Lynn: U.S. Must Preserve Its Defense Industrial Base

AMERICAN FORCES PRESS SERVICE (MAY 12, 2011)
John D. Banusiewicz

NEW YORK—Competition, a global defense market, and targeted research and development spending will be critical in preserving the nation's defense industrial base during the slowdown in Pentagon spending, Deputy Defense Secretary William J. Lynn III said here last night.

In keynote remarks at the Intrepid Sea, Air, and Space Museum for the Royal Bank of Canada Defense and Aerospace Conference, Lynn said that because preserving the industrial base's capabilities is crucial, the Defense Department is developing a roadmap to do it effectively in an era of limited funding.

The defense industrial base is a relatively recent development in U.S. history, Lynn said.

"Before World War II, we relied almost entirely on an arsenal system, in which the government designed and produced munitions and weapon systems," he said. "That arsenal system was a corollary to our reliance on mass mobilization—we fought wars and then demobilized. With no large standing army, he added, the nation didn't need a standing military industrial base.

But the risks inherent in the arsenal system became clear during World War I, the deputy secretary noted. "We were not able to produce most of the weapons and the munitions that we needed to fight that war," he said. "We had to rely largely on the British and the French industries to supply our troops."

The paradigm shifted with World War II, Lynn said, as the nation engaged the American industrial base, producing a tide of weapons and material that contributed enormously to winning the war—a development that largely eliminated the arsenal system and created an enduring partnership of science, industry, and the military.

"That partnership has given us the technological edge that we enjoy in battle," the deputy secretary added, noting that the museum where he was speaking—the aircraft carrier *USS Intrepid*—is a testament to America's industrial prowess. Commissioned at the height of World War II, *Intrepid* saw action in the Pacific, Lynn told the audience. It was transformed into an anti-submarine carrier during the Cold War, and its flight deck—the first fitted with a steam catapult—launched planes during the air campaign over Vietnam.

"Our defense industrial base has emerged in the past three generations as a national strategic asset—an asset that is not a birthright and cannot be taken for granted," Lynn said.

"Thousands of firms—some big, others small—equip our military. These firms, their suppliers, and their suppliers' suppliers, are the links in a chain that, if broken, can have outsize impact on our military capabilities."

Today's defense industrial base is more global, more commercial, and more financially complex and competitive than ever before, Lynn said. "A one-size-fits-all policy is not appropriate now for the defense industrial base, if it ever was," he added.

Therefore, Lynn said, he's leading an effort with Ashton B. Carter, under secretary of defense for acquisition, technology and logistics, and Brett Lambert, deputy assistant secretary for industrial policy, to put together a roadmap for ensuring the health of the industrial base as defense spending slows down.

"We're going sector by sector, tier by tier, and our goal is to develop a long-term policy to protect that base as we slow defense spending," Lynn said. The review will inform defense spending and acquisition decisions, he added, and also will determine how the Defense Department views merger and acquisition proposals and activities in the defense industry.

"It will help us ensure that the taxpayers' investment in this industrial base that we've built since World War II is protected," he said.

Three themes are emerging about how to maintain a vibrant industrial base, the deputy secretary said: competition, the global defense market, and targeted spending for research and development.

Noting that vigorous competition in the defense industrial base has provided the armed forces with more reliable equipment and better technology than that of the nation's adversaries, Lynn said normal market forces should continue to shape the defense industry, ensuring it's exposed to 21st century technology, to technological innovation, and to capital markets.

"Not only is this good economic theory," Lynn said, "but it yields the best goods and services for the warfighter."

The deputy secretary recalled the last defense slowdown in 1993, when then-Defense Secretary William Perry called industry leaders to a dinner meeting at the Pentagon—a

meeting that came to be known as "the Last Supper"—to tell them that reduced defense spending would require industry to consolidate to cope with a reduction in demand. The taxpayers, Perry explained, no longer could afford to underwrite the overhead of so many defense firms. In less than a decade, Lynn told the audience, 50 major companies consolidated into six. But a new Last Supper isn't on the horizon, he added.

"We are not looking for further consolidation in the top tier of the defense industrial base," he said. "Fewer major defense suppliers would not strengthen industry, nor would it benefit the government. Indeed, it would really represent a return to something like the arsenal system that we discarded several decades ago for good reason."

But that doesn't mean the Defense Department opposes all, or even most, future consolidations, Lynn said.

Deputy Defense Secretary William J. Lynn III addresses the audience at the Royal Bank of Canada Defense and Aerospace Conference in the hangar deck of the *USS Intrepid* Sea, Air, and Space Museum in New York, May 11, 2011.

DoD photo by Terry Mitchell

"Mergers and acquisitions are a normal response to budget changes, and we should not reflexively oppose this market reaction," he said. "But we will be scrutinizing proposals that come forward to ensure that the government's interests are protected. Adjustments that lead to greater efficiency or innovation will be welcomed. We are seeking to promote strong, well-financed businesses that avoid over-leveraging and poor balance sheets. The intent is to ensure industry emerges stronger after these structural changes."

Meanwhile, Lynn said, the Defense Department intends to use its position as a buyer, its subsidy of research, and its ability to forecast needs to boost investment, competition, and innovation to the maximum possible extent while still allowing market forces to propel the sector forward.

"We are in this for the long term," he said. "We need industrial partners and financial backers who think and act likewise. In this respect, our viewpoint is similar to long-term investment, not short-term speculation. Think Warren Buffet, not Gordon Gekko."

The second theme emerging from the Defense Department's study of the industrial base is the contribution international sales make in stabilizing the defense industry when U.S. defense spending slows, Lynn said.

"To keep our base healthy, it is in our interest for defense companies to compete globally," he explained. However, he said, an "archaic" export control system is impeding that dynamic.

"It was developed during the Cold War in a peer-to-peer competition with the Soviet Union that is long gone," he said. "The Berlin Wall is gone, but many of these export barriers remain."

That system frequently fails in its central purpose of preventing states of concern from acquiring sensitive technologies, Lynn said, and it also makes it difficult for close allies to buy weapons from U.S. companies, even when they're fighting alongside U.S. forces.

"The barriers that we place at this point in the export control system look something like a marriage of the complexity of the Internal Revenue Service with the efficiency of the Department of Motor Vehicles," he said. "It's something we have to change."

While the export control system should build high walls around technologies that truly are sensitive, Lynn said, it also should allow U.S. companies to compete on the global market with technologies that are widely available.

President Barack Obama's administration is working to bring about export control reform, the deputy secretary said. The administration's proposal is built on what officials call "the four singles"—a single export agency, a single tiered list of controlled items, a single coordination center for enforcement, and a single, unified information technology infrastructure.

The president and the secretaries of state, defense, and commerce all are committed to export reform, Lynn said. Related progress in this area, he added, includes passage of defense trade cooperation treaties with the United Kingdom and Australia, which may set an example of how a new export control system might work.

A parallel effort seeks to change policies for technology security and foreign disclosure, Lynn said. "How we transfer sensitive technologies right now is governed by 13 pretty independent processes," he said. "Those processes aren't integrated, they're not synchronized, and as a consequence they often impede our ability to equip our coalition partners."

A corollary of ensuring U.S. firms are competitive abroad is welcoming international firms to the United States, Lynn said. EADS—a European firm—bid on the aerial tanker contract without an American partner, he noted, and a strong competition ensued in which Boeing, an American company, ultimately prevailed.

"But the real winners were our warfighters who got a great tanker and the American taxpayers who saved billions of dollars," he said.

The third theme emerging from the Pentagon's industrial base study is the importance of maintaining a targeted research and development program, Lynn said, noting that although defense spending plunged during the 1970s after the Vietnam War, the Defense Department made sure that promising research and development continued—with stealth technology among the results of that effort.

"Stealth technology—one of our most important advantages today—wouldn't be available at all if it weren't for the careful stewardship during the 1970s," Lynn said. "Today, we need to concentrate on the technologies that we think are going to be influential in the next decade and the decade after." Those technologies include long-range strike systems, unmanned aerial vehicles, and cybersecurity, he said.

"Each of these technology areas will be critical in future conflicts," the deputy secretary said. "We do not yet know the shape they will take. We don't know the precise advantages they will confer. But unless we shield and protect the [research and development] investments and support them now, we're going to deny the future decision makers the opportunity to bring to bear these technologies in our military forces.

As part of his deficit reduction plan, the president has called for $400 billion in reductions to the defense budget over the next 12 years, as well as a fundamental evaluation of America's missions, capabilities, and role in a changing world, Lynn said.

Though these challenges are enormous, he said, the department must take them on while fighting one war, winding down another, and participating in other missions around the world. "The road ahead will not be easy," Lynn acknowledged, but he invoked a favorite saying of Defense Secretary Robert M. Gates: "Difficult is not impossible."

"The challenge for us is to manage this slowdown in defense spending without disrupting the capabilities of the world's most effective fighting force," Lynn said. "The best outcome would be for contractors to continue to earn fair profits for superior performance, the department to get quality products for an affordable price, and the taxpayer to be able to underwrite our security at an acceptable cost.

"I believe such an outcome is well within reach," he continued. "But we need to continue to execute the lessons of making tough choices early, prioritizing now, balancing our reductions, and avoiding precipitous cuts."

Odierno: Services Must Partner to Weather Lean Times

AMERICAN FORCES PRESS SERVICE (MAY 12, 2011)
Lisa Daniel

WASHINGTON—The Defense Department must expand joint service, interagency, and allied partnerships during tight fiscal times, and avoid the pitfalls of "doing more with less," Army Gen. Raymond T. Odierno said yesterday.

"We must avoid the trap of doing more with less, which is a recipe for creating a hollow force," Odierno, the commander of U.S. Joint Forces Command, said at the annual Joint Warfighting Conference in Virginia Beach, Va.

Odierno also said the military services "may have to do less with less," in coming years due to leaner defense budgets and adjusted priorities.

Defense Secretary Robert M. Gates last year directed that Joint Forces Command be closed and that its assets be redis-

tributed as part of his budget efficiencies initiatives. Odierno said there are more savings to be had in the department's budget, especially in eliminating redundancy.

Calling the nation's fiscal crisis "perhaps our primary threat to national security," Odierno said leadership will be more important than ever.

"We must determine the risks to our national security objectives, and then set priorities," he said.

While previous decades have been characterized by expansions across the U.S. Government and those of its allies, the future decade likely will be one of contraction, the general said. It will require greater creativity, more resourcefulness, and sharing cost burdens across joint U.S. forces and their coalition partners, he said.

"We're now forced to make decisions that previously we could avoid," the general said. "We have to have a national security discussion about...what are we going to stop doing?" As the department moves toward tighter budget years, Odierno said, the strength of the military will depend on the makeup of its leaders. Ten years of war has honed highly skilled military officers and a framework of joint services, interagency cooperation, and stronger coalition partnerships, he said.

"Effective leadership today doesn't mean protection of a Service budget, or a particular weapons system," Odierno said. "Effective leadership during strategic uncertainty means navigating painful changes with moral and ethical courage, with physical and mental toughness, with an appreciation for the greater goal of our nation's long-term prosperity and security."

The general called on listeners to encourage young people to stay with the military. "I believe our future depends on our future military leaders," he said. "They will lead us through these difficult times."

Requiring the military services to perform jointly—and also with civilian agencies and coalition partners—is paramount, Odierno said, and is something that should be included in the Services' training and doctrine.

"Coalitions don't just enhance international legitimacy for action," he said. "They also bring valuable perspective, unique capabilities, and assets." NATO's ongoing air campaign and sanctions in Libya are an example of that, he said. Odierno encouraged leaders to take a "whole nation approach" to problem solving in a rapidly changing world of haves and have-nots, where the disenfranchised "now can challenge the status quo at the speed of Twitter."

"Prosperity is not a zero-sum equation. It is in our best interest that every nation has better prosperity and security," the general said. "It's hard to see a move toward peace unless we move to constantly influence it. ... In my experience, partnering in peace is a really good deal in the long run."

Gates Budget Review to 'Force Discussion' of Risk Analysis

AMERICAN FORCES PRESS SERVICE (MAY 18, 2011)
Lisa Daniel

WASHINGTON—Defense Secretary Robert M. Gates today announced the framework for a comprehensive review of military spending designed to put national security needs ahead of arbitrary budget cuts.

"We must reject the traditional approach of applying across-the-board cuts—the simplest and most politically expedient approach, both inside this building and outside of it," Gates said at a Pentagon news briefing. "That kind of an approach preserves overhead and maintains force structure on paper. But it results in a hollowing out of the force from a lack of proper training, maintenance, and equipment. We've been there before in the 1970s and in the 1990s."

President Barack Obama, in an April 13 speech on the nation's fiscal challenges, set a goal of saving $400 billion over 12 years, mostly from the Defense Department and beyond savings already identified. To do that, he directed Gates and other Pentagon leaders to conduct a "fundamental review of America's military missions, capabilities, and security role around the world," Gates noted.

Defense leaders have worked for more than two years to find cost savings in the department, Gates said. The effort began in acquisition, with more than 20 weapons systems being curtailed or cancelled, then moved to cutting overhead costs and redirecting the savings to support warfighters and help to reduce the federal deficit.

"The overarching goal of these efforts was to carve out enough budget space to preserve and enhance key military capabilities in the face of declining rates of budget growth," he said.

The goal of the new review, Gates said, is "to preserve a U.S. military capable of meeting crucial national security priorities, even if fiscal pressure requires reductions in the force's size."

The review will be guided by the National Security Review, the National Defense Strategy, the National Military Strategy, the Chairman's Risk Assessment, and the Quadrennial Defense Review to ensure it is focused on "strategic policy choices, first, and corresponding changes in the DoD budget, second," the secretary said. The director of cost assessment and program review, the under secretary of defense for policy, and Chairman of the Joint Chiefs of Staff will lead the effort jointly, he added.

The review will provide a strong analytical link currently missing between the QDR and the present makeup of the forces, the secretary said. Once competing strategy options are identified, only then should the review consider fiscal implications and options, he said.

Defense Secretary Robert M. Gates and Chairman of the Joint Chiefs of Staff Navy Adm. Mike Mullen conduct a press conference at the Pentagon, May 18, 2011.
DoD photo by Cherie Cullen

The secretary outlined a four-step process for saving money in the department that would start with identifying additional efficiencies to be gained from eliminating bureaucratic excess and overhead. But that alone won't generate enough savings, Gates said, so examiners should then move on to looking at programs, processes, and mandates that drive up costs, "to include the way we deliver health care, compensate military personnel, provide retirement benefits, sustain our infrastructure, and acquire goods and services."

In the third category, officials will review missions and capabilities of marginal scope against overall strategy. "They represent missions that the department carries out today that, while of value, are not central to our core mission or are of lower priority," Gates explained.

Gates cited the long-standing U.S. strategy that calls for the military to be able to fight two major, regional conflicts simultaneously as an example of reviewing strategic alternatives.

"If you were to tell yourself the likelihood of having two such fights simultaneously is low, and you could therefore plan to fight sequentially, that would have huge implications in terms of the size of force that you need to maintain," he said. "But the other side of that is the risk involved if you're wrong."

The final area for consideration—"the hardest category, strategically, and I would say intellectually," Gates said—is to consider alternatives to the QDR strategy that translate into options for reductions in force structure or capability needed to execute the strategy, Gates said. Such consideration would be informed by all the other activities in the framework, he added.

"In the end, this process must be about identifying options for the president and the Congress where the nation is willing to accept risk in exchange for reduced investment in the Department of Defense," Gates said.
No matter what happens in the review process, the secretary said, leaders must make tough decisions and avoid the "hollowing out" of the forces.

"I want to force that kind of discussion," he said. "If we're going to cut the military, if we're going to reduce the resources and the size of the U.S. military, people need to make conscious choices about what the implications of that are for the security of the country, as well as for the operations that we have around the world."

Gates: Defense Cuts Must Be Prioritized, Strategic

AMERICAN FORCES PRESS SERVICE (MAY 24, 2011)
Fred W. Baker III

WASHINGTON—Defense Secretary Robert M. Gates said he is determined that the department not fall victim to the mistakes of the past, "where the budget targets were met mostly by taking a percentage off the top of everything, the simplest and most politically expedient approach both inside the Pentagon and outside of it.

"That kind of 'salami-slicing' approach preserves overhead and maintains force structure on paper, but results in a hollowing-out of the force from a lack of proper training, maintenance and equipment, and manpower," Gates said during a speech at the American Enterprise Institute for Public Policy Research here today. "That is what happened in the 1970s—a disastrous period for our military—and to a lesser extent during the late 1990s."

In delivering his last major policy speech during his tenure as defense secretary, Gates laid out the department's cost saving initiatives over the past few years, and outlined what he expects from a comprehensive review he launched last week.

Gates said the review should ensure that future spending decisions are focused on priorities, strategy, and risks, and are not simply a math and accounting exercise.

Defense Secretary Robert M. Gates addresses the audience at the American Enterprise Institute in Washington, D.C., May 24, 2011.
DoD photo by Cherie Cullen

"In the end, this process must be about identifying options for the president and the Congress, to ensure the nation consciously acknowledges and accepts additional risk in exchange for reduced investment in the Department of Defense," Gates said.

Gates said the analysis will include going places that have been avoided politically in the past, such as re-examining military compensation levels, retirement, pay and pensions, and spiraling health care costs.

The review also will examine force structure—the military's fighting formations such as Army brigades, Marine expeditionary units, Air Force wings, Navy ships, and supporting aviation assets.

"The overarching goal will be to preserve a U.S. military capable of meeting crucial national security priorities even if fiscal pressure requires reductions in that force's size," Gates said.

"I've said repeatedly that I'd rather have a smaller, superbly capable military than a larger, hollow, less capable one. However, we need to be honest with the president, with the Congress, with the American people, indeed with ourselves, about what those consequences are—that a smaller military, no matter how superb, will be able to go to fewer places and be able to do fewer things," he said.

Gates said that in considering cuts, some assumptions that historically have been used to guide defense funding should be questioned.
For example, the assumption behind most military planning since the end of the Cold War has been that the United States must be able to fight two major regional wars at the same time.

"One might conclude the odds of that contingency are sufficiently low, or that any eruption of conflicts would happen one after the other, not simultaneously," the secretary said. "What are the implications of that with respect to force structure, and what are the risks? One can assume certain things won't happen on account of their apparently low probability."

"But the enemy always has a vote," Gates added.

Still, those are the kinds of scenarios the department and U.S. officials need to consider, he said.

"If we are going to reduce the resources and the size of the U.S. military, people need to make conscious choices about what the implications are for the security of the country, as well as for the variety of military operations we have around the world if lower priority missions are scaled back or eliminated," Gates said.

America needs to understand that a smaller pool of forces could mean greater impacts on troops and families, should the United States find itself in another protracted war.

"To shirk this discussion of risks and consequences—and the hard decisions that must follow—I would regard as managerial cowardice," Gates said.

In the end, the secretary said, the tough choices ahead are about the kind of role the American people—accustomed to unquestioned military dominance for the past two decades—want their country to play in the world.

"Since I entered government 45 years ago, I've shifted my views and changed my mind on a good many things as circumstances, new information, or logic dictated. But I have yet to see evidence that would dissuade me from this fundamental belief—that America does have a special position and set of responsibilities on this planet," Gates said.

"I share Winston Churchill's belief, that 'The price of greatness is responsibility ... [and] the people of the United States cannot escape world responsibility.' This status provides enormous benefits—for allies, partners, and others abroad to be sure, but in the final analysis the greatest beneficiaries are the American people, in terms of our security, our prosperity, our freedom," Gates said.
Gates acknowledged that after a decade of conflict, the American people are tired of war.

"But there is no doubt in my mind that the continued strength and global reach of the American military will remain the greatest deterrent against aggression, and the most effective means of preserving peace in the 21st century, as it was in the 20th," he said.

Research, Development Command to Consolidate Headquarters at APG

Dan Lafontaine

ABERDEEN PROVING GROUND, Md.—The U.S. Army is relocating personnel from Fort Belvoir, Va., to APG as part of its force restructuring actions, officials said.

Six military and 76 civilian authorizations from the U.S. Army Research, Development and Engineering Command at Fort Belvoir will be transferred to APG, according to a memorandum issued Aug. 12 from the Department of the Army, Office of the Chief of the Legislative Liaison.

Keith Gordon, RDECOM chief of current plans and exercises, said the effort will consolidate the command's headquarters at APG by Jan. 9, 2011.

Employees who decide not to relocate from Fort Belvoir will have at least 120 days on the Priority Placement Program to assist in finding alternate employment before official separation notices are issued, Gordon said.

Employees accepting relocation to APG will be provided Permanent Change of Station orders and Department of Defense National Relocation Program assistance, Gordon said. DNRP provides relocation services to eligible DoD civilian employees so they may quickly sell their homes and locate housing at their new duty station.

Gordon said personnel from both locations began consolidation planning in January 2009. The official stationing plan request was submitted July 28, 2009, and DoD approved it July 29, 2010. RDECOM Headquarters conducted town hall meetings to keep affected employees informed of developments.

RDECOM Deputy Chief of Staff Todd Morris has assumed responsibility for leading the consolidation effort.

Lafontaine is with RDECOM.

Pentagon Acquisition Chief Talks 'Better Buying Power'

66th AIR BASE GROUP PUBLIC AFFAIRS (JUNE 3, 2011)
Patty Welsh

HANSCOM AIR FORCE BASE, Mass.—The under secretary of defense for acquisition, technology and logistics spoke to the Electronic Systems Center workforce May 25 regarding Defense Department budget challenges, efficiency initiatives, and their impact.

Dr. Ashton B. Carter said the defense budget for the next decade will not be similar to the past 10 years, and implementing efficiencies will be up to everyone.

"Supporting the ongoing fight is job one for all of us," he said. "Job two is to get the best value for the taxpayer and the warfighter."

During the town hall meeting, Carter spoke about cutting programs that were performing poorly or weren't needed.

Now, cost savings need to be found in remaining programs, he said.

"What we have is what we want and need, and we need to complete them and we need to make that happen ... for not more money every year," he said.

He discussed the points of the "better buying power" guidance he put out in September 2010 and also the usage of contract types.

Using fixed price incentive firm contracts is "not dogma," Carter said. "It applies only if we know what we're doing, it isn't going to change, and the contractor knows the projected cost and has mastered the process."

He said contracts are business deals with contractors. The contractors should know if they don't perform, their contract dies. And those who are performing well should be rewarded.

He also highlighted competition, including sole-source contracts by comparing them to a marathon runner who is only looking to beat the clock.

"The contractor should be looking for follow-on business and reputation," he said.

Knowing what a program's requirements are is also important for success, Carter said. There needs to be a rapport between requirements and acquisition, and if acquisition personnel see an opportunity to save money or change the way things are done to improve, they need to ensure they have that relationship with the customer.

Dr. Ashton B. Carter, the under secretary of defense for acquisition, technology and logistics, speaks to Air Force Lt. Gen. Ted F. Bowlds and other senior leaders during a round table discussion May 25, 2011, at Hanscom Air Force Base, Mass. Bowlds is the Electronic Systems Center commander.
U.S. Air Force photo by Rick Berry

"Program managers should have a deep understanding of the product," the under secretary said, while admitting that the systems engineering capability is not as strong as it should be in the DoD. "I know you are doing a lot with less than you should have."

Carter made it a point to say the acquisition workforce had been cut too much previously, on both the civilian and military sides, and both he and Air Force Principal Deputy Assistant Secretary for Acquisition David Van Buren would be keeping a close eye on acquisition personnel numbers.

"You are a very important part of meeting this national challenge," he told the audience.

Acquisition Office Focuses on Information Gathering

AMERICAN FORCES PRESS SERVICE (JUNE 6, 2011)
Lisa Daniel

WASHINGTON—When senior Defense Department leaders sit down to make tough policy decisions on major acquisition systems that inevitably get the attention of everyone from the secretary of defense to Congress and the president, they rely on the work of a small office of public servants here who are quietly changing the paradigm on information gathering.

"It's work that doesn't seem that sexy, but it is fundamental to the foundation of the department," Mark E. Krzysko, deputy director of Enterprise Information and Office of the Secretary of Defense Studies, said in a June 2 interview with American Forces Press Service.

Krzysko had just completed a presentation at the Association for Enterprise Information Emerging DoD Information Platforms Conference here, held in the same defense industry complex of high-rise office buildings as his, a couple miles south of the Pentagon.

It's a niche field in which discussions are laden with terms such as "service-oriented architecture," "semantic technologies," and "agile methodologies." But before the technical talk begins, Krzysko reminds his colleagues of the end users of the major systems for which they collect data.

The second slide in his PowerPoint presentation shows two soldiers standing with three Afghan children, and a second photo of a remembrance to a fallen U.S. servicemember.

"Remember those who serve; remember those who made the ultimate sacrifice," he said.

Enterprise Information and OSD Studies began as a pilot program that was chartered in the Pentagon's acquisition office in 2008. It falls under the purview of Nancy Spruill, director of acquisition resources and analysis. Its beginnings can be traced to the mid-1980s when the department began working to develop standard protocols for data sharing between government and industry.

EI's specific charge is to compile information on major acquisition programs quickly and with consistent metrics and protocol, Krzysko said.

In the past, leaders could get inundated with insufficient information developed by multiple sources with different methodologies, Krzysko said. In today's environment of asymmetrical threats and uncertain budgets, leaders need the right information quickly, he said.

"If we create an organization that can tackle these problems, we are in a better position to help those who serve," he said. "You could confound yourself with more information, but it's about getting the right information quickly."

Defense Secretary Robert M. Gates has directed that any budget cuts be done through careful risk analysis, not the kind of across-the-board cuts that have led to past "hollowing out" of the military. The department identified $78 billion in savings over five years through the efficiencies initiative Gates announced last summer. That review began in acquisition, with at least 20 systems being curtailed or cancelled. President Barack Obama has since asked that DoD leaders look for an additional $400 billion in savings over 12 years, making Enterprise Information's work that much more critical.

With a focus on the development and demonstration phase of acquisition programs, the Enterprise Information office works to reply to requests for information in weeks or months, not years, and provides monthly reviews of major systems covering some $1.7 trillion, Krzysko said.

Defense leaders "decide which side they want to push on," he said. "They tell us what their priorities are, and we go after it."

The office has been breaking some of the historical paradigms of gathering and using information, not just in the federal government, but also in industry, Krzysko said. It uses more than 180 data points—and is on its way to increasing to 700 data points—to measure the value of dozens of programs by looking at areas such as the science and technology, ability for sustainment, how it is administered, and its ability to meet milestones, he said.

"The end-game for us is about getting the decision makers the best information they can have," he said. "Information is never really perfect. But if you have that authoritative information, you are better able to make those decisions.

"I really view this as a core capability," he added.

DoD Aims to Streamline Foreign Military Sales Program

AMERICAN FORCES PRESS SERVICE (JUNE 13, 2011)
Donna Miles

WASHINGTON—The Defense Department is streamlining the way it administers the foreign military sales program, including testing a concept to get pre-approvals for requests for high-demand technologies such as unmanned aerial systems, the director of the Defense Security Cooperation Agency said June 10.

Navy Vice Adm. William E. Landay III oversees DoD's execution of the State Department program that has delivered more than $96 billion in defense weapons systems, equipment, and services to other countries and international organizations in the last five years.

Foreign military sales have averaged $30 billion for each of the last three years, up almost three-fold from the 2005-2008 timeframe, Landay said. In addition, many customers who once were willing to forego fast delivery to keep the bottom line as low as possible now want their goods and services as fast as possible, often to support current operations.

"This is a different environment," Landay said. "What we need to do is make sure that the foreign military sales system we are operating is changing with that environment, and preferably, changing ahead of that environment so we can continue to support our customers."

DSCA is giving its FMS processes a top-to-bottom review to make it improve processes and make it more flexible and responsive to customer needs, he said.

Among 11 core initiatives under way, one involves working with interagency partners and customers at the front end of the process to shape foreign military sales purchase requests before they're made. Something as simple as getting customers to request technologies that already have been

developed, rather than still in the pipeline, can go a long way toward speeding up delivery, Landay said.

Another DSCA initiative seeks to apply a more systematic approach to processing requests for the most sought-after technologies, including unmanned vehicles and unmanned aerial systems. Instead of processing countries' requests in succession, Landay said, the idea is to make broader foreign military sales decisions early on, before the purchase requests ever come in.

"Can we, in advance of getting lots of technology requests, sit down and make a determination of what kinds of vehicles and capabilities we might be comfortable releasing before the countries even ask us for it so we know the answer?" he asked. "If we are going to release a capability to Country A, what other countries might we be willing to release it to? And why don't we take all of them through the process at the same time, so that when those subsequent countries come in [with requests], we have already made a determination of 'yes' or 'no' to that."

Foreign military sales isn't a one-size-fits-all program, Landay noted, as the United States sells different levels of technology to different countries. But by determining in advance what level of capability it is willing to sell to what specific countries, the entire process can be speeded up, he explained.

Another initiative DSCA is exploring involves buying some of the highest demand foreign military sales items in advance so they're available for delivery on request. "From our view, the fastest way to speed up the acquisition process is to already have [the equipment] in the warehouse," Landay said. Pre-stocking obviously won't work for major sales involving aircraft and ships, he acknowledged, but could be the solution to expediting deliveries of sought-after equipment such as night-vision devices, body armor, vehicles, and radios.

DoD already has the authorities needed to use foreign military sales funds to pre-stock this type of equipment. What's lacking, but what the fiscal 2012 defense budget request could provide, is the funding mechanism to support the process, the admiral said.

"If Congress approves the authority to expend the funds, next year we will stand up the [special defense acquisition fund] and start to buy for that," Landay said. "I think that will have a significant improvement in our ability to respond to requests."

Landay said these and other improvements being pursued at DSCA show major promise for the foreign military sales program. "The idea is to get what the customers have asked us to do: to be not just faster, but more flexible and more responsible," while continuing to maintain the controls built into the program, he said.

Ultimately, a successful foreign military sales program supports U.S. national interests, he explained.

"As a country continues to strengthen its ability to defend its borders, to protect itself and potentially, to operate with partners in the region or with the U.S., all of that strengthens the U.S. from a security perspective," he said. "When there is security in a region, that benefits the entire world. And when and if we were to have to operate together, [and] countries ... have the ability to operate well with the United States, that benefits both of us."

Landay called the foreign military sales program key to U.S. relationship-building efforts around the world.

He pointed to the example of Egypt, a strong U.S. partner with a long history of buying U.S. military technology through the program. As Egypt underwent political turmoil earlier this year, military-to-military communications paths with the United States remained strong, he said.

"Part of that was built on a longstanding foreign military sales relationship and program between the Egyptians and the United States," Landay said. "While built on foreign military sales, it also established those relationships [and] those partnerships so that when other things came up, we at least had the ability to pick up the phones and talk to each other."

Army Embracing 'Should-Cost' Approach to Weapons Acquisition Programs

ARMY NEWS SERVICE (JUNE 15, 2011)
Kris Osborn

WASHINGTON—The Army is working to drive productivity growth, maximize efficiency, and eliminate redundancy through an approach called "Should-Cost/Will-Cost" management, Service officials said.

The push to implement the new approach to acquisition came as guidance from Ashton Carter, under secretary of defense for acquisition, technology and logistics.

"Doctor Carter is challenging program managers to drive productivity improvements into their programs during contract negotiation and program execution," said Heidi Shyu,

the acting assistant secretary of the Army for acquisition, logistics and technology.

Shyu said the approach involves scrutinizing every element of government and contractor costs.

The "Should-Cost/Will-Cost" approach is grounded in an effort to lower costs and improve affordability within acquisition programs by increasing scrutiny and targeting areas of potential cost reduction. Carter's guidance to the Services stresses the need to reduce overhead costs where possible and increase the measure of analysis given to programs.

"I will require the manager of each major program to conduct a Should-Cost analysis, justifying each element of program cost and showing how it is improving year by year or meeting other relevant benchmarks for value," wrote Carter in a Sept. 14, 2010, Memorandum for Acquisition Professionals.

Carter went on to say that managers should be driving productivity improvements in their programs, and should be scrutinizing every element of program cost to determine what elements can be reduced relative to the year before.

Because of the guidance, each program manager must now provide a "Should-Cost" estimate, designed as an internal management tool for incentivizing performance.

The "Should-Cost" estimate will then be compared and measured against the "Will-Cost" estimate, described as the official program position for budgeting, programming, and reporting.

"By January 1, 2012, all ACAT I, II, and III programs will have milestone decision authority-approved 'Should-Cost' execution targets," Shyu writes.

The goal of the approach is to improve business practices and increase efficiency in contracting and acquisition program management.

"Program managers must begin to drive leanness through 'Should-Cost' management," Shyu said.

Program managers have historically argued that they could bring certain elements of a program in for less cost compared to independent cost estimates developed by outside organizations, said Cherie Smith, who directs the ASA(ALT) performance assessment and root cause analysis directorate.

"It doesn't take a crystal ball to see that we are going to be expected to do more with less," Smith said. "Within the established financial boundaries, Miss Shyu's goal is to incentivize our PMs by allowing them the ability to use these savings to lower risk in other areas of their program."

Along with mandating affordability and establishing a "Should-Cost" management approach, additional elements of the Army effort to implement Carter's guidance include initiatives to eliminate redundancy within warfighter portfolios, make production rates more stable and economical, and set shorter time lines to manage programs.

Army Contracting Command Transfers to Redstone Arsenal

Army Contracting Command Public Affairs Office (June 16, 2011)

REDSTONE ARSENAL, Ala.—The U.S. Army Contracting Command and its subordinate Expeditionary Contracting Command marked the official transfer of their headquarters to Redstone Arsenal with a command flag uncasing ceremony today.

The headquarters moved to Redstone Arsenal from Fort Belvoir, Va.

"This is a very important next step for ACC and ECC," said Jeff Parsons, ACC executive director. "It not only signals the physical change of our headquarters operations, it's another significant milestone in our growth as one of Army Materiel Command's major subordinate commands."

During the ceremony, Parsons commended employees for their part in growing the organization in such a few short years.

"We've really matured as a command, bringing in more than 800 employees across the command and doubling our number of soldiers," Parsons said. "We did all of this while still focusing on the quality of our daily contracting efforts. It's amazing what we've accomplished over the last three years."

Parsons also expressed his gratitude to the Huntsville community for the way it welcomed the command and its employees. He stated how impressed he was to see many people willing to relocate to Huntsville, claiming that was a testimony to what the community has to offer for individuals and families.

About 60 percent of the ACC headquarters staff is on hand at Redstone; ECC has approximately 40 percent of its staff here. Once the transition is complete this summer, about

350 soldiers and civilians will be working in the two headquarters.

The Army activated ACC in March 2008. ACC's mission is to provide global contracting support to warfighters through the full spectrum of military operations. Along with its two subordinate commands, the ECC and the Mission and Installation Contracting Command headquartered at Fort Sam Houston, Texas, ACC's 5,500 military and civil servant workforce operates at more than 115 locations worldwide, including contingency contracting operations supporting U.S. forces in Afghanistan, Iraq, Kuwait, and Qatar. If a soldier shoots it, drives it, communicates with it, wears it, or eats it—ACC contracts for it.

Gates Details Efforts to Change Pentagon Culture

AMERICAN FORCES PRESS SERVICE (JUNE 23, 2011)
Jim Garamone

WASHINGTON—When he first took office, Defense Secretary Robert M. Gates had no intention of changing the culture of the Defense Department. He was focused almost exclusively on the war in Iraq.

During his two years with the Bush administration, he did tee up "broader issues that needed to be addressed by my successor, and punted those to my successor," Gates recalled. But he found himself on the receiving end of those punts, he said, when President Barack Obama asked him to stay on as defense secretary.

"The major, more dramatic steps that I took during the first term that went after the institution were really to just try and get things to the troops," Gates said.

This started with the wounded warrior issue at Walter Reed Army Medical Center here and then the mine-resistant, ambush-protected vehicles needed to protect deployed troops from roadside bombs. He also pushed to improve battlefield medical evacuation and to get more intelligence, surveillance, and reconnaissance capabilities into the combat theater.

"But I became increasingly frustrated during that period with the inability to get any of those things done within the usual organization," the secretary said. He began thinking about what needed to be fixed, how to build more agility in the system, how to make people more realistic, and how to impose more discipline in what the department buys.

"So that really teed up the agenda, once I was given renewed lease to begin tackling these broader issues," he said.

So he went after the culture in the Pentagon, particularly the part of it that developed over 10 years of having an open checkbook.

"I knew it was going to slam shut, because we already in 2008 were in economic crisis, and it seemed evident to me that there were going to be pressures on the defense budget," Gates said. "It seemed to me that in order to preserve the money for current needs and future modernization, we had to be very disciplined about looking at the programs that we had."

Again, it began with questions: Are these programs working? Did they have any prospect of working? Did the original concept of how to use them make sense any longer? Could they be sustained?

"That led to the 33 initiatives in April 2009," the secretary said. "Next, it was, how can we begin to reduce overhead and be more disciplined in our spending to ensure that the tooth part of the Pentagon got the 2 to 3 percent real growth that it absolutely requires?"

When Obama handed down direction for the Pentagon to find $400 billion in savings over 12 years, it caused further soul searching in the building. Gates wants these cuts done very specifically with the realization by all parties that "salami cutting"—percentage cuts across all activities—would mean hollowing out the force.

Gates ordered a comprehensive review of the department to find these cuts in the least damaging way. He said that any cuts involve tradeoffs between acceptable risks and defense capabilities that could be sacrificed.

"I am determined that we will not repeat what we did in the 1970s and, to a lesser extent, in the 1990s, which is across-the-board cuts that end up hollowing out the force," he said.

Changing the culture continued by creating a new process for input from the Services and combatant commanders, Gates said. He moved away from a semiannual meeting of defense leaders to more frequent discussions.

"The combatant commanders believed their concerns were not paid attention to by the Services," he said. "The key here was to bring the team together and get on the same page with the senior civilians and all the senior military leadership—not just the chiefs, but the combatant commanders—so all had an understanding of what we had to do and why we had to do it."

Their regular involvement in the process changed the dynamic inside the building, the secretary said. "They had input into the process regularly," he said, "and I think that's one of the reasons the internal discipline was so extraordinary during this period."

It was highly unusual when Gates had all senior leaders involved in fiscal discussions sign nondisclosure agreements in the spring of 2009. "But the truth is I never had to have them sign them after that," he said. "They understood that we were all in this together, but they, being involved in the process and knowing they had a way to make their views heard, contributed.

"If there has been a cultural change," he added, "it has been the internal cohesion across the Services and between the uniforms and the civilians as we move this forward that is really quite profound."

Accountability is another hallmark of Gates' tenure in the Pentagon. When conditions for wounded warriors at Walter Reed Army Medical Center shocked America, Gates relieved the Army secretary, the Army surgeon general, and the hospital commander. When an Air Force B-52 mistakenly carried nuclear weapons from Minot Air Force Base, N.D., to Barksdale Air Force Base, La., he relieved the Air Force secretary and chief of staff.

"It's pretty rare anywhere in Washington for someone at a senior level to be held accountable and to be held responsible, because they rarely lost their jobs," the secretary said. "It certainly got everybody's attention at a senior level."

Lynn Speaks on Advanced Manufacturing at Carnegie Mellon

AMERICAN FORCES PRESS SERVICE (JUNE 25, 2011)
Karen Parrish

WASHINGTON—Deputy Defense Secretary William J. Lynn III gave the defense perspective on advanced manufacturing yesterday while attending the launch of the Advanced Manufacturing Partnership at Carnegie Mellon University in Pittsburgh.

President Barack Obama created the partnership to bring together industry, universities and the federal government to invest in the emerging technologies that, according to a White House statement, will "create high-quality manufacturing jobs and enhance our global competitiveness."

The president's plan, which leverages existing programs and proposals, will invest more than $500 million to jump-start this effort, bringing together leading universities and companies to invent, deploy and scale these cutting-edge technologies.

In his remarks at the event, Lynn said the history of advanced manufacturing in the Defense Department can be told through three individuals: the inventor Eli Whitney, former Lockheed Martin CEO Norman Augustine, and Regina Dugan, director of the Defense Advanced Research Projects Agency.

Before Whitney had success with the cotton gin, the deputy secretary said, he went to Congress in 1801 with a proposal to build muskets with interchangeable parts.

Whitney took 10 muskets to Congress, disassembled them, and threw all of the parts in a pile, Lynn said.

"And then he reassembled them, with different parts constituting each new musket," he added, "something that had never before been done. Congress was impressed.

"Eventually, the Department of the Army issued a contract for 10,000 new muskets to be built using this method," he continued. "It was one of the first widespread uses of standardized parts, and it contributed enormously to the advance of manufacturing in the United States."

In 1984, Augustine published a book called *Augustine's Laws*, which Lynn said is well known in defense circles.

One of the laws charted the cost increase in high-performance jets and tactical aircraft against the increase in the defense budget, Lynn said, noting the lines crossed in 2054.

"What that meant was that in 2054, we would have to spend the entire defense budget to buy one airplane," he said. "He observed that we could work this out. The Navy would get it for three days a week, the Air Force for three days, and the Marines would have it on Sundays."

Costs have continued to rise at roughly the rate Augustine predicted, Lynn said, noting much of the reason is the time it takes to design and approve new equipment.

"The time horizon of design and development is increasing at a similar pace," he said, "which brings us to Regina Dugan, the current director of DARPA."

Under Dugan's leadership, DARPA has focused on an advanced manufacturing effort that uses integrated circuits manufacturing as a model for open design and configurable

foundries, Lynn said, leading to the ability to crowdsource design.

"Altogether, we think this can significantly speed up the manufacturing timeline—on the order of dividing it by a factor of five," the deputy secretary said. "That is to say we could do it five times as fast, which could yield enormous cost savings."

Lynn said the pilot of a vehicle DARPA built in less than 90 days was on display at yesterday's event.

"This is a pilot, not yet a complete vehicle," he said. "But for DoD, this pilot has the ability to undo *Augustine's Laws* and yield advances in manufacturing equivalent to what Eli Whitney ushered in during the early 19th century."

The department will continue to work as part of the Advanced Manufacturing Partnership, Lynn said, to "develop this approach to manufacturing for DoD and to understand its broader implications for U.S. manufacturing."

Ashton B. Carter, under secretary of defense for acquisition, technology and logistics, speaks at the 2011 Defense Logistics Agency Industry Conference and Exhibition in Columbus, Ohio, June 28, 2011. The conference brings DLA employees together with industry representatives, stakeholders, and customers.
DoD photo by Chuck Morris

Carter: Logistics Community Must Do More With Less

DEFENSE LOGISTICS AGENCY
STRATEGIC COMMUNICATIONS OFFICE (JUNE 29, 2011)
Sara Moore

COLUMBUS, Ohio—The Defense Department's budget landscape is changing, but the logistics community must continue providing U.S. troops the best possible support while finding efficiencies and cutting costs, the Pentagon's top logistics official said here yesterday.

Defense logistics' top priority always will be providing the best possible support to warfighters in the field, Ashton B. Carter, under secretary of defense for acquisition, technology and logistics, told attendees at the 2011 Defense Logistics Agency Industry Conference and Exhibition.

Carter said he'd just returned from an eight-day trip to Afghanistan where he focused on rapid acquisition support, contracting and logistics. DLA accomplished a "true miracle" in supporting the troop surge into Afghanistan last year, he said, and it now must focus on ensuring the force there remains capable as troops withdraw.

"Our overall objective must be to make the force there, which is going to be somewhat smaller over the next year, nevertheless more capable than the force that has been in Afghanistan this past year," Carter said.

To ensure forces in Afghanistan remain capable, the defense logistics community is looking at several initiatives, such as providing more enabling technologies to enhance intelligence, surveillance, and reconnaissance and counter explosives. They also are looking at providing more reachback capability as a substitute for military support on the ground, and strengthening Afghan security forces so they can take on more responsibility.

DoD also is focusing on building up logistics in Afghanistan to eliminate transportation costs, and ensure contracting money is spent responsibly there with a focus on its effect on local Afghan communities and culture, Carter said.

While support for warfighters in Afghanistan and other areas around the world is the first priority for the defense logistics community, logisticians also must focus on the changing budget landscape and find ways to increase efficiency while maintaining performance, Carter said.

"Two things are clear," he said. "First, we're not going to have the ever-increasing budgets of the post-9/11 decade. This is going to feel very different to a group of government and industry managers and congressional overseers who have grown accustomed to a circumstance in which they could always reach for more money when they encountered

a managerial or technical problem or a difficult choice. Those days are gone for all of us.

"The second thing is, the president, the secretary of defense, and the taxpayer are going to expect us to make every dollar we do get count," he added.

About $400 billion of the $700 billion defense budget is spent on contracted goods and services, Carter said, and the defense logistics community is looking at how to reduce costs. The department already has made cuts by eliminating underperforming or unnecessary programs like a new presidential helicopter and the Army's Future Combat System, he said, and now it must find ways to reduce costs in other areas.

"If you're really going to deal with a circumstance in which you want to have the same capability or as much military capability as we can, [then] just as we're trying to do in Afghanistan, in the budget as a whole, you have to look at everywhere we're spending money and try to get better value everywhere that we're spending money," Carter said.

Of the $400 billion spent on contracted goods and services, about $100 billion goes to procuring weapons systems and $200 billion goes to services, Carter said. Also, for every 30 cents the department spends on buying something, it spends 70 cents maintaining it.

When it comes to contracting services, the department is improving practices to get better value, unifying efforts, improving requirements, and taking advantage of competition, Carter said.

Officials also are looking to save money by sustaining existing systems, such as the F-22 Raptor fighter and the C-17 transport plane, and finding how to best manage those costs while looking ahead to future systems and planning for their total ownership cost, Carter said.

The F-35 Joint Strike Fighter is a prime example, he said, because it is the department's largest and most expensive program and one that will be around a long time.

"To the extent that we can do it, we are planning now and managing now to not only have an affordable aircraft to acquire, which is also a challenge, but also an affordable aircraft to own when we do get it," he said.

The department looks to save money while maintaining quality support and looking for improvements and innovations, Carter said. He added that small businesses will be an important partner because they offer a constant source of renewal and innovation, increase competition, and make valuable contributions in the customer service area.

"A strong, technologically vibrant and financially successful defense industry is in the national interest," he said. "We need, collectively, to be stewards of that industry so it remains vibrant for the future."

There is no doubt that increased efficiency is the way of the future for DoD and the government as a whole, Carter said, and the defense logistics community is working to adapt while ensuring America's military receives the best support possible.

"The world's changing; the budget landscape is changing," Carter said. "We in DoD are trying to change. I know industry's changing also. The only thing that doesn't change, and I saw again and again last week in Afghanistan, is the dedication and quality of the men and women in uniform, and we owe them our best dedication back."

Army/Boeing unveil new defensive vehicle

ARMY NEWS SERVICE (JULY 1, 2011)
Jason B. Cutshaw

HUNTSVILLE, Ala.—The future is pointed forward like a laser as researchers find ways to support and defend the fighting men and women of America and its allies.

On June 27, Boeing and members of U.S. Army Space and Missile Defense Command/Army Forces Strategic Command came together to show their support for the Army's High Energy Laser Technology Demonstrator (HEL TD).

"We are very excited to be partnering with the Army on this program," said Dr. Greg Hyslop, Boeing Strategic Missile and Defense Systems vice president and general manager. "We believe that directed energy really is the next leap forward in weapons systems for the United States. Once we have harnessed the precision and power, it is going to give our warfighters a tremendous advantage."

Boeing recently completed system integration of key components for the HEL TD which included installation of the Beam Control System and critical hardware onto an Oshkosh Heavy Expanded Mobility Tactical Truck vehicle platform.

The system consists of mirrors, high-speed processors and high-speed optical sensors.

The HEL TD program's objective is to demonstrate in a relevant operational environment that a mobile solid state laser

The Army's new High Energy Laser Technology Demonstrator. In July 2007, U.S. Army Space and Missile Defense Command/ Army Forces Strategic Command. awarded a contract to Boeing to begin developing the initial phase for a truck-mounted laser weapon system that destroys rockets, artillery shells, and mortar rounds. The Beam Control System mounted on the vehicle will go through initial testing and characterization at White Sands Missile Range.

Photo by Jason B. Cutshaw

weapon system can provide an effective mission capability to counter rocket, artillery, and mortar projectiles.

Testing will take place at the Army's High Energy Laser Systems Test Facility (HELSTF) at White Sands Missile Range, N.M.

"I want to thank the government and contracting team for their outstanding performance in designing, fabricating, and integrating the High Energy Laser Technology Demonstrator," said Dr. Michael Lavan, Emerging Technologies Directorate, USASMDC/ARSTRAT Technical Center director. "We have taken a major step toward providing our warfighters a truly game-changing counter rockets, artillery, and mortars vehicle."

HEL TD is a cornerstone of the Army's high-energy laser program and will support the transition of directed energy technologies to Army acquisition programs. Soon the HEL TD will prepare for testing at White Sands Missile Range, N.M. The tests will demonstrate the system's ability to acquire, track, and target moving projectiles.

In operation, HEL TD will acquire, track, and select an aim point on a target. The system will receive the laser beam from the HEL TD laser device, reshape and align the beam, and then focus it on the target.

"This is a huge deal," said Mike Rinn, Boeing Directed Energy Systems vice president. "This represents about four years of hard work by the government and the Boeing team to build this demonstrator, but it also represents decades of technology maturation. It gives our warfighters an advantage with speed-of-light weapons, precise pointing, and the promise of a potentially endless magazine.

"The design of this demonstrator is to do counter rocket, artillery, and mortars, which it gives you an alternative to the kinetic ways to do that now with bullet against bullet," he added. "The advantages will be astounding."

HEL TD is a cornerstone of the Army's high-energy laser program and will support the transition of directed energy technologies to Army acquisition programs.

Funding and technology support for the Army's high energy laser program elements have been provided by the office of the assistant secretary of the Army for acquisition, logistics and technology and the High Energy Laser Joint Technology Office.

Cutshaw is with the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command.