LOOKING FORWARD INTO 2021

Challenges and Successes Across DoD and the Defense Industries

Interview With Under Secretary of Defense Ellen M. Lord
ECENTLY, THE HONORABLE ELLEN M. LORD, Under Secretary of Defense for Acquisition and Sustainment (A&S), and DAU President Jim Woolsey met virtually to discuss acquisition innovation and reform in 2021 and beyond. In addressing Department of Defense (DoD) challenges and successes across the defense industry, Ms. Lord focused on leading-edge solutions to enable the Warfighter.

WOOLSEY: It’s hard to believe we’re already in the first quarter of Fiscal Year (FY) 2021, which is why I’m excited to sit down with you to look at 2021 and beyond, and what the Department has been able to deliver during this ever-changing time. What innovations are being delivered to better enable acquisition at the speed of relevance and instill this idea of irreversible momentum in critical program areas?

LORD: During 2020, the A&S team demonstrated significant progress enabling capabilities to be delivered at the speed of relevance, while strengthening the security and resiliency of the Defense Industrial Base (DIB). If I had to identify a single A&S contribution that creates irreversible momentum for 2021 and beyond, it would be the Adaptive Acquisition Framework (AAF). This policy rewrite was a highly collaborative process, involving stakeholders from inside and outside of the government. The result was a comprehensive redesign of the DoD 5000 Series acquisition policies, which were streamlined and modernized to maximize flexibility and enable speed. DoD Directive 5000.01, The Defense Acquisition System, is the overarching directive that describes the principles governing the acquisition process, emphasizing six main tenets of acquisition via the AAF. It was published in early September and is a true example of reform as required by the National Defense Strategy.

As a result of the Defense Science Board and the Defense Innovation Board’s Software Acquisition and Practices (SWAP) report recommendations, the AAF also includes a specific Software Acquisition Pathway designed to enable continuous integration and delivery of software capabilities. The Department has recognized that modern software development is a continuum from development, to production, and during sustainment.

I’d also like to note that cybersecurity is a critical component of all the acquisition pathways. The AAF ensures cyber-hardening is designed-in at the beginning of a program and factors in other functional areas, such as planning for long-term intellectual property needs, to deliver systems that are sustainable, upgradable, affordable, and secure throughout the entire life cycle.
WOOLSEY: Can you discuss what it means to deliver at the point of need and how that directly impacts the Warfighter?

LORD: When we talk about delivering at the point of need, we focus on the Six Tenets of the Defense Acquisition System: simplified acquisition policy, tailored acquisition approaches, empowered program managers, use of data-driven analytics, active risk management, and an emphasis on sustainment. We use the six pathways of the AAF to enhance these tenets and offer flexibility, depending on the criticality of the need. We maintain laser focus on what our Combatant Commanders need; our job is to put in their hands the capabilities they need to win quickly and effectively.

One example of delivering at the point of need is when USTRANSCOM (the U.S. Transportation Command) communicated an urgent need to protect aircrews and aeromedical personnel from COVID-19 exposure while transporting a large number of patients via USTRANSCOM aircraft. Using the Urgent Capability Acquisition Pathway, the Joint Rapid Acquisition Cell worked with the Air Force to develop and deliver the Negatively Pressurized CONEX, an isolated containment chamber, to fill this capability gap in just 93 days! It was a great example of moving at the speed of relevance to deliver at the point of need.

WOOLSEY: As the Software Acquisition Pathway is one of many initiatives being pursued, where is the Department in implementing other recommendations of the Defense Science Board Software Study and the Defense Innovation Board SWAP Study?

LORD: Most of our warfighting systems are hardware-enabled and software-defined. As such, we are aggressively pursuing implementation of both studies’ recommendations to modernize software development and acquisition capabilities of the Department. As we work to identify and mitigate our vulnerabilities, we are working to answer questions such as how can we capture commercial best practices to rapidly code, both during development and sustainment? How do we rapidly respond to evolving adversaries and threats, or changes to the operational environment? In addition to the creation of the AAF’s Software Acquisition Pathway, we’re focused on creating and maintaining cross-program and cross-service digital infrastructure. This includes developing code in government cloud environments to increase efficiency and security, as well as provide automatic authorities-to-operate. One example of this is the Air Force’s Ground Based Strategic Deterrent (or GBSD) program that is leveraging digital technology coupled with Agile and development, security and operations, or DevSecOps, methodologies.

In conjunction with the Comptroller, we also are working on another significant pilot program for the creation of Budget Activity 8 under the Research, Technology, Development, and Engineering title. With congressional approval in the FY 2021 Appropriations Act, this would consolidate funding for a small number of ongoing programs under a single appropriation, or color of money, for software and digital technology. This pilot effort will evaluate the efficacy of a single funding category for software and digital technology. Doing so will afford more flexibility for program management and better position programs to field valuable software at the time of need—not years later.

WOOLSEY: Amid the current health crisis, managing the health of the DIB has become more important than ever. How has the Department been able to leverage agile acquisitions as part of the national response to strengthen the way we do business as a whole, now and into the future?

LORD: The COVID-19 pandemic highlighted the criticality of the security and resiliency of defense supply chains. The Federal emergency enabled DoD to accelerate initiatives to identify constraints and risks in our supply chains that were initially identified in the Executive Order (EO) 13806 report, which was published in 2018. For example, our DoD Industrial Base Council, or IBC, is also assessing inputs from all sources to prioritize funds appropriated...
for the Defense Production Act (DPA) Title III program. Using investments that target supply chains in aircraft, shipbuilding, space, and soldier systems, we seek to do two things: offset direct financial distress in the DIB and support our partners affected by the virus with investments and local job creation. Furthermore, in the early days of the crisis, we worked expeditiously to issue guidance allowing DIB companies to continue operating, and also took steps to provide liquidity for the industrial base through a variety of progress payment adjustments, accelerated program awards, and accelerated payments. Now, our challenge is to incorporate our pandemic response activities into regular business.

WOOLSEY: Speaking to that strategy, it is my understanding that a new methodology is being used to ensure supply chain security for DoD microelectronic components. What role does the U.S. government play in enabling a reliable domestic microelectronics industrial base for national security and technological objectives, and what factors contributed to U.S. microelectronics designs being offshored for fabrication, packaging, and testing?

LORD: As I mentioned earlier, we are using the October 2018 EO 13806 report, Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States, as a foundation for our current work to monitor the security and resiliency of the DIB. That report developed the risk framework that DoD uses to identify and address risks and issues in the DIB. The Department uses that framework to continually update the assessment, and to focus DoD’s resources to address the industrial base’s shortfalls. One of the risk archetypes identified in the report is foreign dependency.

Although DoD will always have a diverse, domestic and international supply chain, we recognize that this comes with some risk. COVID-19 magnified that risk and the difficulties of offshore sources of supply in times of global emergencies. This, coupled with the ever-present potential of political uncertainty, means that we need to re-establish domestic capability for our critical supply chain needs.

Examples of these critical supply chains are microelectronics, rare earth elements, and unmanned aerial systems (UAS). We have been using the various levers the Department has available to begin to address these issues. For example, we held a Trusted Capital event to pair domestic UAS companies with U.S. investors to build this capability in the United States, and lessen our dependency on Chinese sources. We’ve also been using our Industrial Base Analysis and Sustainment and DPA Title III funding to begin to rebuild our domestic rare earths capability. We’ve recently begun focusing on reshoring microelectronics capability. The majority of the fabrication, packaging, and testing capability resides in Asia, providing vulnerability to potential foreign trade restrictions, loss of U.S. intellectual property from offshore dependency, and loss of confidence that the technology will function as intended due to possible malicious activity by foreign fabricators.

Congress has enabled DoD with multiple statutory mechanisms to strengthen the capability, capacity, and throughput of the DIB, as well as to develop both our government and civilian workforce. Circling back to our COVID-19 response, we have recently used DPA Titles I, III, and VII for both the medical supply chain, and to address effects of COVID-19 on the DIB. Coupled with programs

An unarmed Minuteman III intercontinental ballistic missile is launched at Vandenberg Air Force Base, Calif. The aging Minuteman is to be replaced by the Ground Based Strategic Deterrent.

U.S. Air Force photo
such as Acquisition Demonstration, and the Defense Acquisition Workforce Development Fund, we continue to build capability to meet the needs of both the Warfighter and the Nation.

WOOLSEY: To that point, as you work to reshore critical DIB capabilities, how is the Department addressing the threat of adversarial influence within our supply chain?

LORD: The Department is raising awareness about the threat of adversarial capital at a time when the current COVID-19 crisis is being exploited by our adversaries. We are part of a Whole-of-Government approach that values an open investment environment while prioritizing the need to protect our technological know-how from theft.

Our efforts to block adversarial capital can be characterized as both offensive and defensive. On the defensive side, we work with the Committee on Foreign Investment in the United States, which was recently strengthened and expanded by the Foreign Investment Risk Review Modernization Act to focus more on protection of critical technologies. On the offensive side, last year the Department stood up the Trusted Capital program to offer critical technology companies an alternative to adversarial capital.

Trusted Capital works with American military and academic partners to bring companies developing solutions critical to the DIB together with capital providers in the Trusted Capital Marketplace, an ecosystem that fosters deal flow in the interest of national security. For companies that do not meet certain requirements of the domestic Trusted Capital Marketplace, we are partnered closely with the U.S. International Development Finance Corporation (DFC) to offer those applicant companies opportunities to identify alternative supply chain sources in democracies across emerging market economies.

WOOLSEY: When discussing the National Defense Strategy, you’ve also talked about the critical importance of ensuring a cyber-safe, cyber-secure, and cyber-resilient DIB. How are we better equipped to address that challenge?

LORD: The main challenge for cyber-securing the DIB is understanding that all of its components are interconnected. To address our cybersecurity challenge, the Department is pursuing three main efforts: encouraging the removal of suspect, foreign-produced equipment; developing tools and processes to allow the Department to see, understand, and remove foreign influence from our supply chain; and providing auditability of our vendor security practices.

While vendors self-attested adherence to established cybersecurity practices under former contracting standards, billions of dollars in intellectual property continued to be exfiltrated prompting the creation of an auditable process to stop this loss. In January, we released the Cybersecurity Maturity Model Certification (CMMC), which combines cybersecurity standards and references into one, unified standard for the Department. Overall, the CMMC framework enables the verification of the cybersecurity posture of contractors in the DIB and across our supply chain. We now have a process to measure and report on the cybersecurity of the DIB.

I would also note that, as China is a prime culprit of intellectual property theft from the United States, Section 889A of the John S. McCain National Defense Authorization Act of FY 2019 prohibits the Government from procuring any equipment, systems, or services that use certain telecommunications equipment or services. Concurrently, Section 889B prohibits the Department from contracting with vendors who use specific products or services from specified Chinese companies. We are
committed to the legislation’s intent and are working diligently with our industry partners to ensure a smooth transition away from affected products and services through approval of risk-informed waivers on a contract-by-contract basis.

WOOLSEY: You mentioned meeting Warfighter needs, so I would be remiss if I did not ask about delivering on the F-35 fighter jet, the largest procurement program in DoD history. How is this program modernizing the way we look at acquisition and sustainment?

LORD: The goal of the F-35 program is to produce and sustain an affordable, Warfighter-focused air system with the readiness and capability needed to dominate the 21st-century global battlespace. As you know, the F-35 is the premier multi-mission, next-generation strike fighter and provides U.S. and Allied forces unmatched, game-changing capabilities to preserve our advantage over near-peer adversaries. A&S and the Joint Program Office (JPO) are focused on driving cost out or down, quality up, and achieving timely deliveries of capability to our Warfighters. From FY 2014, we have reduced the cost per aircraft by 26 percent, and from 2017 to 2019, we have increased annual aircraft production by 147 percent.

The Department’s efforts to aggressively address Warfighter operations and supportability requirements led to the current initiative to replace the F-35’s Autonomic Logistics Information System (ALIS) with the Operational Data Integrated Network (ODIN). The ALIS architecture is increasingly obsolete and current system performance does not efficiently meet the needs of the Warfighter, leading to multiple workarounds to operate and support the F-35. ODIN will enable real-time monitoring of system performance and automated collection of performance information, and ultimately data-driven analysis for seamless management of parts, technical orders, and program performance data. The JPO is leading the collaborative development of ODIN using AAF’s Software Acquisition Pathway. The system will be hosted and developed in a government-owned cloud, utilizing Agile software development processes to enable flightline, base, and deployed operations while connected or disconnected through a cloud-native data infrastructure.

WOOLSEY: Before closing, I’d like to turn to the workforce. When you think of developing a culture of innovation, critical thinking, and creative compliance, what does that mean for the future of the Defense Acquisition Workforce?

LORD: The future of our acquisition professionals will continue to be both demanding and full of opportunity. Acquisition is a Warfighter tool, and high-quality agile acquisition professionals will continue to be critical to our lethality and reform efforts. The AAF really brings the power of customization and tailoring to acquisition. And I know, Jim, that you and DAU, are critical in delivering training to our workforce. The transformation DAU is undergoing is rooted in rethinking training so that it is customizable and fast. Credentials are key to that. These quick micro-learning blocks are tools that workforce members can use to get spun up on knowledge quickly, and drive their own learning for what they need to know to be effective on the job. Acquisition professionals are now in much greater control of their careers. DAU also is training and facilitating discussions through webcasts and podcasts. These virtual gathering platforms allow subject matter experts to engage directly with the workforce to share their knowledge. Diversity in knowledge dissemination is how DAU contributes to training that is focused and tailored. This will change how acquisition professionals develop their skills—and the Warfighter is really going to benefit from that.

Along with DAU’s transformation to provide more point-of-need training and job relevant credentials, we assessed our workforce requirements management approach and created the 21st-century talent management framework. A departure from the prior structure, which was broad, the new “Back-to-Basics” framework streamlines 14 career fields into six, and prioritizes training resources for those who do the hands-on development, acquisition and sustainment of Warfighter operational capability.

I also am excited about our initiative to start two-way exchanges between industry and DoD. We recently finished our second pilot of high-performing defense industry professionals completing six-month assignments in DoD acquisition organizations; while vice versa, our DoD acquisition professionals are participating in six-month assignments with industry. I have personally met with the exchange participants from the first two pilots, and I am convinced that this is the right thing to do. These young professionals, from both industry and the DoD, have volunteered to be ambassadors and to advocate the exchange program with their peers. They’ve described how valuable their exchange experiences have been in allowing them to gain insights in business culture from both sides. Continuing and expanding these two-way exchanges is imperative to drive understanding between government and industry. We are stronger and more effective when we understand one another.

Our workforce is positioned to continue to advance a culture of innovation, critical thinking, and creative compliance. We will always deliver to and support the Warfighter in providing our Nation’s security, and build on the irreversible momentum we’ve generated across the acquisition enterprise.