that senior leaders of the Air Force under your purview are held accountable for their actions and performance?

If confirmed, I plan to delegate decision authorities where feasible, returning the reins and responsibility to those overseeing the day-to-day work. Though I will expect the highest standards of conduct and performance, I also expect prudent risk-taking, especially early in programs. Consequently, accountability assessments would be handled via case-by-case, vice blanket, determinations. I will work to ensure the Air Force strikes the right balance of empowering its acquisition working, holding them responsible for decisions they control, and encouraging fast failures to avoid slow program deaths.

Management and Development of the Acquisition Workforce

The transformation of the armed forces has brought with it an increasing realization of the importance of efficient and forward-thinking management of the acquisition workforce.

What is your vision for the management and development of the Air Force acquisition workforce, including the scientific and technical fields?

I agree that an efficient and highly-skilled acquisition workforce is critical for managing

today's and tomorrow's Air Force programs effectively. I also realize that swiftly-moving technology and the need for creative thinking in the acquisition community places greater demands on the workforce. The Defense Acquisition Workforce Development is an outstanding tool, provided through legislation, that allows the Services to fund many advanced workforce development programs to address these issues. I applaud the Committee for this reform.

If confirmed, I also plan to review current training to ensure its quality and effectiveness, especially given the increasing demands of the Air Force's complex and highly technical warfighting systems portfolio. I also plan to work with the acquisition and training communities to improve acquisition of software by leveraging commercial practices and standards.

Do you believe that the Air Force has an appropriately sized acquisition workforce, with the proper skills, to manage into the future?

If confirmed, I will review the current Air Force acquisition workforce, including both size and skill composition. I am aware of how critical a well-equipped and highly-skilled acquisition workforce is to the successful development and execution of complex programs and will work to ensure the Air Force has the most effective distribution of acquisition personnel to drive efficient execution.

Do you recommend any changes to the statutes, regulations, or policies regarding the Air Force's acquisition workforce in order to build in more flexibility? If so, please describe.

If confirmed, I plan to examine the acquisition workforce thoroughly and, in particular, explore creative ways to bring in new talent and insight in areas of emerging technology, including cybersecurity, software development, and machine learning. I will ensure the Air Force takes full advantage of the multiple workforce authorities it has been afforded through legislation and communicate any additional changes needed to the Committee.

How will you work with the Defense Acquisition University and other educational institutions to improve the education and training of acquisition officials?

I plan to work closely and collaboratively with the Defense Acquisition University and other training providers if confirmed. In particular, one area that I will scrutinize is how acquisition professionals are being trained to manage the world of currently accelerating commercial technologies, especially software-empowered ones. Acquisition professionals poised to be fast adaptors of commercial technologies will be better equipped to field systems faster and manage cost.

China and Russia

Senior U.S. military officials have said Russia and China are top potential threats to the United States.

Please describe the challenges the United States faces from China and what steps may be required by the Air Force to address these concerns.

China is using a whole-of-nation approach to create a Sino-centric Indo-Asia-Pacific region to support its economic rise and undermine U.S. influence. Additionally, China is using aggressive economic statecraft, both legitimate and illicit, to further increase its economic strength and enable its pursuit of emerging technologies that could erode U.S. military advantage, denying our ability both to safeguard shipping lanes vital to the world's economy and protect important Allies and Partners.

As far as what the Air Force should do to remain the world's best, there are a few things I can share in an open setting and others I would be happy to share in a closed setting due to classification. (1) The Air Force should strive to regain the element of surprise by transcending predictable uses of current systems. Working together, the Air Force and Strategic Capabilities Office have made great strides in doing this. (2) Ensure future systems can be spirally improved faster than any other military's by designing for modern upgradeability, especially of software. (3) Ensure that Air Force systems are maximally integrated with other Service's and vice versa. (4) Broadly deploy artificial intelligence and its enablers: advanced networking; ubiquitous processing, compute, and common software layers; and large-scale, properly-curated data. (5) Develop and integrate low-cost "attritable" systems that can take risk, learn, and adapt in collaboration with high-end manned systems.

If confirmed, I will do all that is in my authority to ensure Air Force acquisition programs are meeting warfighter needs to counteract these concerns.

Please describe the challenges the United States faces from Russia and what steps may be required by the Air Force to address these concerns.

Russia continues to expand its influence and presence beyond its borders. Increased militarization and modernization continue at a steady pace, even with economic sanctions and fiscal constraints. As Russia re-establishes itself as a global power, it routinely undermines U.S. and Western influence and activities throughout the world. It is pursuing new agreements with many old and new client states and begun to expand its activities into the greater Pacific region. Russia is likewise actively pursuing adversarial activities against the U.S. and its Western Allies through actions below the level of overt conflict (the so-called "Grey Zone") particularly through cyberspace, disinformation, and even social media.

In addition to the steps recommended previously, I recommend the Air Force investigate new technologies designed to confront Grey Zone aggression. If confirmed, I will do all that is in my authority to ensure Air Force acquisition programs are meeting warfighter needs to counteract these concerns.

Iran

Iranian malign influence appears to continue to grow throughout the Middle East.

Please describe the challenges the Air Force faces from Iran and what steps may be required by the Air Force to address these concerns.

Iran continues to arm proxies in Lebanon, Yemen, and across the Middle East. As Iran's military technology improves, many advances proliferate across the region at a faster pace. Iran also continues to advance its own anti-access/area denial capabilities, including missiles and drones.

Although Iran is not a pacing adversary for the U.S., the security challenges of the Middle East do highlight that the low-cost lethal drone threat is one the Air Force must now take seriously. Because of their cheapness and ubiquity, affording a solution at scale will take careful architecting. If confirmed, I will do all that is in my authority to counteract this concern.

Energy and Acquisition

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?

Energy storage, use, and logistics should be considered from the beginning of the requirements process and throughout the acquisition lifecycle. If confirmed, I will maintain close dialog between the requirements and acquisition communities to ensure energy needs are tracked by clear metrics and meet operational intent. I will also continue research and development investment in potentially game-changing energy capabilities.

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.

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

Yes.

Do you agree, if confirmed, to appear before this Committee, or designated members of this Committee, and provide information, subject to appropriate and necessary security protection, with respect to your responsibilities as the SAF(AQ)?

Yes.

Do you agree to ensure that testimony, briefings, and other communications of information are provided to this Committee and its staff and other appropriate committees in a timely manner?

Yes.

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.

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

Yes.

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?

Yes.