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MOORE'S LAW GOES TO WAR:  
HOW CAN THE DEPARTMENT OF DEFENSE KEEP PACE WITH CHANGES IN IT?

Washington, D.C.

Tuesday, June 10, 2014

**Moderator:**

IAN WALLACE  
Visiting Fellow in Cybersecurity  
The Brookings Institution

**Panelists:**

JACQUES GANSLER  
Director, Center for Public Policy and Private Enterprise, School of Public Affairs  
The University of Maryland

TOM SISTI  
Senior Director and Chief Legislative Counsel  
SAP America

JON ETHELTON  
Senior Fellow  
National Defense Industrial Association

LT.COL. DAN WARD, USAF  
Author, *F.I.R.E.: How Fast, Inexpensive, Restrained and Elegant Methods Ignite  
Innovation*

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ANDERSON COURT REPORTING  
706 Duke Street, Suite 100  
Alexandria, VA 22314  
Phone (703) 519-7180 Fax (703) 519-7190

MR. WALLACE: Hello and welcome on behalf of Brookings Center for 21st Century Security and Intelligence. My name's Ian Wallace. I'm a visiting fellow here at the Center.

The question we're here to discuss today is how the DOD acquisition process is coming to terms with the information revolution. And just by way of illustration, one interesting fact that I came across in my research, which I think illustrates this point well, is the fact that in 1997 the world's fastest supercomputer was owned by Sandia National Labs and was used for modeling nuclear weapons. Yet just nine years later, another computer was released with the same speed and that was the PlayStation 3. And that was four or more cycles ago, so a sense of how fast things are moving.

Equally the challenges of defense acquisition are well documented, but changing that system is not easy. And there are some very good reasons why Congress would want to hold the government to account for the billions of dollars that are spent each year on buying and sustaining equipment. But, nevertheless, those rules or at least the way that they're implemented start to look less sensible if they're perceived as getting in the way of keeping our warfighters competitive on the battlefield. And that is certainly a perception that is growing about the way in which acquisitions working at least in regard to information technologies.

Now, it's not a new problem and as we shall see and some of our panelists have been dealing with this challenge for well over two decades, but, and I think this is the key point, there's a growing sense that the pace of change is achieving an urgency due to the exponential rate of technological progress that can't be avoided. And exacerbating that are a number of additional challenges; first of those is globalization of the technology market, which is making it a global market for the U.S.'s commercial technology companies -- good for them, more challenging for the DOD as its buying

power is reduced.

Second challenge perhaps is the defense budgets are under pressure, which potentially creates a more risk-averse approach, potentially the budget's not under enough challenge to necessitate really true innovation, and that's something we might discuss.

And third, with the end of the wars in Iraq and Afghanistan, we may be seeing a shift away from rapid acquisition and some of the roots which have been used to mitigate some of this challenge in the past. And there are obviously other trends operating in this area.

However, along with these challenges there are clearly some real opportunities. We have a Department of Defense, which is open to change, and we'll hear more from Andrew about that in due course. But as we also heard on this stage in April, we have a growing momentum on the Hill where Representative Thornberry of the House Armed Services Committee is looking for new ideas to put into the next year's defense authorization bill; and particularly in doing that, recognizing the particular place of information technologies within that.

So without looking too deeply into some of the woes of defense acquisition, what I want to do today is look forward at some of the ways in which we can channel these positive opportunities to address the very clear issue of technological change and how that's impacting on defense.

We have a fantastic panel to discuss these issues. You have their bios. I'm not going to go into great detail. Just very quickly, running from your left to your right, Jon Etherton who as well as running his own company, he is a senior fellow at the National Defense Industrial Association, the man in charge of pulling together the strands of what could go into a new bill on the Hill. He is himself a Senate Armed Services staffer

in the past and has been deeply involved as an acquisition reformer in that capacity over many years.

Next to him we have Tom Sisti, now a senior director and chief legislative counsel at SAP, a technology company, but he also has a background on the Hill on both the Senate side and the House side involved in the defense reform effort, so the 1990s including the '94 Federal Acquisitions Streamlining Act.

Third, we have Jacques Gansler who's been involved in defense acquisition issues for many, many years right back to the Packard Commission I believe and was Under Secretary for Acquisition, Technology, and Logistics towards the end of the Clinton Administration; now teaches and writes at the University of Maryland, including some of the more insightful and well-informed critiques of the current system.

Fourth, we have Lt. Col. Dan Ward who's a serving member of the U.S. Air Force, program manager for experimental radar systems. He is the author of a book, which I have here, "*F.I.R.E.: How Fast, Inexpensive, Restrained and Elegant Methods Ignite Innovation.*" And he is famously the person who describes the DOD's acquisition system as the empire in *Star Wars*.

So next to him, representing the empire, we're pleased to have Andrew Hunter, currently the director of the Joint Rapid Acquisition Cell, but relevant to this discussion the man charged by Under Secretary Frank Kendall with revising the 5000.02 acquisition guidance suggesting ideas for Congress about what they can do to help DOD do its business more effectively.

Just a quick word on format and we're going to hear from each of the panelists in turn and then I'm going to ask some questions and then I will open it up to the floor and that should take us through roughly an hour and a half.

So to kick us off, I'd like to begin by asking Jon Etherton to set some

context for us. Jon, you're in a fantastic position to look at where we've come from and where we're now at and including where industry would like us to go. And to bring us back to our theme, I'm particularly interested to hear some of the sort of unique ideas that may be relevant to the IT world.

MR. ETHERTON: Sure. Thank you, Ian. Let me sort of set the stage by talking a little bit about the state of "acquisition reform" as people are looking at it right around this time.

We've been in a position I think -- Congress tends to run and the department tends to run in cycles that occur about every ten to 12 years if you go back and look at history. We're really actually coming off of a cycle that started about 2005 or 2006 in which Congress became more and more engaged in mandating various things on the acquisition process at the Department of Defense, as well as doing oversight and raising a number of issues.

I would say that from where I sit and my view is a lot of the things that we saw in the approaches really had to do with restoring the Department of Defense's capabilities in acquisition, trying to take back a lot of the specific functions that folks on the Hill felt had more and more drifted toward industry, and they were concerned about the ability of the department to actually control the process and really oversee decision making. And as a way of setting up a number of different steps, milestones, capabilities, within the acquisition community in the department, I think the idea has been all along that by doing those kinds of things we'll get better outcomes. I think probably the quintessential piece of legislation that reflects that philosophy in many ways is the Weapons Systems Acquisition Reform Act, which Congress passed as independent legislation in 2009. And a number of themes that I mentioned -- restoring the workforce, basically rebuilding capabilities on systems engineering, cost estimating, testing, and that

sort of thing -- and to really have the department in a position where they can more effectively assume actually integrating functions that in the past probably ten years or 12 years or so had really more and more drifted toward industry.

I think we're already starting to see some good results from a lot of those efforts, at least in the major defense acquisition program arena. And I think GAO and other studies have documented some of that. But now we're in a position where we're starting to look at it in a little bit of a different light.

With the budget cutbacks, I think there is continuing to be a focus on outcomes, both on major programs and services and IT and whatever. But folks are now starting to ask the question if we can actually afford the process itself that we currently have. And so now we're starting to look at the interaction between the process, the outcomes that we're trying to achieve, and what costs we're going to have to pay to get there as people look at a very austere budget environment in the next few years.

So we're in a little bit of a different place now. We're having conversations in my view between the department, Capitol Hill, and industry that are a little bit different than what I would say we were having even a year ago.

As a result of that and I think sort of reflective of that thinking, many of you have seen the letters that the House and Senate Armed Services Committee jointly sent to a number of the industry trade associations asking for inputs on how to improve the performance of the process, specific recommendations. That letter went out at the end of March. The deadline at least for the initial submissions is July 10, although my suspicion is -- and I can tell you from the process that I'm working will probably take longer than that to get meaningful answers back to the Hill -- but there is a real interest in sort of putting everything on the table and looking at that. I would say that in looking at those issues and there are things from how do we more effectively purchase services to

do we have issues with commercial item acquisition and commercial process that we might learn from, which I think are particularly pertinent to the IT space. A number of other things: The acquisition workforce, how do we do oversight better, a number of other issues that are addressed in those letters. And I get the sense that there is starting to emerge a little bit of a consensus among the major stakeholders in the acquisition process that all these things need to be looked at, and we need to really be open to new ways of doing business.

I think one of the issues that remains to be determined is the degree to which the committees that have been involved in a lot of the most recent acquisition policy initiatives are willing to put those on the table or look at those in the same light as they are some of the bigger issues. And what the relationship between this effort and what has been recently done, I think that's still a little bit unclear. But I think there is a potential for a consensus emerging around these issues. And I think that with the new Congress coming in next year and starting the FY16 defense authorization process, I think you'll see a lot of the issues at least come out in the hearing process and may actually result in some legislation, although people aren't totally committed to legislating being the main way that they want to achieve transformative change. I think a lot of that remains to be seen. If I can, I'll just make a little plug. If you're interested in what the National Defense Industrial Association response to that letter is, we're putting everything up on the Web. If you go to the Website, [www.ndia.org](http://www.ndia.org), there's an acquisition reform page there, and we literally are putting the transcripts of the meetings, all the other working papers and everything else up there for everybody to look at as we go through it. So you can at least get a sense of the approach that association is taking. But I know the other associations are also working on this, and it will be interesting to see over the course of the summer how it all plays together.

One of the questions I think that people have continued to ask is to what degree IT acquisition is sort of a standalone set of issues or whether it's simply something that gets treated in the more general reference point of acquisition reform. The answer I think is yes. I think people are more and more seeing IT, business process, reengineering, and the relationships between all those things as really standalone issues. I think a reflection of that is the language that you see even this year in the Senate Defense Authorization Bill, the text of which was released last week, in which there is some fairly significant legislation in advance of what may come next year dealing with driving the system more toward an open systems architecture process across the board not only for emerging systems, but also for legacy systems overtime. There's a discussion of looking at what the legislation that was passed recently, such as the Section 804 legislation from a few years ago that specifically drove information technology conceptualization of acquisition where the committees are still I don't think fully satisfied that the department has answered the mail on that. And so there is a lot of discussion now around how we do acquisition of IT, what is the relationship between the type of acquisition process that we have for IT and the business processes within the Department of Defense, which I think has been a major issue. To what extent can we open the system up to more commercial solutions, even to the point of actually driving reorganization of business process in the department? I think it's a big issue. And to what extent the MAIS or the major automated information system process, which we use for larger programs, really is going to mimic the major defense acquisition program process or whether it needs to be sort of a standalone process with different metrics and other things? I think all those things are on the table now, but I do think there will be within this broader context of acquisition reform a specific standalone effort. We're probably going to do that at NDIA and other places, specifically looking at the particular



problems of IT acquisition, both large IT acquisition and even smaller things, even imbedded systems.

So that's my view.

MR. WALLACE: Thank you, Jon. That's fantastic. We will come back to some of the details of that in due course. But moving forward, Tom Sisti, you were with Jon on the Hill back in the nineties doing some of this work. And for fear of reinventing the wheel -- there's a danger that we try and reinvent the wheel and some of that reform was very successful, some of it less successful. It would be great to get some of your perspectives on what worked, what didn't, and what that means for the future. And also some insights sitting as you do now in a technology company about what private sector feels about the way in which defense does its business in this area.

MR. SISTI: Well, I appreciate the opportunity to be here. I think you have to look at the motivators, what was taking place at the time in the late eighties, early nineties. There are some similarities to the environment in the sense that we had pieces of acquisition reform being passed and I think people wanted to take a breather, for lack of a better term. And so on the Senate side, the Senate came up with the Section 800 panel, Section 800 of the fiscal '91 NDAA, which funded and staffed a panel of experts to take time to review a narrow scope of issues in the sense in a vertical the laws related to the buyer-seller relationship in government. They produced an 1,800 page report, made recommendations probably surrounding maybe 250-300 pieces of law. It went up to the Senate side and I think it's important to understand the process. You had bipartisan activity among multiple stakeholder committees -- Armed Services, Governmental Affairs, Small Business -- sitting down in a very methodical way, looking at that report, reviewing it, asking questions of the panel, getting feedback, and embarking on an effort to address the recommendations that were made. At that time you had a change in the

administration, the national performance review came in, same cluster of issues I think, coalescing around some of the same issues, except also recognizing that we had a changed environment given the post-Cold War future that we were facing, a desire to automate acquisition, to bring efficiency, a desire to open the door to discretion among the decision makers in the acquisition process.

So that brought in the administration side. The House was working on similar issues, not necessarily focused on Section 800, but the House came in with their bipartisan, multiple stakeholders. So you really had a moment, if you will, where there was an alignment of parties working on these issues. During the course of that you had, of course, I think the strongest policy statement set forth by then Secretary of Defense Perry in the mandate for change document, which acknowledged all these activities that were going on and really recognized that we were in a changed world. We were facing reduced defense spending, I think it said 40 or 45 percent, that DOD's influence in the innovation section at least in IT was not as strong as it used to be, that people could not access the defense market because of the unique government requirements that were set forth or because of unique government processes or because of fear for the loss of intellectual property in the context of the government space. So you weren't getting the traditional commercial vendors, the vendors that might bring, say, innovation and information technology into the environment.

All of this came together in the Federal Acquisition Streamlining Act. I don't think we can go into these statutes here, but just generally speaking opened the door to commercial acquisitions with a broadening of the definition of commercial. Obviously, it brought some unity to the defense and civilian sides of acquisition, continuing that theme set up in the Competition in Contracting Act (CICA) with the FAR, opening the door to pilot programs, electronic commerce, and authorizing multiple award

task and delivery order contracts, which was a big step. There was concern in DOD that those were in violation of CICA. There was concern on the civilian side that there wasn't enough leverage to bring in innovation as it was entering the marketplace and to really motivate people. So the idea was to have an abbreviated competition, which would be considered a contract administration function and thus not subject to protest in the process.

Then you had the elections and the House has changed parties, and it was sort of like the *Empire Strikes Back* maybe, I don't know. You had a second bite at the apple for people to come in and attempt to get some of the things that didn't go through the first time. So you had Clinger-Cohen, which brought business processes and business case analysis to the process. We had pilot programs. We had CIOs identified. The biggest step probably most recognized is the repeal of the Brooks Act, which was essential. In the Brooks Act, the administrator was responsible for the efficient and economic acquisition of IT for the government either directly in concert or by delegation of procurement authority. With that repeal came other cascading effects, changes in the IT regulations, elimination of the bid protest authority over the then General Services Board of Contract Appeals. So agencies had that discretion flowed down to them to come up with their business cases, to propose them, to do incremental acquisitions for large-scale procurements so that you could break them up and not have these mega buys.

So where did that leave us? I think we faced an environment that some people probably didn't expect, especially as we got into a post-9/11 world. But I think if you were to try and categorize wins and losses, although we don't have data on it, I suspect it's fair to say that the win for the government was access to innovation. It was accessing it at a more rapid pace than it did before because it opened the door to commercial items, the ability to get the .2 when everybody else got the version .2 as

opposed to waiting until there were certain levels of sales in the environment, probably saved costs.

I think that was a key point of the mandate for change document, specifically because when you don't have money, DOD and the rest of the government can't really start design-specking things. It really can leverage the research, innovation, and development expenditures of the private sector where appropriate for commercial items and rely on those items and processes and then repurpose that money that they would have used on maybe research and development, although it would be nice to have some data on that.

So I think the other win was just the alignment, the bipartisan alignment, the multi-stakeholder alignment, even the industry came together. You may know the acquisition reform working group had its beginnings in this process where multiple industry associations came together and coordinated their messaging.

The so-so, if you will? I don't think anyone anticipated the reduction in acquisition staff inside the government. I think Jon had some excellent testimony earlier this year. And I think you said it effectively worked out to about a 50 percent hit over the decade of the nineties to the acquisition workforce staff. Then you go into a post-9/11 and the massive ramp-up in contracting actions and dollars associated with that. So you had a twofold problem there. I don't think that was anticipated. I think what was anticipated -- well, it was half anticipated -- was the multiple award task and delivery order contracting authority was extended to multiple agencies. There was concern when working on FASA that this might have problems, inventory problems, problems identifying the impacts on things like the GSA schedules. And Jon was on the Services and Acquisition Format Advisory Panel. And I think one of the findings there was that government really didn't have a handle on the number of multiple award, multiple agency

contracts. So it turned out to be a control problem from that standpoint. I think that was a big issue.

And I don't think we've overcome the compliance culture. We are still in a culture of checklists -- have you done this, have you done that -- and intense oversight. So the lesson is I think that you've got to be holistic in your approach. It's good to go government-wide to create as much similarity in the process as you can so that people who are trying to enter the process can actually do so.

I think, though -- and I'll end with this -- we seem to be in a kind of procurement Groundhog Day where we recycle through a lot of the same recommendations. You go back to the Hoover Commission, Commission on Government Procurement, Grace Commission, PAC Commission, Section 800, and the national performance review mandate for change. I mean there are a lot of themes that are consistent, that come out. Reliance on commercial items and practices where possible, key successful business processes, a trained and sustained acquisition workforce to do the job, a reduction in government use of unique specs. You can go on and on. We keep coming back to this. We go through reform, make some incremental changes, then we keep coming back to these similar problems that promote these similar recommendations.

So the question is, what are we doing wrong in all of these processes because we've had a number of reform efforts and we do make some headway, but we do keep coming back to these same things? There are issues that we don't confront and maybe we need to open the door to confronting them, at least asking the questions.

I'll leave it there.

MR. WALLACE: Thank you, Tom. Jacques, Tom called it procurement Groundhog Day. You have been involved in a number of these processes. Tom

particularly mentioned sort of commercial items where literally 20 years to the moment from Bill Perry's famous memo on commercial items. And you have written recently about nontraditional supplies, which are very relevant to this. Bring us up to date. Tell us why we keep making the same mistakes and how we can avoid them in the future.

MR. GANSLER: Well, let me pick up first from Tom's point about looking at the history. In the last decades there have been equal periods of dramatic decline, more than 30 percent as I define as dramatic, in the defense budget. And post-World War II, post-Korea, post-Vietnam, post-Cold War, and now it has always been the same three things that get unfunded: Research, training, and then conferences. Giving up the future for the present so you can buy more tanks, ships, planes, and things like that, but not recognizing our strategy has been technological superiority. How do you do that if you don't do research? It's just obvious it seems to me.

So what we're facing today is obviously the declining appropriations, but rising costs -- equipment, services, fuel, health care, labor. And the other major problems since they both talked about the workforce, other than the people in this room, we have an aging workforce and that's a serious problem in terms of what we've been doing is replacing the people who are leaving with interns. I mean the Department of Defense today, 55 percent of the acquisition workforce have less than five years of experience. Across the overall federal government is 50 percent by the way. It's not just defense that's in bad shape in that regard.

And we have this huge national debt, which obviously is going to be hard to project an increase in the defense budget even though some people think this 18 year cycle is a law of nature. The reality is it's driven by exogenous variables and it's not likely to come back unless there's another 9/11 or Pearl Harbor or whatever you want to call it. These were what caused the big increases.

And we have a very unstable, insecure world environment. If I was giving this talk ten years ago, I wouldn't have started with pirates or terrorists maybe, but I can go down the list including cyber security and other things, loose nukes, bio-warfare, nuclear Armageddon. And even the struggling for scarce resources is now causing regional issues certainly. And I'm sure you all read Machiavelli in the 16th century warning about the resistance to change and especially in the government and large institutions, and so this idea of how easy it is to make the changes is pretty clear.

But I think something that's not recognized very widely is the fact that one of the reasons we've been so strong in national security is because we've had technological leadership. We really don't anymore in many critical areas. I just got a briefing from the Army Night Vision Lab, for example. The French are way ahead of us on night vision devices because we won't export them and they've taken over the world market in that area. So a lot of global stuff, but also commercial stuff in many areas is way ahead of defense. And I'm going to come back and talk about the resistance to our buying commercial stuff even though we have laws that say you ought to do it. We just don't do it. We build barriers to doing that as well.

And even some of the changes that are required are counter-cultural. I mean, for example, when I was Under Secretary, two years in a row the Air Force refused to buy Global Hawk, the first unmanned airplane, because it didn't have a pilot in it. So it's understandable why there was cultural resistance to it, but we had to direct them to actually buy unmanned airplanes and that was the only way it came about. So that's Machiavellian in the sense of resistance to change. And that resistance by the way is coming from not just in that case the military, but certainly from Congress and certainly from industry who want to keep building the same stuff they've been building. So we have to figure out a way to overcome that, and I'll come back and talk about how you

introduce change.

But I thought I'd read you three statements, summary statements, on the national security environment today. The former Chairman of the Joint Chiefs, Mike Mullen, said "America's number one national security threat is the deficit." We have to obviously address that. Another former director of National Intelligence said "We have more challenges today than we've had in the last 50 years." And another senior military officer in the intelligence field said "The controlling concern we have today is uncertainty. We know how to prepare for each of the various scenarios. We can't afford to pay for all of them, and we don't know which one's next." So that's clearly a challenge for us and that goes along with the speed of technology change. How do we know where it's going to happen? And I should point out that this technology is globalized. Also industry is globalized, labor is globalized, and so where this new technology comes from is often around the world, not just here. I should point out maybe even that every U.S. weapon system today has foreign parts in it. That's a fact that came out of a DOD report. That's because they're better, not because they're cheaper. And we will take full advantage of that globalization. We should do more of it I think.

So our problem is how to do more with less and how to respond in this uncertain and rapidly changing world, rapidly responding, which I'm sure you're going to hear about next, and how do we maintain technological leadership if that's our strategy? And it's hard to do that with no research investments, and so clearly that's going to be a challenge for us, how to take advantage of all those.

Now, there are serious barriers -- and this is one of things that Ian asked us to try to cover -- to making these changes. For example, a lot of the laws like the federal acquisition requirement for specialized cost accounting. Commercial people don't want to do that. I'll give you a simple example. Boeing combined the commercial and



military transports in Wichita, except cost accounting standards and auditing and other things like that forced them to separate commercial and military transports. And they put commercial in California and left the military in Wichita, both of them the prices went up. That's not a big advantage to us in terms of the things we need to do for doing more for less.

Another example I could give you I guess is export controls. If you want a funny story, the Department of Defense stopped the export of the Roomba vacuum cleaner, the robotic vacuum cleaner, because it had navigation software in it so it wouldn't hit the tables and chairs, things like that. So the Defense Department stopped the export of a vacuum cleaner? Big national security threat I guess, but obviously it does hurt your economy.

Another thing that Congress has done recently is to stop public-private competitions for non-inherently governmental work, things like maintenance. Wrench turning is not inherently governmental. I read the constitution carefully. It's not mentioned in there as inherently governmental. But Congress has said "50 percent of all maintenance must be done sole-sourced in government facilities and will no longer allow public-private competitions for non-inherently governmental work" even though on average the savings has been over 30 percent and better performance. Why wouldn't you allow that? For political reasons obviously.

So there are these barriers that have to be overcome to take advantage of even some of the things like I mentioned of commercial or globalized. And so we have to figure out, for example, when we noticed that the largest killer of American soldiers and Marines were roadside bombs and not only that, but maiming as well, arms and legs, then we decided to armor the vehicle, the MRAP. Well, the question is where do you get the best armor? Well, who has the most unfriendly neighbors? Israel. So they happen

to have the best armor, so we bought the armor from Israel and that company set up their factory in Vermont. Also the best shock absorbers in the world were coming from Germany. The best tires from France. And so we took advantage in that case of globalization.

But we also need to recognize that we're all going to be in a scenario in the future, no matter what it is, where we're going to have to work in a coalition because you can't really stop things like cyber security unless you have cooperation. You need the cooperation for terrorism. You need the cooperation for many of these other things, and so we've got to realize that we're going to be in a coalition even in-theater environment. So the United States stopped funding the MEADS program. The Army stopped that. This is the theater missile defense program. When 100 nations have ballistic missiles, what are you going to do? Pick up the phone and say Pierre, you take the first one, Hans you take the second one, and we'll take the third one? Or you have an integrated system and that's where we foolishly cancelled that program. You do have to consider the security of your supply chain when you're doing this, but you can do that if you plan it properly.

So there really are five areas we have to address in order to get more with fewer resources. First is what do we buy, which is a requirements process and the budget process. They have to be addressed. This is all part of the so-called big A. Second thing -- so it's what you buy, then how you buy them. That's the acquisition process in the narrow sense. And then from whom you buy them, that's the industrial base issue. We have to plan that out well and that's going to be a globalized industrial base, but it's also going to include commercial suppliers. And then how do you do support, the logistics process. And then the fifth issue is who does the acquisition, the acquisition workforce that they both have raised, and that's a critical issue which we

grossly undervalue. And those five issues are highly interrelated and need to all be addressed if you're really going to address the acquisition community.

So how do we do that? Let me just quickly touch on each of those five. First one is what do we acquire? The very first obvious thing is it has to be low cost. Why can't you make cost a design requirement? We've done that. I'll give you a simple example of that. When the Chief of Staff of the Air Force wanted to convert the dumb bombs into smart bombs, he said there were only three requirements for that. One is that it hits the target. Second one is that it works when I push the button. And the third one is that it costs under \$40,000 each so we can buy enough of them to convert all the dumb bombs into smart bombs, the JDAM program. And we did that and now the reliability and the accuracy both exceed the requirement, and the independent cost analysis for those was going to be \$68,000 each. We kept competition going on that program. So as a result of competition, the two contractors both bid under \$18,000 each. So you can just see it's possible to do these things if you just apply them properly. But that took a leader on the program, Terry Little, the program manager, to decide that we were going to actually not simply comply with all the rules. We were actually going to insist upon continuous competition, which cost a little bit more maybe right in the very beginning, but the Air Force said they saved about \$4 billion on it. So it's not a bad idea. So there are things you can do with a leader who's willing to say I'm not going to conform. I want to have some differences this time.

And in terms of how you buy things besides making costs a design requirement, you need this competition continuously and you want to be able to overcome the barriers to commercial buying, especially at the lower tiers by the way. That's one of the things that's missed because most of the rules are intended for the prime contractor. But 85 percent of the costs, for example, of an airplane are at the lower

tiers. And that's where the small business and the commercial stuff is most applicable. Luckily, there's no commercial fighter planes, but all the things that go into that plane can all be commercial. And even that JDAM thing that I mentioned a minute ago used maximum commercial stuff.

And then the most obvious area is IT where the commercial world is so far ahead and where, for example, the Defense Department doesn't have an integrated IT system for its logistics operation, the most expensive thing it does. And I can compare world-class logistics with DOD logistics, and there's no question DOD logistics is not world class. For example, Walmart even ties in their industrial suppliers. When something goes off the shelf, the industrial supplier is immediately told to prepare because we're going to need some more of those. The DOD logistics system does not link in the industrial suppliers. It's just an internal system itself. So I can give you lots of examples of where that linking of government and industry would be of great value.

So another area of how we can improve dramatically is the rapid acquisition process that you're going to hear about in a few minutes. But I like teasing the Air Force about it, just to give you an example. They named the new fighter the F-22; that's because it took 22.5 years from the time it was started until it actually got deployed. I mean that's ridiculous. And think about the electronics in that and think about the IT in that because this is an electronic-intensive airplane, 22 years? I mean we measure the cycle times in IT in months, not in years, so you can see that there's some education required, some changes required, and as I think Jon said, we have a policy, the 5000 series, which is based upon buying goods. And yet over 60 percent of what we buy is services and we need a 5000 series for services. We need a 5000 series for IT. We don't and literally I would argue that buying an engineer or acquiring an engineer is different than buying a tank. I mean, for example, we don't even put the engineer

through live-fire testing, so it's pretty clear that they're different. Why don't we use a different set of rules and practices and policies when we're buying a service than when we're buying goods? So we need to create incentives for industry, and that's by the way one of the problems that we have. Most of these people in the government don't understand industry incentives, especially in their five years of experience.

So I guess I was asked not to give too many complaints, but I'm going to do it anyhow. In the current acquisition process, the trends are in the wrong direction. One of the things you most notice today is since we don't have as much money, people are shifting to something called low price, technically acceptable. That's the way you buy commodities that are interchangeable. It's not the way you buy things that are different in terms of services or goods. And we should be using best value where you evaluate performance and cost, not just the cheapest thing you can find. That's one of the big problems.

We're not using competition properly either. I mean the best known of competitive programs is the competitive engines, so-called great engine war for the F-15, F-16. Now, the F-35 comes along, the largest program in history, and we choose not to have a second engine. Even the President of the United States said why do we need a second one, we have one? People don't understand the value of competition, the incentives that come from competition on performance and cost. And I would point out in the great engine war, both GE and Pratt & Whitney ended up getting higher performance, higher reliability, and lower costs. And, again, the Air Force saved billions of dollars they say as a result of that. Why wouldn't we do the same thing on the largest program in history, the F-35? Eleven nations involved and they're all cutting back, and even the DOD, three forces that are involved, are cutting back on quantity because the prices have gone up. I could even be facetious and say it's called the F-35 because when it was a

design objective of DARPA, it was a \$35 million airplane. Now it's about \$130 million at least.

So we've stopped public-private competitions. We've stopped a lot of things that I think are going in the wrong direction. It was mentioned earlier the IDIQ-type contracts, multiple awards. The concept behind that was maybe three qualified sources and that's been distorted grossly as well because, for example, the SeaPort-e contract for the Navy has 2,200 winners and they're all now going to bid on each RFP that comes out? Think about what happens to bid proposals. Nobody loses in those. They would protest otherwise.

Another area that we've been doing is insourcing instead of competitive sourcing, either public-private or private sector competition. The White House and the Pentagon have both been pushing for more insourcing. They proposed 33,000 jobs be brought in. The Air Force said they were going to save 40 percent doing that. The reason they said that was because just comparing the hourly rate of a government employee versus a fully loaded contractor, but they didn't load the government employee. So, fortunately, the Congressional Budget Office did an analysis of this and for maintenance they said it was 90 percent more expensive to bring it in-house when you fully load it. Yet Congress by law demands that 50 percent of all maintenance work be done in government facilities sole sourced by government workers.

The GAO then did a separate study on security services and said it was 90 percent more expensive to do it in-house as well. So there has been some analytical work done, but ignored.

I was going to shift to industry.

MR. WALLACE: Let's come back to industry in the Q&A.

MR. GANSLER: Okay.

MR. WALLACE: Let's quickly give Dan a chance to come in. One of the things that has potentially changed since Jon and Tom were on the Hill and Jacques was in DOD was the emphasis on rapid acquisition. You've literally written a book on this. Can you just tell us what is to be gained, particularly in relation to the IT industry, in terms of rapid acquisition? Then we can hear a bit more about how the DOD is doing that as well.

LT. COL. WARD: Sure, absolutely. So just a quick side comment. The article I wrote a little while back about *Star Wars* basically said we should build droids, not death stars. And the idea is these big, expensive, complicated monstrosities that suck up resources like a black hole tend to get blown up by the second act and not contribute much to the fight, but it's the small, inexpensive, simple droid-like technologies that tend to save the day in scene after scene. So the fundamental idea in my book is that innovation doesn't have to cost so much, take so long, and be so complicated.

So the good news and the bad news both is that technology is changing fast. What that means is that the need for innovation is higher than ever and, again, the real thing is it doesn't have to cost so much, take so long, and be so complicated. We're better off taking an approach that is more constrained.

So the opening story in the book is an IT system called the condor cluster. The Air Force Research Lab built this supercomputer. They cut the ribbon in December of 2010, and it was the fastest supercomputer in the entire Department of Defense, so 500 teraflops. They built it for one-tenth the cost of a comparable supercomputer. It uses one-tenth the electricity, so it's inexpensive to own, inexpensive to operate, and they built it out of 1,760 PlayStation 3s. So those PlayStations that he mentioned earlier, you cobble a bunch of them together and these weren't even the new version, these were old PlayStation 3s, like a generation ago. And again, this was in

2010.

So you would never take that approach when you have a lot of time and money on your hands. The only reason they would go after an approach like that is -- hey, what if we get a bunch of PlayStation 3s and use it to build a supercomputer -- is if gosh, we just don't have the time and the money to go the traditional route. And so there are some benefits here to living in an age of austerity where time is tight, where money is constrained, money is just not flowing as freely as before. It acts as a forcing function for creativity. Constraint fosters creativity, and it pushes us in the direction of these droid-like technologies, these condor cluster-like technologies, where again, this wasn't just a low performance system. This was the fastest supercomputer in the whole department.

Another quick story. The HSIS system, health and safety information system, was developed by a guy named Allen Woods for the Ministry of Defense in the UK. He built it for £65,000. Unbeknownst to him, other bidders came in at £7 million. So that means he built it for less than 1 percent of what the other people were bidding. It is faster, more comprehensive, and more accurate than the system it replaced. It's one of the busiest policy and governance sites in the whole Ministry of Defense's infrastructure or Internet. They get 400,000 hits a year. Again, he built it for less than 1 percent of the cost of other bidders. So the lesson for practitioners like myself, acquisition program managers, maybe the lesson for us is not only that hey, this happened and it worked well -- again, best in class, first in class, high performance system -- but when we look at bids and we get a \$7 million bid and \$65,000 bid, we tend to distrust the smaller number. Maybe we should be distrusting the larger number. And rather than saying hey, that \$65,000 bid, that guy must not know what he's talking about, it could be the other way around. Maybe that \$7 million bid, that's the one who doesn't know what they're talking about. And we've got to find these Allen Woods guys out there who really are a one-man



shop with a code bank, puts something together -- and if I didn't say what that way, it's a .pdf library that basically uploads, searches, and downloads data handling sheets for handling hazardous materials. Nothing particularly sexy about it, not an exciting system, unless you consider saving £7 million an exciting outcome.

So some opportunities in IT and in my book I go through some of the principles and practices for how do we do this at the practitioner level and at the leadership level.

MR. WALLACE: So we've heard a lot about what should be done, what could be done. Andrew, tell us what the DOD is already doing and what it would like to see from Congress to help you do what you'd like to do even more.

MR. HUNTER: Sure, thank you. I think one of the themes that I'm taking away from listening to my colleagues here, and although we don't maybe always sense it when we're talking to each other, but there is a lot of actual consensus in the current moment. I think similar to or really something that I haven't seen since the era of FASA, about 20 years ago, where people really broadly embraced the idea that moving towards commercial specifications was the way to go. There was a broad consensus behind that and it led to far-reaching legislation. I don't know if we can have or are going to have legislation quite that far-reaching in the near term, but I think there is an unusual amount of consensus about a need to do some streamlining in our process and in our system and in our statutes that hopefully will lead to some helpful action.

The Department of Defense is committed to this. This is a major initiative for the department. It has the daily attention of the department's senior leadership. They pay attention to these issues. There's an interest from the department's senior leadership in acquisition and in improving it that has -- I mean it's never not been there, but it's much more intense and immediate. And the tide in the

minds of our senior leaders to the strategy in a way that maybe wasn't front of mind when we were focused on daily operations in a more intense way.

Mr. Kendall, my boss, the Under Secretary of Defense for Acquisition, Technology, and Leadership is directly leading acquisition improvement. Some people ask me who in ATL is in charge of acquisition reform. Well, it's easy. My boss is in charge of acquisition reform. He's leading the effort himself and basically all of us within the organization and within the services who engage in acquisition are also engaged in it. It is an organization-wide mandate and initiative.

One thought I want to throw out there, we talked about different things that can lead to action or bring consensus. One of the things that Mr. Kendall is trying to do is really bring data to the table. And I think Tom made a reference to well, we maybe can't prove that we achieve some of these outcomes, but I believe that we did. Well, Mr. Kendall's really interested in gathering data to really prove to people that certain policies work and other policies didn't have the intended effect. What we may find as we get more and more of this data, and stay tuned for the next annual report on the performance of the Defense Acquisition System coming very soon, is that we don't all like what the data has to tell us because some of our favorite pet policies may not come out looking favorable in that analysis. But I really think we should go where the data takes us, and maybe that's one way to kind of foster and drive this consensus.

You mentioned my role as the director of the Joint Rapid Acquisition Cell, and I do think there are a lot of lessons for this process coming out of rapid acquisition. Probably the first and the foremost, and it sounds blindingly simple, but I think it is important, is it can be done. You can achieve, as Dan has indicated, you can achieve really outstanding acquisition outcomes. Our system can do this. It really can. We've proven it. We do it. MRAP does it. We have the best equipped military in the world for a

reason. We also have had some big misses and there's no doubt about that, and I wouldn't want to deny that. But when you get down to the fundamental question of is our system incapable of performing or capable of performing? I think it's clear it can perform. Rapid acquisition has been a case of that. That's what my office does. I also got tasked to kind of be involved in this effort because of my history as well working on Capitol Hill, working with professionals like Jon and I don't think I worked directly with Tom in overlap, but a lot of good folks on the Hill have focused on this for years.

The department's objective in looking at acquisition improvement is to have a functioning, capable, defense acquisition system that's flexible enough to buy goods and services, everything from toilet paper to tanks and everything in between, because that's what we do at the Department of Defense. We buy all of that stuff, and we need a system that can encompass that range of need. And there's not too many other, if any other, organizations in the world that have quite that job. And it's about \$300 billion on an annual basis. Of course, we're in a downward slope. So if I'd been here two years ago, I might have said \$400 billion and if I come back next year, it might be under \$300 billion. But nonetheless, it's a vast amount of money that needs to be treated, obviously, responsibly.

It's critical to DOD because we need access to the best technology and innovation. So as Dr. Gansler mentioned, our strategy has historically and to this day depended upon the United States having a technological advantage over potential adversaries. And that is, again, senior leadership understands that that is our strategy, understands that, therefore, the performance of the acquisition system is critical to the department's future. And our objective obviously is to be good stewards of taxpayer dollars because that's an important moral responsibility in the department for those of us who work in acquisition, and it's important to the long-term national security. If we don't

spend our money wisely, we're not going to continue to receive it and we'll have eroding national security.

Another objective that the department's after is to adapt to the changing national security environment that, again, has been referred to. Innovation was never something that happened exclusively in the Department of Defense. I think that's fairly clear. But it is increasingly the case that the most cutting-edge technologies are not necessarily or are not being developed within traditional defense firms. They're happening in the commercial sector and particularly in the IT space. This is blindingly obvious and blindingly true. In the department, again, your strategy depends upon the technologically superior advantage. You have to have access to that technology. So getting access to the best commercial technology, maybe in spite of some of our past systems and processes, is very important.

And also as was mentioned, it's increasingly not happening in the United States. There is really good technology around the world and some of the reasons why that happened I think are fairly complex. Dr. Gansler mentioned that other countries have in many cases the opportunity to focus their R&D or their resources on a particular area of technology that for one reason or another the United States may not be pushing to the forefront on. So they can focus. We tend to have to cover all technology areas as a part of our approach and our position in the world. Other countries can focus for a variety of reason in specific areas where there's a high payoff in the commercial world and really get out ahead and be leaders. And that's probably going to be true no matter what we do here, but we have to be able to recognize that fact and respond to it. Oh, and by the way, the fact that a lot of this technology is available commercially and available from sources outside the United States means that potential adversaries have access to it, and they are motivated and financed to obtain it and they are doing so. And

so Moore's Law is an example of one of these national security environment factors that's driving us to improve the acquisition system.

Now, how do we think we're going to get there? There is no one silver bullet. Mr. Kendall has said that in many fora. It's kind of a central message to deliver today. It's really a range of things. So in 2010, the Department of Defense established what we call the better buying power initiative and four years later it's still going strong. You might ask hey, after four years, hasn't your initiative worked yet or not? And the answer is it's working, but it's not just a hey, we do this for a couple of years and then we're done, everything's great now. That's not the nature of this problem, and I think we've all referred to the Packard Commission report which echoed the findings of earlier reports from the sixties and seventies and reports that have been done since all with similar findings is because it's not an easy problem to solve and you can't just take a whack at it and be done. It is about continuous process improvement and that's the way the department is thinking about the problem with better buying power. It was started in 2010 with a set of initiatives that were really focused on a sensible rule set for some things that maybe weren't being adhered to as closely, competition being a major aspect of that. Should-cost analysis really squeezing down and not just taking hey, the budget estimate was this, so that's how much it must cost, but actually driving down and saying if you apply the sharp engineering mind to the problem, can you skinny it down? By the way, I should say live-fire tested engineers? I think we had a little bit of that here. I just couldn't let that one go by. So it does occasionally happen.

So focus on things like controlling costs, improving industry's productivity because coming off the nineties where there was a lot of consolidation, we consolidated companies. We didn't always consolidate overhead and facilities. So there's work to be done there.

The department's processes can be bureaucratic and unproductive. We want to work on those. Competition and then services, absolutely, 50 percent of the departments spend this huge opportunity within the services space. And everyone in the organization has a role under BBP, better buying power.

Our initiative itself, continuous process improvement, we're trying to improve the improvement as we go along. So about two years after the initial release of the objectives of our approach, we went back and relooked at it and said what worked, what didn't work, where are we ready to take the next step? And so we don't just declare victory because we had a limited objective in 2010 and we achieved it. Now we're going to take the next step in that. Should-cost is an example of that. We had a fair amount of success with should-cost and then we looked to try and deepen that success, find larger savings and do harder things under should-cost. And also our affordability analysis is something that we're trying to take a step further.

And the biggest thing about BBP 2.0, second iteration, was adding professionalism of the acquisition workforce as a major initiative. And that really is if -- there are no silver bullets, but if there's kind of one overarching theme that you can focus on that I think is constructive, it is the professionalism of the workforce. And one of the things that BBP 2.0 was designed to get the workforce to do was to focus less on the rule set and more on critical thinking through the problems of acquisition. And it was intended that Mr. Kendall build that when he released it as a guide to help you think. And that's really the core of the problem, and so the professionalism of the workforce that's what's key. And building the trust with the Congress, building back the trust with the Congress, that if they provide us with some of the flexibility that we think we need to think through problems and behave smartly in our acquisition processes, that we're going to be able to do that, that we can adopt smart approaches. We definitely can.

And actually we're now just about two years into the second iteration of better buying power. The third iteration is around the corner and in the initial planning stages. And the focus there is really going to be on this issue of innovation and how do we achieve the kind of technology offset strategy that has been so successful in the past; i.e., where our adversaries have developed capability that is approaching ours or is catching up to ours or in some cases may have exceeded ours as a result of numbers or the quality of technology that they've been able to develop. What we've been able to do in the past is offset that with an asymmetric U.S. advantage in another area. Precision guided munitions was a huge example of that. Stealth was an example of that. Those advantages have eroded due to proliferation of those technologies and some of the commercial factors that we discussed. And so we need to identify technologies where we can regain some of the advantage that adversaries won't be able to counter so easily.

And so this initiative, better buying power, this approach has been incorporated really throughout the organization, throughout the department's policies. It was mentioned the 5000.02, sort of code words in the acquisition community for the Bible of acquisition, the rule book. These initiatives have been incorporated into that. And as we went through that process, there were a lot of things where we couldn't change the guidance the way that we wanted to, the way that Mr. Kendall wanted to. And the reason was because hey, there's a statute that says thou shalt do it another way or you'll do it a particular way. And in most cases the statutes are based on initially or fundamentally sound principles, but they're very inflexible on the way they written and a statute tends to be that way. If it's written in a clear and concise manner, it can be a little bit constraining.

And so what Mr. Kendall set up was a group to go through some of the acquisition statutes and try and identify areas where we were over constrained, not able to exercise the flexibility in the system and tailor our acquisition approach to what we're

actually buying because tanks are not the same as toilet paper, not the same as aircraft carriers, and not the same as fighter jets. They're all different. IT is very different, and I'll speak a little bit about some of those differences. And so we need that ability to tailor our system. If we create a separate system for any individual commodity or product, say IT, for example, we run the risk that we'll create a second rigid, inflexible system that maybe is mildly more appropriate for IT than our overall system, but still rigid and inflexible. And so what have we gained thereby? We need to have that flexibility to cover the entire set of equipment, goods, and services the department needs to buy. We need to have that in all of our acquisition programs.

And so I was tasked along with a team of other folks from the services to work on some legislative recommendations for Congress, which we expect to deliver next year to the Hill when it's had the time to stew appropriately and go through the department's processes. We focused on streamlining, eliminating barriers in statutes, but not a -- I think one of your queries you said do we have to have a big bang rewrite of the acquisition statute? I think it probably won't be that.

How is what we're doing with better buying power going to lead to better acquisition outcomes? I'm going to take IT as an example. Software is a major component of all of our weapons systems. The Joint Strike Fighter has been described as a flying supercomputer and that's not an inaccurate description and, in fact, the single most challenging and difficult part of at least the remaining development for the Joint Strike Fighter is in the software. I remember when the Joint Strike Fighter program was in its competition stages, everyone said well, all that's going to matter is who can do the vertical, the STOVL part of the problem. And, in fact, it's probably true that Lockheed won because of its approach to that, but it turns out winning the contract may have been the easy part. So actually developing and delivering the software that makes this jet



have the capabilities that it was designed to have is the hardest task, and that's the hardest task that the department is working to nail down here as development is coming to a close and we're actually getting close to IOC for that asset.

Unlike traditional hardware programs, production isn't really the problem. It is in development and test where you see the biggest issues and maintaining technological currency as commercial industry moves on so rapidly. And oh, by the way, the intellectual property issues associated with developing that software and who owns what in each piece of it, incredibly complex, and those are paramount issues in software development issues. And as I said, most of our programs are at some level a software development program.

Software-defined radios is kind of a case study, not necessarily a sterling case study for the department, but a case study of how we're using better buying power to change our approach. Some years ago we had a program called the JTRS program, joint tactical radio system program, that was a government-led development of a software-defined radio across a range of military uses -- high-performance jets, helicopters, man-held radios, vehicle-mounted radios. It was the one -- I'm going to mix metaphors -- but one-ring-to-rule-them-all kind of a program and it was going to get it all done. And we hired a traditional Department of Defense integrator to take the lead in that. Folks who manufacture radios were secondary to the integrator. And what really ended up happening was that as that program chugged along and worked to deliver to the specifications that it was given, the commercial software development radio industry really kind of blew past the government program. Better stuff was available from the commercial sector than the technology developed at great expense by the government. And so some aspects of that program have fallen by the wayside, but there is a significant effort still underway with the Army. They modify their acquisition strategy to

focus on competition, to focus on the technologies developed in the commercial sector, and to build in technology refresh cycles into the program's acquisition strategy. So that's a case of where we're trying to use better buying power principles to adapt in the IT space.

Let me just touch again a little bit on acquisition workforce. There are some key things that we need to keep doing that we need the Congress to continue that are helpful. There is something called the Defense Acquisition Workforce Development Fund (DAWDF), a pot of money that is specifically devoted to improving the professionalism of the defense acquisition workforce, used initially to hire on and recover from some of the downsizing of the workforce that had happened in the nineties, really now being used to get that unique training for the workforce and increase the professionalism. And the IT area is a great example where the complexity and the understanding the workforce needs to have to tackle those problems. We need to continue to fund training and education to make that possible and DAWDF is key to that. I don't know if we could create -- I'm actually confident we couldn't create -- a DAWDF now if it were not already in place. But since we have it, it's critical that we keep it. And we need to use it to give our acquisition workforce exposure to industry, particularly the nontraditional industry in IT, and deal with some of those complex, intellectual property issues that I mentioned.

And let me just say briefly what I think we don't need. The key things that we could get rid of or that we don't want that would not help us are first, sequestration. Maybe a little bit pie in the sky to ask for that in this context, but it is an anti-efficiency initiative to sort of randomly cut the budget as sequestration has done. And then an entirely brand new rule set or a slew of new rules in the process we think would be unhelpful. We really do think streamlining the rule set and flexibility and

tailoring is the way to go.

MR. WALLACE: Thank you. I'm going to ask two quick questions and then I'm going to open it up to the floor because I know people want to ask questions.

First question, one of the common themes was avoiding big, complex, projects and if ever there was an area where that is likely to be true, it's in IT systems. When I talk to people, they tell me it's all about incentives. What are the incentives that can be put in place -- Clinger-Cohen in some ways was an attempt at this -- put in place to try and incentivize smaller, more rapid systems? In his testimony to the Senate Armed Services Committee, Under Secretary Kendall seemed to be open to the idea of Nunn-McCurdy for IT, for example. What are the sorts of things that can be put in place to create those incentives? Jon?

MR. ETHERTON: Well, I think what you have to do is look at the reason it doesn't happen more often as a starting point because if you go back to Clinger-Cohen, just as you say there's a lot of language in there about incremental acquisition. A number of studies have come since then that have also pointed to that. And I think it's the same phenomenon that you see with a number of other initiatives not limited to IT and that is that you really -- I think people feel they've got one bite at the apple to do this or that major issue in the budget process and so you tend to load everything you can into that one bite because the whole idea that you're going to get a sustained level of support for a more incremental approach -- there's just no belief that that can happen.

And so I think some of that really goes back to the budget process that we have and how that works against sort of in a lot cases what people think are the commonsense approaches. That's a tough one because the budget process is really outside the acquisition arena and it's driven by a lot of other factors besides acquisition outcomes. But I think looking at ways to mitigate the impact of that process on planning

for IT acquisition is really where you would probably invest your most productive time.

MR. WALLACE: Tom?

MR. SISTI: I agree with that. And I would add that if you want to promote this incremental approach that you involve the stakeholders early on and you maintain some continuity of stakeholders through the life of the program. So it's not only the traditional people in acquisition, but bringing in the users, bringing in the entire vendor team, so that there's collaboration in the process. There's a full understanding of the process requirements and how they're evolving in the course of incremental development.

MR. GANSLER: I think the thing that I would suggest is we learn from the people who have done it properly. And an easy example I mentioned is we don't have a world-class logistics system. FedEx and UPS have total asset visibility all the time. They know where all their assets are at any given point, any packages, or anything of that sort. The DOD does not have total asset visibility. Why wouldn't you go to the people who have done this work before and take advantage of them? That's broadening the industrial base perspective. Don't think of it as a defense industrial base, think of it as a national industrial base.

MR. WALLACE: Incentives, Dan?

LT. COL. WARD: I think right now if you look at the question of prestige, the most prestigious programs to be in charge of or associated with are MDAP programs or these MAIS programs, the Major Defense Acquisition Programs. The one thing I would love to see us do is take that "M" at the beginning of MDAP or MAIS and instead of calling them "major" programs -- and the way we define those is if you're expending above a certain threshold of money -- let's call them EDAP and EAIS for "expensive" acquisition programs. So instead of major, now they're expensive. So it might be worth it

for half the price. But if we call them expensive, then that sort of helps scale back a little bit of the prestige. And who wants to introduce themselves as hi, I'm in charge of the expensive program.

So, again, we're not going to change human nature. People will always go after what is rewarded and encouraged and incentivized and what represents prestige, and SOCOM is a great example of an organization that prides itself on doing the most with the least. They take great pride in we got no time, we got no money, we just do good stuff with small teams, with tight schedules, with short schedules, and tight budgets.

So, again, if we just take an MDAP and turn it into an EDAP, an expensive defense acquisition program, gosh, I think that would send the right cultural message and that really wouldn't be -- we don't need to rewrite the policy, all the rules and regulations still apply, but we're just calling them EDAPs now. That's my one big recommendation.

MR. GANSLER: I'd rather call them "affordable" than expensive.

LT. COL. WARD: Right, and then there could be another category of affordable systems. That's something different.

MR. WALLACE: And that would drive people down towards rapid iterations.

LT. COL. WARD: Right, it would provide environmental pressure in the direction of decreased cost.

MR. HUNTER: I would say obviously we have done this in the rapid acquisition system, and I should truth in advertising say that we have had failures in the rapid process, so I don't mean to make it sound like a panacea. But we certainly have proven that we can field equipment very quickly, that we can field new capabilities in

weeks and months, not years. This capability is there. And I would say the key to how that has been done -- well, there are a couple of keys. One is that we've had basically continuous access to the user community through the joint staff, working with the combatant commands and it's primarily CENTCOM for doing rapid acquisition in recent years. We have actually been able to go back to the warfighting community directly and say we set out to take a stab at this requirement that you identified. It turns out that we can do about 75 percent of what you said you needed. Is that worthwhile? And I would say in 99 percent of the cases, the warfighter says sure. Something's better than nothing.

And so we've been able to take that approach and Secretary Gates kind of identified that as a key and how do we get to the 80 percent solution. And then in rapid acquisition we largely have done it that way through this tight interaction with the user community.

One of the keys to that has been having the financial flexibility to be able to move money rapidly against unanticipated requirements. That's been possible for a few reasons; certainly strong cooperation from the Congress and because of the existence of an overseas contingency operations (OCO) account has made that possible. And so one of the things that we are really trying to think through in the department and have developed plans for and trying to build consensus around is how do we keep enough of that financial flexibility as things like OCO maybe have seen their day come and go and that will probably happen at some point? How do we maintain enough of that financial flexibility to still be able to do the quick things that we need to do?

And then another piece of that, one element that may be hard to replicate, is obviously it's easier for a service to allow that rapid process to happen. If they don't feel like well, when this is all done I'm going to be stuck with this thing for the

next 30 years, and maybe that's a negative way to put it. Maybe I shouldn't put it so negatively, but that burden of sustaining it, a lot of those questions were really deferred in our rapid process. And they were deferrable in some sense because we didn't tell the services you're going to have to own this gear for 50 years. And you go back in time to World War II when tremendous advances were made, they also didn't keep things for 50 years back then.

So that's been something that the services basically had an understanding that they'd only have to keep this gear that we purchased if it was something they wanted to have for 50 years. And if they didn't, it was going to be okay to say when the war's over, we're done with it. And now we're at that stage with some of this stuff and that's hard, but I think kind of changing that paradigm a little bit of the need to sustain things over multiple decades is one of the keys.

MR. WALLACE: I'm not going to ask my other question so I can open it up to the floor, and I'm going to bundle some questions together. We will start at the front here and we'll come across over here.

QUESTIONER: Mr. Hunter, you mentioned that you were working on some legislative recommendations. I was just wondering if you could kind of elaborate on what some of those would be addressing and also what challenges you face with those with possible sequestration in 2016.

MR. WALLACE: And can you just identify yourself?

QUESTIONER: Oh, sure. I'm Scott Maucione. I'm with *Inside the Pentagon*.

MR. WALLACE: Thank you. We'll grab some questions together and then we can get as many in as possible.

QUESTIONER: On a related note, to quote Loren Thompson, the

customer is not actually part of the military. The customer is a political system, is Congress, and that's something that no business has to deal with. So how -- and I suspect Mr. Hunter can never say enter this question because it requires an impolitic answer, which I would look to the rest of you for. But how do you fix the congressional end of this when their incentives have nothing to do with any measurable kind of performance except for polls? I think I'll stop being cynical now and leave it there.

MR. WALLACE: Erica, next question.

QUESTIONER: Thanks, Ian. My name is Erica McCann. I'm with the IT Alliance for the Public Sector and I manage federal procurement policy for IT companies that supply their goods and services to the federal market. You all talked about the acquisition workforce and the federal IT workforce and as a millennial, I'm starting to get really scared. There's an article today in *FedScoop* that highlights this point exactly as I've been feeling about it the last couple of weeks. And I think all of us, myself included, we're not thinking about the workforce the right way. To think that we're going to recruit and retain a workforce that right now will have maybe say six jobs in the first ten years that they're in the market. They're trying to pay off substantial student loans and the government's trying to compete with what the private sector can pay them. I'm getting very nervous because I don't think that we should be thinking about retainment of the workforce, but really trying to engage people more on the civic duty aspect of it, on trying to entertain them more on perhaps coming in as a tour as opposed to a career. It's something that I'm very nervous about and particularly because I am part of that generation, but also because the millennial generation will be 50 percent of the total U.S. workforce by 2020. That's not too many years away and right now we represent 7 percent of the federal IT workforce. So I just challenge you, and I ask if there are ways that we can think about this as a whole as a community. I think this is something that's



really, really rather important.

MR. WALLACE: Thank you. I'm going to let Andrew answer this last one and invite others, particularly we have legislative proposals that maybe Andrew has to answer, but whether the Hill can really fix this. Is it possible? And this question of movement in and out of the Pentagon, which I think goes beyond the millennials. If you look at geographically people with experience, Tom, in the private sector moving in and out of the system and is there something we can do to improve that.

MR. ETHERTON: Let me talk to the Hill issue, this Hill as the customer comment. That is a fact. I mean I think that clearly whatever you do, you have to sell to Congress. They ultimately will adjudicate that issue either through the budget process, by passing additional laws, or you'll have some additional oversight to deal with. And my sense is and from my experience up there -- and I think we're actually seeing it play itself out a little bit in the response to the acquisition reform, the potential of that this year and I alluded to it a little bit in my opening remarks -- is that there's a tremendous amount of ownership that individual members sort of build around things that they do during their time in Congress. And so I think one of the forces that you can work with in that respect is playing on that sense of ownership and as you make proposals, as you sort of look at different approaches that are maybe larger than individual programmatic decisions, is try to help people sort of buy into that ownership of a bigger process, bigger change, even when in a specific case you may have a problem with some other issue. And I can give you one example. We had this issue that came up when we were up there in the nineties after the passage of the Federal Acquisition Streamlining Act and Clinger-Cohen with pricing on spare parts because they were reclassified as commercial items. And it would have been very easy for the members -- and we had a big oversight hearing with the Armed Services Committee in the Senate in 1998 over the issue -- it would have been

very easy for the members at that point to say this isn't working. It was actually the lead story on all three networks that night on the news, this overpricing issue. So there was a lot of political capital to be made to be outraged and to react to that. And yet the members and leadership of the committee didn't do that. I mean they really had a sense that they had been part of the enterprise, which was changing the acquisition process, and they didn't want to just simply retreat and say never mind, it was a mistake. They had a sense of ownership with that. They had a sense that it was going to take a long time. They didn't want to do some legislative changes, which we did do to specifically address that issue, but the fundamental definitions of commercial items, some of the other terms and conditions that were sort of mandated in the law that had been at play in this one particular case, they did not change. And so I think there are ways.

The other thing I would say about that is to the extent that there is a perception that the system has been looked at, that folks have really tried to work it so it is designed to get you a streamlined process with as good outcomes all things considered as you can get to, I think again there was more willingness to go along with things, especially when issues come up during the course of individual program decisions or whatever. It's when there's sort of a sense of a systemic issue that you really see the Congress sort of backing away and really wanting to make either big changes or not support the program. That's just my personal perspective, but that's one answer to that.

MR. GANSLER: I'd like to comment on that one, if I could. I mean I think more laws, more regulations, more rules are not the answer. In fact, today the Code of Federal Regulations, if you read it, has 180,000 pages and the OMB recently made an estimate of the cost of those rules and regulations. It was \$1.7 trillion a year. There have been some studies done comparing the same item commercially with government regulations that you have to conform to. And a few years ago, I did one in

'94 I think it was, it was 18 percent. More recently the Air Force has said 25 percent, and some studies have just come out saying 30 percent. So do you want to add more rules and make it even worse? I like a quote from Norm Augustine that I noted that just came out in a report that an acquisition study group did. "Defense acquisition operates on a government system that intentionally trades optimum efficiency for strong checks and balances." You want to add more checks and balances? I don't.

MR. WALLACE: And can we talk workforce, moving in and out of defense?

MR. SISTI: Just to say that I understand Erica's concerns, and I think you've seen some initiatives over the past few years where members have been trying to encourage sort of an in-and-out-of-government kind of experience where government people leave and take fellowships or whatever you want to call them in the private sector and vice versa. I think we have to address the compliance issues that are associated with that. I think there have been ethics concerns about people working on projects, but those are overcomeable obstacles.

I would like to say -- and I don't know, maybe it's because we're ex-Hill people defending the Hill -- I don't share that view that people are that parochial on the Hill. I have not experienced it. I think that what you have are good people who are smart people and they're dedicated to a defined jurisdiction of issues and they're trying to do the best they can in that context.

The question I think we have to ask as a procurement community is to what extent does the construct really fit our current times? We're in an environment where the evolution of technology is occurring at an increasingly rapid pace. We don't have the money that we used to have. So to what extent do we have to look at the way we do things, not because there are any nefarious motivations behind them, but simply

because they're not structured to align with the environment that's evolving now?

MR. GANSLER: You really have to understand how both sides work. Someone from industry has to understand how the government works, and someone from the government has to understand how industry works. So her question is a really good one. There is a barrier to doing that. I did it twice. I went from industry to government, back to industry, and then to government. First time I took an 80 percent salary cut and the second time a 90 percent salary cut. My wife said there's a trend there. Next time you'll have to pay them to take the job I guess. But the reality is we really need people on both sides to understand how the other side works.

MR. WALLACE: We're running up against our time. We started a little bit late, but I do want to hear Andrew who's both been on the Hill, now in government. What is it you're going to put out to the Hill?

MR. HUNTER: All right. Well, we've been going through a process of doing deep-dive analysis of programs that have gone through the acquisition process that is so beloved to find out what was their experience. What did they do that drove them nuts? What made sense? What was useful? What was not useful? So we call those our deep-dive initiatives.

We've also been basically talking to folks in industry in whatever forum we've been invited to for the most part and talking to folks on the Hill. So we're trying to get as broad a set of inputs as we can, coming from the perspective of our program managers. This is one of our primary -- really for my effort as kind of a customer if you will for what I'm trying to do.

One of the biggest things that impacts the work that they are asked to do, that they find to be not helpful and not useful and overly constraining, is all of the buildup that comes to the milestone decisions. And there are now in statute

requirements that say the following checklist of items -- and we talked a little bit about checklists and what that can do to processes -- the following checklist of items must be addressed at specific milestones. And what that does is it drives, somewhat to the nature of the Department of Defense, a tremendous amount of process to support those certifications. So we're going to look hard at the milestone certification process and see if it makes sense.

We actually have four separate systems within just the Department of Defense that provide oversight to acquisition programs. And we have our classic acquisition system. We have the Clinger-Cohen process, which requires a certain number of reviews. We have Major Defense Acquisition programs. We have MAIS programs. And so a program manager can be subject to three of those processes all at the same time. If they're running an IT system that -- oh, and business systems is the one I left out, that's the fourth one. So a program manager who's running a business system is subject potentially to Clinger-Cohen, MAIS process, and business systems process. And they're three, distinct, separate regimes if you will. And so one of our objectives is to do away with that duplication or quadrication I guess you could call it and really get back to having an acquisition oversight system that reviews what needs to be reviewed in one process.

So those are some of the things, but there are also a number of individual points of friction if you will where the statute takes kind of a one-size-fits-all approach to the problem. And that may be just right for about 20 percent of what we buy, but for the other 80 percent it's not at all right. And the statute creates if you will a presumption of error or a presumption of almost bad faith if you're not doing a certain requirement. But 80 percent of the time I think objectively that's not the right approach. We do have waivers and as I said, we've proven in the rapid acquisition process we can

use waivers. We can get things done. But the statute in some cases implies that we're doing the wrong thing when, in fact, we're doing the right thing and that's not appropriate.

MR. WALLACE: So conscious of people's time, I invite people to come and talk to the panelists afterwards, but I want to wrap up the formal proceedings with one last question and I'll come down as a way of wrapping this up.

Jon kicked us off very well by alluding to this idea of an IT carve-out as part of some legislation. When Mac Thornberry was sitting on this very panel talking about the legislation that he is hoping to push through, he invited people to suggest ideas into that. So I'd like the panelists to suggest if there's going to be an IT part of that acquisition, what would you like to see in it? Feel free to chip in in any order. Dan?

LT. COL. WARD: I think we're going to look at one sort of IT-centric sort of reform initiative or focus area. I think something along the lines of the rewarding and incentivize, speed, thrift, and simplicity where we really set up things that measure speed and thrift, that reward it, and say if you finish early and have schedule, some benefit of that convey back to you rather than just giving any leftover time and money to some program that was already behind schedule and over budget.

MR. GANSLER: I'd like to see the people who understand the system fix it, not having Congress do another legislation. I mean the one that I think of is when we had the overpriced toilet seats and hammers and coffeepots. Congress fixed the toilet seats they said because they mandated by law no toilet seat could exceed \$220 and they added 5,000 auditors to make sure. Do you think that 5,000 auditors cost anything? I mean they have to be entertained. I hear all the time from the small business people how they're doing nothing but entertaining the auditors. They're not able to run their business.

MR. WALLACE: Tom?

MR. SISTI: I just think that we have to -- this raises another issue. We

have to look at the input costs and output costs of everything we choose to do. You can't just look at the endpoint price and say well, it costs this, now it costs that. It's a win or a loss, depending on what exists. You have to also have a robust methodology around what you're doing and say, okay, what are the opportunity costs associated with the money I'm spending? What is the cost of the audit let's say? Incrementally, what are we saving? If you're spending in an analysis of anything, ten to say five, I would submit that's a loss, not a win, because you also have time delay and other things. So that's one aspect.

Another is I would go back to what was done in the late eighties. When we pulled together the Section 800 panel, we brought together experts from a cross section of the community and they did a methodical supported review on a defined scope of the system. And this goes to Jacques' point about getting people who know what they're doing to take a look at this. We've heard so many times over the last several years, let's just go for the low-hanging fruit, let's see what we can do and take the low-hanging fruit. The acquisition system is not a low-hanging fruit issue. If you think of those things that you made in kindergarten, those little hangers, they're like wind chime things, if one of them moves, the whole mobile moves. And that's sort of the way the acquisition system is. You can't just zero in on one little thing and say you'll fix the whole system because what happens is that has a spillover effect and then you get to a point where you have these incremental approaches to acquisition that lead you to say gosh, we should have done the panel.

MR. WALLACE: Jon?

MR. ETHERTON: I guess what I'm thinking about is not doable as legislation, regulation, or anything else. But I think in IT, especially at the enterprise level, if we had a process in place which more effectively surfaced and sort of brokered among

the different tradeoffs, between the capabilities that we're trying to bring in and the actual process within the government and the organization, so that it wasn't just a matter of trying to smash the outside capability onto the existing process and have that more or less emerge intact, but actually have it be more of a feedback on one side and the other because I really think a lot of the issues that I see in the large IT purchases that we have seem to be driven by the fact that the organizations in the process is people want to keep the same. And yet they want to bring in the solutions which are really built around new thinking and new ways of organizing the process. And I just don't think we get a good tradeoff on those kinds of considerations when we start programs, but I don't think you can legislate that. I don't think there's a way to do that, but that's what I'd like to see.

MR. WALLACE: Andrew, final word.

MR. HUNTER: I would just want to introduce a note of caution to have if you will on an IT-specific solution to acquisition. The reality is most of what the department buys has an extremely large IT component to it, everything just about. And so what you can find and, in fact, what we already have, is a system where we have an IT review process and an acquisition review process. And so we basically duplicate and you don't achieve any efficiency thereby and you don't streamline the process, you complicate the process. And I think there is a -- I can't rule out absolutely that you could maybe somehow affect a system where you streamlined and didn't add complexity, but I think odds are good that you're going to just add complexity. I think what we need is the flexibility within the acquisition process to buy things like IT in a smart way, and I think we can do it. If there's one area where I'd say help could be brought to bear there for IT, it's really in the acquisition workforce side. And I think Erica's question kind of hit at that a little bit that having the flexibility that you can bring people into government service without it having to be a 30 year commitment on their part, which they may not be willing



to make if they're an IT professional and there's many lucrative opportunities for them in the private sector. I think there's definitely some space there to look at different approaches to workforce. I think there are approaches out there that have worked, and I think the workforce side is where I would focus if I wanted to really impact IT acquisition.

MR. WALLACE: Thank you very much. What I think I'm hearing is the future is about flexibility. It's the ability to move in and out of government with expertise. It's the ability to tailor the right roots towards acquisitions. It's the ability to get funding done in a way that allows projects to progress in the way that they should, not the way that they have to.

I think there's a lot of work to be done here, but thank you very much for your contribution. Good luck to those people who are going to be taking this forward.

Thank you very much for coming, and if you could join me in thanking the panel.

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Expires: November 30, 2016