

DoD Review Will Lead to 'Big Choices,' Hagel Says

AMERICAN FORCES PRESS SERVICE (APRIL 3, 2013)

Karen Parrish

WASHINGTON—Defense Secretary Chuck Hagel today signaled possible big changes ahead for his department in acquisition, personnel, and organization as he delivered his first major policy speech as Pentagon chief.

Hagel outlined his plan of attack for the strategic and financial challenges the Defense Department faces during remarks at the National Defense University.

“We need to challenge all past assumptions, and we need to put everything on the table,” he said.

Hagel said DoD’s task is to prepare for the future, “but not in a way that neglects, or is oblivious to, the realities of the present.”

At his direction, Hagel said, Deputy Defense Secretary Ash Carter, working with Army Gen. Martin E. Dempsey, chairman of the Joint Chiefs of Staff, is leading a review of the department’s strategic choices and management. The review is intended to identify the challenges, uncertainties, risks, and opportunities connected to both strategic priorities and budget uncertainty. It’s also “about matching missions with resources—looking at ends, ways, and means,” he said.

The review will consider big choices —“change that involves not just tweaking or chipping away at existing structures and practices but, where necessary, fashioning entirely new ones that are better suited to 21st-century realities and challenges,” the secretary said.

Reshaping the defense enterprise means confronting “the principal drivers of growth in the department’s base budget—namely acquisition, personnel costs, and overhead,” Hagel said.

The Pentagon’s biggest budget challenge is not its top-line budget, he said, but “where that money is being spent internally.”

Spiraling costs to sustain existing structures and institutions, to provide personnel benefits, and to develop replacements for aging weapons platforms will, if unchecked, eventually crowd out spending on procurement, operations and readiness, he said, which are the budget categories that enable the military to be, and stay, prepared.

Hagel said the U.S. military has grown more deployable, expeditionary, flexible, lethal “and certainly more professional” since 9/11.

“It has also grown significantly older—as measured by the age of major platforms—and it has grown enormously more expensive in every way,” he said.

The department will “get out ahead” of challenges, Hagel said. He said he has told the senior leaders across the department and the Services that “we are all in this together, and we will come out of it together.”

Hagel said the military’s modernization strategy “still depends on systems that are vastly more expensive and technologically risky than what were promised or budgeted for.”

The department must develop an acquisition system that responds more quickly and effectively to the needs of troops and commanders in the field, he said—one that rewards cost-effectiveness “so that our programs do not continue to take longer, cost more, and deliver less than initially planned and promised.”

On the personnel front, Hagel said, DoD leaders must determine how many military and civilian people they have, how many they need, and how to compensate them for their service. He said that process will involve questioning the right mix of civilian and military members, the right balance between officer and enlisted service members, and the appropriate troop strength dedicated to combat, support, and administrative duties.

Hagel said he also advocates a hard look at defense organization. The military’s operational forces, its battalions, ships, and aircraft wings, have shrunk dramatically since the Cold War era, he noted.

“Yet the three- and four-star command and support structures sitting atop these smaller fighting forces have stayed intact, with minor exceptions,” he added, “and in some cases, they are actually increasing in size and rank.”

Hagel said the review will examine funding for those headquarters and support structures, along with DoD elements including the Office of the Secretary of Defense, the Joint Staff, the combatant commands, and the defense agencies and field activities.

“The military is not, and should never be, run like a corporation,” Hagel said. “But that does not mean we don’t have a good deal to learn from what the private sector has achieved

over the past 20 to 30 years, in which reducing layers of upper and middle management not only reduced costs and micromanagement, it also led to more agile and effective organizations and more empowered junior leaders.”

The secretary acknowledged that making dramatic changes in acquisition systems, benefits, and force structure could prove unwise, untenable, or politically impossible. “Yet we have no choice but to take a very close look and see how we can do all of this better,” he said.

Hagel noted that his two immediate predecessors as defense secretary—Leon E. Panetta and Robert M. Gates—each led efforts to cut costs across the department. But sequester cuts and budget uncertainty have “led to far more abrupt and deeper reductions than were planned or expected,” he added.

“Now, DoD is grappling with the serious and immediate challenges of sequester—which is forcing us to take as much as a \$41 billion cut in this current fiscal year, and if it continues, will reduce projected defense spending by another \$500 billion over the next decade,” the secretary said.

Much more hard work, difficult decisions, and strategic prioritizing remain to be done, he said, and “deep political and institutional obstacles to necessary reforms will need to be engaged and overcome.”

The secretary said the department’s enduring mission—defending the nation and advancing America’s strategic interests—must be approached in the context of “unprecedented shifts in the world order, new global challenges, and deep global fiscal uncertainty.”

The 21st-century security landscape is marked by the threat of violent extremism from weak states and ungoverned spaces in the Middle East and North Africa, Hagel said. Other security issues, he said, include the proliferation of weapons and materials; increasing access to advanced military technology among state and nonstate actors; risks of regional conflict that could draw in the United States; and “the debilitating and dangerous curse of human despair and poverty, as well as the uncertain implications of environmental degradation.”

Hagel said cyberattacks, “which barely registered as a threat a decade ago, have grown into a defining security challenge,” which allows enemies to strike security, energy, economic, and other critical infrastructure with the benefit of anonymity and distance.

All in all, Hagel said, the world is combustible and complex, and America’s responsibilities are enormous. The military’s role in meeting those responsibilities is essential, he said, but as part of a total government approach.

“Most of the pressing security challenges today have important political, economic, and cultural components, and do not necessarily lend themselves to being resolved by conventional military strength,” the secretary noted.

Defense leaders need time, flexibility, budget certainty, and partnership with Congress to effectively explore new approaches to acquisition, personnel, and overhead costs, he said. Hagel emphasized that future strategic planning will emphasize DoD’s “inherent strengths” of leadership development, training, mobility and logistics, special operations, cyber, space, and research and development.

“The goal of the senior leadership of this department today is to learn from the miscalculations and mistakes of the past drawdowns, and make the right decisions that will sustain our military strength, advance our strategic interests, and protect our nation well into the future,” Hagel said.

The secretary concluded with some comments on the nation’s role in the world. Amid budget turmoil, financial crisis, and a war-weary population, Hagel said, questions arise about America’s global leadership.

“America does not have the luxury of retrenchment,” the secretary asserted. “We have too many global interests at stake, including our security, prosperity, and our future.”

If America leaves a leadership vacuum, he said, the next great power may not be as judicious or responsible as the United States has been since World War II.

“We have made mistakes and miscalculations with our great power,” Hagel said. “But as history has advanced, America has helped make a better world for all people with its power. A world where America does not lead is not the world I wish my children to inherit.”

Quoting President Theodore Roosevelt, Hagel said America “cannot bear these responsibilities aright unless its voice is potent for peace and justice ... with the assured self-confidence of the just man armed.”

What distinguishes America and its people, he said, is “our commitment to making a better life for all people.”

"We are a wise, thoughtful, and steady nation, worthy of our power, generous of spirit, and humble in our purpose," he added. "That is the America we will defend together, with the purpose and self-confidence of the 'just man armed.'"

AMC Commander Stresses Importance of New Tanker

AMERICAN FORCES PRESS SERVICE (APRIL 11, 2013)

Army Sgt. 1st Class Tyrone C. Marshall Jr

WASHINGTON—The commander of the Air Force's Air Mobility Command today stressed the high priority his Service places on the KC-46A tanker aircraft program.

Air Force Gen. Paul J. Selva discussed progress with the program and stressed its priority in a meeting with Defense Writers Group reporters.

Air Force officials announced award of a \$3.5 billion engineering and manufacturing development contract to Boeing Co. for the new tanker in February 2011.

"I'm on the record saying that our No. 1 acquisition priority in AMC—and it remains the Air Force's No. 1 priority—is making sure the KC-46 tanker delivers on time, on cost," he said. "And because we have a firm fixed-price contract for the development of that airplane, if we allow ourselves to get into the position where we don't have the funds to pay for the initial development of the airplane, that contract gets reopened."

This would be a bad outcome for the Air Force and for the nation—in reverse order, Selva said.

"We'll pay more for the airplane than we know we have to based on the existing contract," he added.

The general said an initial round of site surveys for where the aircraft will be based has taken place, and the critical final design review is scheduled in July.

"We're in source selection for the simulator training devices, which means we're already started into the process of developing the curriculum and deciding how we're going to train the crews that operate the airplane," Selva said.

Selva said a recent decision will enable the Air Force to reap the new tanker's benefits faster than earlier plans projected.

"About six months ago, we finalized a decision to change the crew ratio on the airplane from two-and-a-half to three-and-a-half crews per airplane," he said. "[This] will allow us to use the airplane in greater volume earlier in its lifetime, because it's so much more efficient than the KC-135."

The KC-135 Stratotanker has provided the Air Force's core aerial refueling capability for more than 50 years.

Research, Engineering Team Adjusts to Fiscal Uncertainty

AMERICAN FORCES PRESS SERVICE (APRIL 19, 2013)

Amaani Lyle

WASHINGTON—Defense Department scientists and researchers will adjust to fiscal uncertainty by scrapping duplicative research and increasing prototyping, a senior Pentagon official told Congress yesterday.

Alan R. Shaffer, acting assistant secretary of defense for research and engineering, told the Senate Armed Services Committee that DoD plans to consolidate programs and develop new capabilities by keeping design teams on tap during equipment purchase lulls.

"[Scientists and researchers] will be doing prototyping in things like very advanced electronic warfare systems and ... cyber capabilities," Shaffer said. "It's where we have to address new and emerging capabilities."

About \$45 million allocated for the applied technology program in the Pentagon's fiscal year 2014 budget request is not a new set of money, Shaffer said. Rather, he told the senators, it derives from a consolidation of programs such as cyber, communications, electronic warfare, and materiel.

"I took five or six of my old programs and collapsed them into a single program element to be able to fund good ideas competitively across the department in the cross-cutting areas that everybody has [science and technology] programs in," he explained.

Shaffer said Undersecretary of Defense for Acquisition, Technology and Logistics Frank Kendall has asked him and his team to reassess late-development prototyping and demonstration.

When considering advanced technology, the real "secret sauce" is design team engineers, who will create the new trades and possibilities, he added.

"So we will do some prototyping to make sure that we keep the national intellectual capital viable for when we need the next set of systems," Shaffer said. "It's a new way of thinking about how we're going to get more 'bang for the buck' by funding ... internally, competitively proposed projects in those certain cross-cutting areas."

Nobel Laureate Discusses Improving DoD Decision Making

AMERICAN FORCES PRESS SERVICE (APRIL 22, 2013)

Jim Garamone

WASHINGTON—Defense Department personnel pride themselves on their decision-making ability, but Nobel laureate Daniel Kahneman believes there are ways to systematically improve and help remove biases from the process.

Kahneman presented his opinions during the “New Ideas @ OSD” seminar in the Pentagon this morning. Former Navy Secretary Richard Danzig moderated the discussion.

Defense leaders literally make life-or-death decisions. They decide how to spend billions of dollars of taxpayer money. They decide how best to approach leaders in other countries and how to best implement programs and policies.

Kahneman received the Nobel Prize in Economics in 2002 and wrote the New York Times bestseller *Thinking, Fast and Slow*.“ He said there are three elements in making decisions: options, judgments, and evidence. The judgments and evidence feed into providing options, which constitute the crux of decision making.

Stressing the need for quality control in the process, Kahneman urged that defense leaders be aware of the role their biases play.

“Institutions in general can be viewed as factories that produce decisions,” he said. “When there is a production line, there is a need for something called quality control.”

He suggested a quality control checklist for decision making. “This is not a checklist of relevant facts that pertain to the decision,” Kahneman said. “It is a checklist of the likely errors that can be made in the process of deciding.” The checklist should provide an evaluation of whether the decision is being made well, he said. The list should include the likely biases and mistakes that could be entering into the decision-making process.

He suggested this checklist could move along even as a decision is being made. There is no need to await the outcome. The process entails uncertainty, and a decision can be viewed as a gamble, the professor said. “There is no perfect corollary between the quality of decisions and the quality of the outcome,” he said.

In general, there is a very strong tendency for people to evaluate decision making by outcome and not by process, Kahneman said. “We cannot prevent ourselves from seeing,

‘If something ended well, it was done well, and if something ended badly, somebody must have fouled up,’” he said. He called this the “hindsight bias.”

“Our model of the world is changed by the outcome,” he said. “It is almost impossible to control.”

The hindsight bias is unkind to decision makers, the professor said. “Their failures tend to look stupid, and their successes tend to look obvious,” he said. “We cannot foretell the future, but we can almost always explain the past.”

This leads to another bias he called the “outcome bias.” This means decision makers are rewarded or punished by the outcome of their decisions, and not by the quality of the process.

“Knowing about the existence of these biases ... will do absolutely nothing for you,” he said. “You will not be able to avoid these errors.” But people can correct for these biases, he added.

“The only way to control for these biases is to identify the circumstances under which it is likely to occur and to make a conscious effort to correct the judgment,” he said.

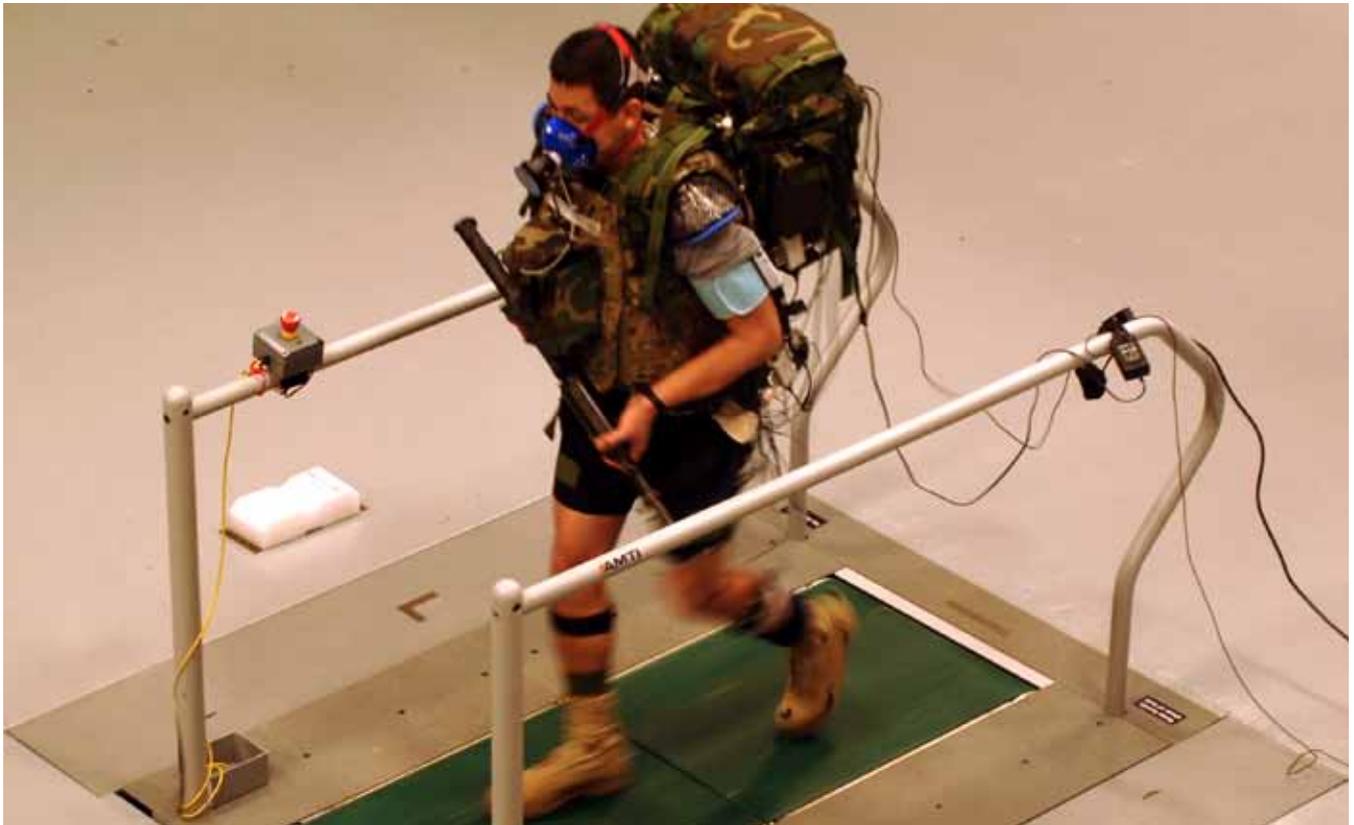
Another bias that Kahneman said is common is for people to exaggerate their chances for success. “Especially if they have a plan, they tend to be really optimistic about the chances of their plan succeeding,” he said. “They tend to have an illusion of control. These are very deep-seated illusions.”

Officials need to control for this by looking at other, similar plans and gauging the similarities from those, he said. “They will find sometimes that their conclusions are not even in the ballpark,” he added.

Kahneman discussed decision makers holding a “pre-mortem” for their decisions. In this, the leader tells those helping with the decision to imagine the decision went horribly wrong, and that it is now a year later and they have to discuss why it failed.

In making a decision, organizations “increasingly get locked into that decision,” he said, and dissent becomes very difficult. Organizations love optimists, Kahneman noted, while pessimists are almost seen as disloyal. A pre-mortem helps to find flaws in the plan he said.

“I believe you can improve decision making if you are conscious of errors, and in an organization that does things sys-



A soldier carries a 61-pound load while walking in a prototype DARPA Warrior Web system during an independent evaluation by the U.S. Army. Warrior Web seeks to create a soft, lightweight under-suit that would help reduce injuries and fatigue common for soldiers, who often carry 100-pound loads for extended periods over rough terrain. DARPA envisions Warrior Web augmenting the work of soldiers' own muscles to significantly boost endurance, carrying capacity, and overall warfighter effectiveness—all while using no more than 100W of power.

Defense Advanced Research Projects Agency photo

tematically and does things slowly, there is an opportunity to improve decision making," Kahneman said.

Warrior Web Prototype Takes Its First Steps

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY (MAY 22, 2013)

The U.S. Army Research Laboratory Human Research and Engineering Directorate (ARL HRED) is nearing completion of a five-month series of tests to evaluate multiple Warrior Web prototype devices. The testing evaluates how each prototype incorporates different technologies and approaches to reduce forces on the body, decrease fatigue, stabilize joints, and help soldiers to maintain a natural gait under a heavy load. The testing uses a multi-camera motion-capture system to determine any changes in gait or balance, a cardio-pulmonary exercise testing device to measure oxygen consumption, and a variety of sensors to collect force, acceleration and muscle activity data.

The Warrior Web program consists of two related program tasks. Currently underway, Task A seeks to develop a mix of core technologies deemed critical for the program's success. Scheduled to commence in fall 2013, Task B aims to develop and fabricate an integrated suit that would eventually undergo real-world testing to evaluate its performance. For more information, please visit the Warrior Web program page at http://www.darpa.mil/Our_Work/DSO/Programs/Warrior_Web.aspx.

Department of Defense Announces Selected Acquisition Report

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 23, 2013)

The Department of Defense (DoD) has released details on major defense acquisition program cost, schedule, and performance changes since the December 2011 reporting period. This information is based on the Selected Acquisition Reports (SARs) submitted to the Congress for the De-

December 2012 reporting period at <http://www.defense.gov/news/SelectedAcquisitionReportSummaryTables2012.pdf>.

SARs summarize the latest estimates of cost, schedule and performance status. These reports are prepared annually in conjunction with the submission of the President's Budget. Subsequent quarterly exception reports are required only for those programs experiencing unit cost increases of at least 15 percent or schedule delays of at least six months. Quarterly SARs are also submitted for initial reports, final reports, and for programs that are rebaselined at major-milestone decisions.

The total program cost estimates provided in the SARs include research and development, procurement, military construction, and acquisition-related operation and maintenance. Total program costs reflect actual costs to date as well as future anticipated costs. All estimates are shown in fully inflated then-year dollars.

The current estimate of program acquisition costs for programs covered by SARs for the prior reporting period (December 2011) was \$1,617,549.2 million. Final reports submitted for the annual December 2011 and for the March 2012, June 2012, and September 2012 quarterly exception reporting periods were subtracted. Initial reports for the annual December 2011 and for the March 2012, June 2012 and September 2012 quarterly exception reporting periods were added. Finally, the net cost changes for March 2012, June 2012 and September 2012 quarterly exception reporting periods were incorporated.

[View the entire report by individual program and line items at <http://www.defense.gov/releases/release.aspx?releaseid=16035>.]

Science, Technology Investments to Focus on Innovation, Industry

AMERICAN FORCES PRESS SERVICE (APRIL 24, 2013)

Amaani Lyle

NATIONAL HARBOR, Md.—To meet the Defense Department's 21st century security objectives, its science and technology funding will focus on innovation and industry, the acting assistant secretary of defense for research and engineering said here today.

In remarks at the National Defense Industrial Association's 14th annual science and engineering technology conference, Alan Shaffer said mitigation, affordability, and surprise technology lay the foundation for the DoD's science and technology commitments.

Shaffer noted a rise in the commons known as technology enablers that include space, cyberspace, and the oceans.

"These are the places that no one owns and yet enable all our operational systems," he said.

In electronic warfare, Shaffer explained, the United States has enjoyed pre-eminent electronic detection systems with its allies, but now must maintain balance in the electromagnetic spectrum for its systems to operate.

"Increasingly, a space communications layer is vulnerable to being jammed," he said. "Space is contested. Space is no longer assured—nobody owns cyber, but it certainly will [affect] how we're thinking about the world."

In cyberspace, research and resilience of data are key, Shaffer said. "We need robustness and ... the ability to operate through any type of cyberattack," he added.

And considering cyberspace as a science is critical, he said.

"I can go out and measure warheads," Shaffer said. "How do you measure cyber as to whether or not you're improving?"

DoD also must continue countering weapons of mass destruction through sensors, network analytics, data integration, and predictive tools, he told the audience.

Developing new tools and more prototyping within DoD and throughout industry are important to affordability, Shaffer said.

"Right now, it [takes] roughly 20 years to field a new weapon system," he noted. "The requirement cycle cannot envision where you're going to be in that period of time." The Services are using a program called Engineered Resilient Systems, which develops predictive tools to execute an open system design and perform thousands of system trades with larger, more complex systems within a computer, Shaffer said.

Typically, he explained, technology investment involves money and a lot of time in early basic research before encountering a concept, then learning about a capability that grows rapidly before flattening out.

"I don't want to continue to have to invest in older, mature technologies where we flattened out some," Shaffer said. "I want to create surprise for other folks. That means the DoD must continue to invest in a lot of concepts in basic research, look for the maturation, and then put some big bets behind things to hit the high part of the growth curve."

DoD science and technology also will encompass human systems, he said, from realistic and immersive training to better man-machine interface.

Analysts will further research how humans can better interface with platforms, and how DoD can reduce time for a human to better operate a system, he added.

Space Domain Vital to National Defense, Official Says

AMERICAN FORCES PRESS SERVICE (APRIL 25, 2013)

Army Sgt. 1st Class Tyrone C. Marshall Jr.

WASHINGTON—It is critical for the Defense Department to develop and implement space programs and policies to maintain U.S. space advantages in a perpetually changing environment, a senior defense official told Congress yesterday.

Douglas L. Loverro, deputy assistant secretary of defense for space policy, appeared before the Senate Armed Services Committee's subcommittee on strategic forces regarding the fiscal year 2014 budget proposal for military space programs.

"[It's a] basic reality that space remains vital to our national security," he said. "But the evolving strategic environment increasingly challenges U.S. space advantages—advantages that both our warfighters and our adversaries have come to appreciate."

As space becomes more congested, competitive, and contested, Loverro said, the department must formulate programs and policies that will secure those advantages for years to come. But reality, he added, is juxtaposed with providing these capabilities in an environment with increasingly restrained budgets.

Loverro said the growing challenges of budgeting, in addition to increasing external threats, compels the department to think and act differently.

But Loverro noted that while he thinks these realities present the Defense Department with a clear challenge, he does not view them with "a sense of 'doom and gloom.'"

"New entrepreneurial suppliers, alongside our legacy suppliers, are creating an ever-burgeoning commercial space market that can provide significant advantages to DoD if we formulate the policies and strategies to encourage their growth and use," he said. "Similarly, there has been a growth worldwide in allied space investment capability."

This growth, he added, provides the Defense Department a significant opportunity in helping to build resilience into its space capabilities.

Loverro said the policies and strategies under discussion begin to address challenges and opportunities.

"But they are just the initial steps in an area that will continue to demand attention and action from all of us," he said.

Affordability Priority for F-35 Program

AMERICAN FORCES PRESS SERVICE (APRIL 25, 2013)

Jim Garamone

WASHINGTON—Affordability remains the priority for the F-35 Lightning II joint strike fighter, the Pentagon's program executive officer for the Defense Department's most expensive procurement told Congress yesterday.

Air Force Lt. Gen. Christopher C. Bogdan told the Senate Armed Services Committee's airland subcommittee that the program has made progress, but he acknowledged it is enormously complicated and has a way to go.

Sequestration complicates the acquisition as well, the general said.

"We must use all our energy finishing development within the time and money we have, we must continue to drive the cost of producing F-35s down, and we must start today to attack the long-term life cycle costs of the F-35 weapon system," Bogdan said in prepared testimony.

The F-35 comes in three variants and is being used by the Air Force, Navy, and Marine Corps. In addition, it will form the backbone of allied nations' airpower for decades to come, the general said. He called it a "dominant, multirole, fifth-generation aircraft."

The fiscal year 2014 budget request includes \$8.4 billion for continued system development, testing, and procurement of 29 F-35 aircraft.

Twenty-nine F-35s are deployed in operational and training squadrons at three locations. The program is shifting from development to production and long-term sustainment.

F-35s flew 1,984 sorties for a total of 3,118 hours in 2012. Officials tested launching weapons from two of the variants last year and stood up the first operational F-35B Marine Corps squadron in Yuma Marine Corps Air Station, Ariz.

Sequestration has the potential either to stretch the development program out or reduce the capabilities warfighters



In response, President Dwight D. Eisenhower founded the Advanced Research Projects Agency—now called the Defense Advanced Research Projects Agency—the following year, and he directed it to prevent further technological surprises by reaching beyond the frontiers of technology and science, and immediate military requirements. In the 55 years since DARPA was founded, it has succeeded in preventing technological surprise—and has created surprise of its own, DARPA Director Arati Prabhakar told reporters at the Pentagon yesterday.

“Today, if you look at how we fight, you will find in our military capabilities really critical systems and capabilities like precision guidance and navigation, like stealth technologies, like [unmanned aerial vehicles], communications and networking, night-vision systems,” she said, all developed, in part, due to pivotal early investments by DARPA.

Crew chiefs from the 57th Wing Lightning Aircraft Maintenance Unit marshal an F-35 Lightning II, March 6, 2013, at Nellis Air Force Base, Nev. The first two aircraft will be assigned to the 422nd Test and Evaluation Squadron.

U.S. Air Force photo/Lawrence Crespo

can get, he said. Sequestration cuts funds for the program meaning development will be stretched out, causing the program to cost more in the long run. This will have impacts on international partners, he said.

“The increases may result in reduction of their aircraft quantities, which would, in turn, increase unit costs even more and cause them to relook their commitment to the program,” Bogdan said.

Furloughs of civilian workers “will have immediate negative consequences,” he added. It would cause a reduction in testing and could reduce productivity by a third, he explained.

Bogdan stressed that the basic aircraft design is sound.

“While there is still risk to the program, I have confidence in the resilience of the plan to absorb expected further learning and discovery, and stay on track, so long as it remains properly resourced,” he said.

DARPA Reaches Beyond Technological Frontiers for Warfighters

AMERICAN FORCES PRESS SERVICE (APRIL 25, 2013)

Claudette Roulo

WASHINGTON—In 1957, the entire world was surprised by the Soviet Union’s launch of Sputnik 1, the first artificial Earth satellite.

“And our warfighters have taken this suite of capabilities and turned it into a way to change the face of war,” Prabhakar said.

In making those investments, DARPA paved the way for leaps forward in capability, she said. “That’s really our role,” she added. “That’s what our function is. That’s what we’ve done for many generations and that’s what we’re going to be doing again for the next generation.”

DARPA is a small agency, Prabhakar said. About half of its roughly 200 employees are experts from throughout the technical and military communities who serve as program managers for short terms of about three to five years. The rotational nature of the program manager positions allows the agency to tap into a broad technical community, she said, a tactic that gives DARPA influence that far outweighs its size.

“The job for the rest of us [at DARPA] is to recruit these stellar individuals, to construct a balanced portfolio of programs from the ideas that they generate, and ultimately ... enable these program managers to take the kind of risk that is inherent in reaching for high payoff,” she said. “And all of that is really what keeps the DARPA engine humming,” Prabhakar added.

Incoming program managers listen to what is happening in the technical community to learn where the breakthrough

opportunities are, Prabhakar said, and learn from the military community what they see as their future needs.

“From all of those inputs, our program managers create DARPA programs that they think really have the potential to change the world,” she said. “When they start building these programs, of course, they build these new technology capabilities [and] ... technical communities that really can move our abilities forward in a really powerful way.”

While DARPA’s mission hasn’t changed in 55 years, the same can’t be said of the world in which it operates, Prabhakar said. Now is a good time for DARPA to step back and assess its view of future missions, she added, particularly in the context of today’s realities.

The agency identified three major trends that it views as critical in shaping DARPA’s effort to build “radical new solutions,” Prabhakar said.

“The first major factor that we see is we believe we’re going to be in an extended period during which our national security will face a wide range of different types of threats from a wide range of different actors,” she told reporters. Not just nation-states, but also terrorist and criminal organizations and even individuals, she said.

These actors now have access to a wide range of tools that can create effects once limited only to nations, she said—weapons of mass destruction or mass terror and cyberattacks, for example. “So the No. 1 major factor that we really pay attention to is this complex, fluid, shifting national security environment that we think we will be facing for an extended period of time.”

The second factor, she said, is the rapid advances in military technology made by other nations. This, combined with other factors, has led to a prevalence of obsolete and publicly available technology in U.S. military systems. “That’s a trend that we expect will continue,” Prabhakar said. “I think that’s going to be a fact of life in the world that we’re living in.”

Fiscal constraints are the third trend shaping DARPA’s future, she said. “We believe we may be at the beginning of a fundamental shift in how our society allocates resources to the business of national security,” she added.

Prabhakar said she’s not referring only to the immediate issues around sequestration spending cuts. “What I’m really talking about here are the fiscal pressures that could shape a different future over the coming years and decades,” she explained, “and, if it turns out to be the case that we don’t

allocate this continuing level of support for national security as a society, it actually won’t change the fact that our job will still be to keep the country as safe and secure as is humanly possible.

“So these three factors create a very challenging environment that we’re going to be facing for an extended period of time,” she continued. “I think these are factors that create an environment that calls for a DARPA and for the DARPA approaches to thinking outside the box more than ever before.”

DARPA will continue to invest in “game-changers,” Prabhakar said. “[Investing] in radical new systems concepts, in radical new technologies that can enable new capabilities—that’s something that DARPA has done for 55 years, and we’re going to do it today, and we’ll hope we’ll do it for the next 55 years at least.”

The agency is also taking new approaches, she said. “We’re thinking about how we can make the systems of the future more readily adaptable,” she added, “so that they can be configured for whatever actual threat emerges in time, or can be reconfigured in real time in an engagement so that we can adapt more quickly than adversaries might in a battle environment.”

The organization also seeks ideas that can “invert the cost equation,” Prabhakar said. These types of approaches not only would reduce program costs, but also would force adversaries to spend more money to counter the technology than the technology cost to develop and implement, she explained.

“And then, finally, we’re also thinking about the fact that DARPA’s in the ‘silver bullet’ business, but in fact, even our most powerful capability will not single-handedly change the face of war for the next generation,” she said.

One way to realize such a far-reaching change is by combining technologies, she said. “That’s how I think we’ve created the last big shift in military capability,” she added, “and we see how that could be possible looking forward.”

DARPA’s objective is a new generation of technology for national security, Prabhakar said.

“If we’re successful, as I think we really must be in this DARPA endeavor, what that will mean for the future is that our future leaders and commanders will have real options, powerful options for all the range of threats that we face in the years and decades ahead,” she said. “That’s really how

we will enable our nation to achieve its strategic objectives in a decisive fashion.”

Carter: Defense Industry Interests Align With Those of DoD

AMERICAN FORCES PRESS SERVICE (MAY 6, 2013)

Claudette Roulo

WASHINGTON—The long-term interests of the defense industry and the Defense Department are aligned, Deputy Defense Secretary Ash Carter said during a May 3 awards ceremony in McLean, Va.

At the ceremony, Carter received the Eisenhower Award from the National Defense Industrial Association. The award recognizes leadership and strategic impact at the highest levels of national security, according to an NDIA news release.

The success of the U.S. defense industry is in the nation’s interest, Carter told the audience.

Though President Dwight D. Eisenhower’s farewell address in 1961 warned of the dangers of an outsized military-industrial complex, Carter said, the warning has been removed from its context. As a former Army general and supreme commander of the Allied forces in Europe, Eisenhower clearly understood the vital role played by the defense industry in securing the nation, the deputy secretary noted.

“The larger point of his farewell address was that the interests of the country are served when leaders take the long view,” he continued. Only by properly aligning ends with means in accordance with national interests, rather than special interests, can national leaders achieve the balance Eisenhower sought, Carter said.

Eisenhower advocated “balance between the private and the public economy, balance between cost and hoped-for advantages, balance between the clearly necessary and the comfortably desirable, balance between our essential requirements as a nation and the duties imposed by the nation upon the individual, [and] balance between the actions of the moment and the national welfare of the future,” Carter said, quoting from the president’s farewell address.

“He went on to say, ‘Maintaining balance involves the element of time, as we peer into society’s future. We—you and I, and our government—must avoid the impulse to live only for today, plundering for our own ease and convenience the precious resources of tomorrow,’” he said.

The Defense Department is taking the long view, Carter said, understanding that it is operating at the convergence of two

great historical trends. The first—a time of unprecedented strategic change—led President Barack Obama to make clear in the new defense strategy that “we’re turning a strategic corner,” the deputy secretary said. The second—historic levels of financial turbulence—will require the department to absorb reductions in defense spending in the interest of the nation’s overall fiscal health, he said.

The country is moving from an era dominated by two wars toward a future defined by disparate challenges and opportunities, Carter said.

“We know what many of these challenges are—continued turmoil in the Middle East, the persistent threat of terrorism, enduring threats like weapons of mass destruction, and a range of new threats like cyber,” the deputy secretary said.

With the challenges come great opportunities, he said. Among them, Carter noted, is shifting the Defense Department’s great intellectual and physical weight from Iraq and Afghanistan to the Asia-Pacific region, “where America’s future ... will lie, and where America will continue and must continue to play a seven-decade-old pivotal, stabilizing role.

“As we draw down from the wars in Iraq and Afghanistan, our force needs to make a very difficult transition,” Carter continued, “from a large, rotational counterinsurgency-based force, to a leaner, more agile, more flexible, and ready force for the future.”

There was nothing wrong with the force the nation built for the wars in Iraq and Afghanistan, Carter told the audience. “It was the right force for the period,” he added, noting that the Afghanistan conflict is not over. “We can’t ever forget that that still remains job one, but we’re going into a different period,” he said.

The department’s rebalance to the Asia-Pacific region is predominately a political and economic concept, not a military one, the deputy secretary said. But, the Defense Department’s role is to enable the continuation of the region’s 60 years of peace and prosperity, he said, often by simply leading by example. “We believe that our strong security presence in the Asia-Pacific has provided a critical foundation for our principles to take root,” Carter said.

“Our partners in the region welcome our leadership and the values that underlie them,” he added, “and therefore, I believe that our rebalance will be welcomed and reciprocated.”

The rebalance isn’t aimed at any one country, or group of countries, in the region, Carter noted. “It’s good for us, and



Deputy Defense Secretary Ash Carter delivers remarks after being honored with the Dwight D. Eisenhower Award and Medal by the National Defense Industrial Association at the Ritz-Carlton hotel in McLean, Va., May 3, 2013. The annual award recognizes leadership and strategic impact at the highest levels of national security.

DoD photo by Glenn Fawcett

it's good for everyone in the region, and it includes everyone in the region."

If managed properly, the department's budget reductions and the nation's strategic shift can reinforce one another, he said.

"That is the task before us in the Department of Defense," the deputy secretary said. "We know, that in making this strategic transition, we only deserve the amount of money we need, and not the amount we've gotten used to. That's why, well before the current budget turmoil, we made reductions to the department's budget by \$487 billion over the coming decade."

Other cuts were made earlier under former Defense Secretary Robert M. Gates to eliminate unneeded or underperforming programs, Carter said. Additionally, overseas contingency operations funds are decreasing now that the military has left Iraq and is drawing down from Afghanistan, he said.

"Taken together, these reductions compare in pace and magnitude to historical cycles in defense spending the nation has experienced ... after Vietnam and after the Cold War," the deputy secretary said. "We need to continue our relentless effort to make every defense dollar count."

The department is committed to this effort, he added, noting that "everything will be on the table" during an ongoing review of strategic choices and management. The results of the review will be delivered to Defense Secretary Chuck Hagel in the coming weeks, Carter said.

"The choices that the secretary and the president make in response to these points in the following months will then inform our [fiscal year 2015] budget submission, as well as our [fiscal 2014] execution decisions," he added. "Ideally, we will have all three elements—stability, time, and flexibility—with which to make critical budget decisions, but we must anticipate a wide range of possible contingencies."

Tough choices will be necessary in the years to come, Carter acknowledged—and will have significant impact on the

United States, particularly if deep spending cuts required by the budget sequester remain in force.

"These tough choices, by necessity, must favor national interests over parochial priorities," he said. "What we cannot afford, as President Eisenhower said, is a debate in which people are in favor of sequester, but just not in their own back yard.

"Fiscal 'NIMBY-ism' is exactly the wrong policy prescription for what ails us," the deputy secretary said.

Officials Call for Continued Ballistic Missile Defense Modernization

AMERICAN FORCES PRESS SERVICE (MAY 9, 2013)

Donna Miles

WASHINGTON—Senior defense officials underscored the importance of ballistic missile defense modernization efforts requested in the fiscal 2014 budget proposal during testimony before the Senate Armed Services Committee today. The budget requests \$9.2 billion in fiscal 2014 and \$45.7 billion over future years to develop and deploy missile defense capabilities.

Madelyn Creedon, assistant secretary of defense for global strategic affairs, told the panel these capabilities will both protect the U.S. homeland and strengthen regional missile defenses.

Navy Vice Adm. J.D. Syring, director of the Missile Defense Agency, joined Creedon during the afternoon hearing in citing disturbing trends in Iran, North Korea, Syria, and elsewhere around the globe.

"The threat continues to grow as our potential adversaries are acquiring a greater number of ballistic missiles, increasing their range, and making them more complex, survivable, reliable, and accurate," he reported. "The missile defense mission is becoming more challenging as potential adversaries incorporate [ballistic missile defense] countermeasures."

The administration remains committed to developing proven and cost-effective missile defense capabilities through the phased advance approach to regional missile defense, Creedon noted in her written statement.

"This approach puts emphasis on a flexible military toolkit with forces that are mobile and scalable," she said. As a result, "they underwrite deterrence in peacetime, but can be surged in crisis to meet defense requirements," she said.

Creedon reported on progress on three policy priorities: sustaining a strong homeland defense, strengthening regional missile defense, and fostering increased international cooperation and participation.

She emphasized the importance of continually improving the Ground-based Midcourse Defense system in place to protect the U.S. homeland against potential limited intercontinental ballistic missile attacks.

The budget request, she said, supports this effort as well as enhancement of ground-based interceptors and deployment improved sensors, she said. The proposal also includes funding to implement regional missile defense approaches that Creedon said will be tailored to the unique deterrence and defense requirements of Europe, the Middle East, and the Asia-Pacific regions.

Missile defense, she noted, is an integral part of a comprehensive U.S. effort to strengthen regional deterrence, and plays a central role in DoD's strategic guidance released in January 2012.

While promoting these efforts, the United States is striving to build stronger relationships with allies and partners to cooperatively address the ballistic missile threat, and to help build partner capacity to do so, she said.

Syring reported, for example, that the Missile Defense Agency "is engaged either bilaterally or multilaterally with nearly two dozen countries and international organizations," including NATO and the Gulf Cooperation Council. "We have made good progress in our work with our international partners, and I want to continue those important efforts," he said.

"We have had some very significant successes over the last several years, ... but we cannot afford to stand still," echoed Creedon. "To the contrary, we need to reevaluate the threat continually and adapt as necessary."

The fiscal 2014 budget request reflects DoD's goals of retaining the flexibility to adjust and to enhance its defenses as the threat and technologies evolve, she said.

"Our most vital security commitments [are] the defense of the United States and the protection of our allies and partners."

Pentagon Seeks to Establish 'Cost Culture,' Official Says

AMERICAN FORCES PRESS SERVICE (MAY 14, 2013)

Army Sgt. 1st Class Tyrone C. Marshall Jr

WASHINGTON—In an effort to maximize investments of defense business opportunities during austere times, the Defense Department is seeking to establish a “cost culture,” a senior Pentagon official said here today.

Elizabeth A. McGrath, the Defense Department’s deputy chief management officer, spoke to an audience during the Excellence in Government Forum about DoD’s efforts to optimize business opportunities in support of the department’s core mission.

McGrath’s office advises the defense secretary and deputy defense secretary on matters relating to the management and improvement of integrated defense business operations.

“We’re looking at establishing a cost culture within defense,” McGrath said. “We’re really, really good at putting together a budget. We do it every year without fail. We do budget formulation. We even do execution of that budget. But what we are really focusing our attention on now is the cost of operation.”

McGrath said this cost analysis plays a crucial role in considering business investments.

“Do you know how much it costs per transaction?” she asked. “Do you know what makes up the cost elements?”

Every company, McGrath said, looks at what is driving cost when they evaluate what is profitable and what is not.

“We do this every day at home,” she said. “We look at what’s driving our costs. There are cost decisions we make every day. It’s applying that same thought process that businesses have—that we have as individuals—to the execution of the business space.”

When evaluating these cost drivers, McGrath said, there should be a consideration of whether there is a good return on investment. “If it’s not there, we have to say no,” she added. “We’re not going to make that investment, because in this fiscal environment we just don’t have the dollars.”

This approach requires thinking differently, McGrath said.

“It has been a very difficult conversation within the Defense Department, within the business space,” she told the audience. But that approach makes it possible to make informed

decisions, she said, if there is an understanding of exactly what the cost drivers are.

McGrath noted the Defense Department is “for sure, the largest government entity,” and in terms of numbers, would be the 16th largest country in the world, with 3 million to 3.5 million people, 5,000 locations worldwide, and a multi-billion-dollar global supply chain. DoD also is the largest health care provider in the nation, she said.

McGrath used information technology as an example of considering the right strategy to achieve the right outcome in the business space.

“Annually, we spend about \$7 billion, and we have over 2,000 IT systems,” she said. “In my opinion, that’s too many, but what we don’t want to do is say, ‘Well, let’s just cut 10 percent of those,’ not understanding the strategic impact of doing that.”

McGrath said it is critical to understand how to tie the investment to the strategy to achieve the desired outcome. “What business outcome are you trying to achieve?” she asked. “How does the IT enable you to get there?”

McGrath acknowledged that this “deliberate thought process” isn’t always employed by government.

“Typically, it’s oftentimes a blunt-object approach to cutting costs,” she said. “And I really think that the government—especially over the last couple of years, but certainly historically—has cut a lot of the easy things.”

McGrath said the current fiscal environment requires different, more strategic thinking about how to make budget cuts and achieve the mission within the fiscal targets that are provided without disrupting the mission. Certainly, she said, national security is the Defense Department’s core mission.

“What I often tell many people is you have to sort of look up and out across the enterprise,” McGrath said. “We execute from an end-to-end perspective. There’s nothing that is just financially focused. There’s nothing that is just personnel-focused. Every personnel action has a financial transaction.” In the current and projected fiscal environment, McGrath said, defense officials must think differently to optimize available dollars. And that’s difficult in a culture that favors certainty, she added.

“We really are risk-averse,” McGrath said. “We don’t like to take the risk. We want to ensure success before taking a risk.”

I think the fiscal environment really allows us to take a little more risk to execute, if you will, bigger and bolder thoughts about how we execute the mission. And so, I really do think it's time to think differently."

Kendall: Better Buying Power 2.0 Aims to Improve Acquisition

AMERICAN FORCES PRESS SERVICE (MAY 24, 2013)

Army Sgt. 1st Class Tyrone C. Marshall Jr

WASHINGTON—The new initiatives outlined in the Defense Department's Better Buying Power 2.0 effort are intended to improve the efficiency of the complicated business of defense acquisition, a senior Pentagon official said yesterday. Following Deputy Defense Secretary Ash Carter's explanation of the origins of Better Buying Power 1.0, Frank Kendall, undersecretary of defense for acquisition, technology and logistics, explained there are no simple fixes during remarks at the Center for Strategic and International Studies.

"I don't believe there are one- or two-policy changes we can make which are going to fix, if you will, defense acquisition," he said.

"We're in a very, very complicated business," Kendall said. "We had 23 initiatives in Better Buying Power 1.0. There are about 34 here. There are another 100 things, at least, that we're working on that are not on this chart."

Kendall said Better Buying Power 2.0 covers a wide range of products and services that defense acquisition requires.

"The way to improve it, I think, is not with one or two policy changes or even five or six," he said. "It's with continuous efforts to understand the results that you're getting, why you're getting them, and where you can make improvements on the margin."

Kendall said an important feature of Better Buying Power 2.0 is, "A Guide to Help You Think."

"When Dr. Carter and I put out [version] 1.0 and went around the country talking to the workforce, one of the things we told them was that we really wanted them to think," he said. But the guidelines included in the original version, Kendall said, were not hard rules written in stone to be followed on every occasion.

"They had to be applied with judgment, and that's what the thinking part is about," he said.

"The range of things that we do is so diverse that each problem has to be approached and assessed on its own rights," he added.

Kendall also cited a new process in Better Buying Power 2.0 which addresses professionalism in the workforce.

"[It's] not an easy job," he said. "It's takes professionals, and it's the key to success."

It's important, Kendall said, getting those little decisions and acquisition strategies right, and really understanding technology maturity and what incentives make industry perform better for the department.

"So what you see in the guidance that I just put out implementing 2.0 is a combination of some general guidance and then some specific actions that people take," he said.

"[In] many cases, it's to provide more thorough and more complete guidance to people to help them through the process of deciding how to actually implement this," Kendall added.

If the department continues to make improvements on the margin, he said, it will transform its results.

"We're going in the right direction, but there's still a lot of room to get better," he said. "And that's what this is about—finding those things on the margin where we can do better." During his remarks, Kendall touched on each of these seven areas:

- Achieve affordable programs;
- Control costs throughout the product life cycle;
- Incentivize productivity and innovation in industry and government;
- Eliminate unproductive processes and bureaucracy;
- Promote effective competition;
- Improve tradecraft in acquisition of services; and
- Improve the professionalism of the total acquisition workforce.

Noting the current budget climate under sequestration, Kendall said there's no reason for defense acquisition officials to stop doing their jobs, only "every reason in the world to do it better."

"We didn't have a cyclone or hurricane arrive the day sequestration was implemented," he said. "What happened was the rain started to fall. And it's still falling, the water's rising, and that's what we're dealing with."

With the constraints of sequestration, Kendall said the department is essentially being forced to endure a "huge number of inefficient actions," opposite of what he and his team are striving toward.

Kendall also noted sequestration's "water" continues to rise. "I've used the word devastating before—I'm not going to back down from that," he said. "That's the sort of impact this is having on the department."

There is "more pressure than ever on us to get as much value as possible for the money we have," Kendall said.

"And that's what our workforce is dedicated to doing, and will continue to do," he added.

Despite Hackers, DoD Retains Faith in Weapon Systems

AMERICAN FORCES PRESS SERVICE (MAY 30, 2013)

Jim Garamone

WASHINGTON—The United States military has "complete faith that our systems are secure and reliable," a Pentagon spokesman said here today.

The military is always concerned about cybersecurity and the chances of losing information to other nations, Army Col. Steve Warren said, but the department has invested a lot of money, time, and expertise in combating this threat.

In a meeting with reporters, Warren discussed alleged hacking that targeted U.S. military weapons systems, but he did not address what programs—if any—were exposed to cyber intrusions. "But we have absolute confidence in our systems," he added. "Suggestions that any of these intrusions have led to an erosion of our capabilities is incorrect."

Further, the spokesman said, there is no fear in the department that intrusions like this are eroding the U.S. military lead over other nations. "Suggestions that our technological edge has eroded are incorrect," he said.

Warren said the department has a program that companies can join to help deter and mitigate these attacks. The Defense Industrial Base Enhanced Cybersecurity Information-sharing Program helps companies and the Pentagon defend American secrets, said Air Force Lt. Col. Damien Pickart, a DOD spokesman specializing in cyber issues. The program has yielded successes in information sharing and in network defense, he said.

"Any company in the defense industrial base can sign a classified framework agreement and voluntarily join this sharing program," Pickart said. "If the company experiences an intrusion or a cyberattack on their systems, they can voluntarily bring that to our attention."

The company shares the signature of the intrusion and details associated with the attack. "We do our forensic analysis of that through the Defense Cybercrime Center," Pickart said.

"Once we looked at what that is, we are able to develop measures that we can then share back to all the companies, and that can help mitigate against future attacks or intrusions from whoever was launching them."

The program started with DOD as a pilot program a few years ago. Today, 85 companies—about half of the defense industrial base—participate in the program. The department and the companies share both classified and unclassified information.

The Homeland Security Department has a similar program that took the lessons learned from the DoD effort and applied it throughout industry, Pickart said.