

[H.A.S.C. No. 115-78]

**ASSESSING MILITARY SERVICE  
ACQUISITION REFORM**

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COMMITTEE ON ARMED SERVICES  
HOUSE OF REPRESENTATIVES

ONE HUNDRED FIFTEENTH CONGRESS

SECOND SESSION

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HEARING HELD  
MARCH 7, 2018



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U.S. GOVERNMENT PUBLISHING OFFICE

29-416

WASHINGTON : 2019

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ONE HUNDRED FIFTEENTH CONGRESS

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## ASSESSING MILITARY SERVICE ACQUISITION REFORM

HOUSE OF REPRESENTATIVES,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC, Wednesday, March 7, 2018.*

The committee met, pursuant to call, at 10:02 a.m., in Room 2118, Rayburn House Office Building, Hon. William M. “Mac” Thornberry (chairman of the committee) presiding.

### **OPENING STATEMENT OF HON. WILLIAM M. “MAC” THORNBERRY, A REPRESENTATIVE FROM TEXAS, CHAIRMAN, COMMITTEE ON ARMED SERVICES**

The CHAIRMAN. The committee will come to order. A major priority for this committee over the past 3 years has been reforming DOD’s [Department of Defense’s] acquisition system to help ensure that taxpayers get more value for their money and to improve our agility in dealing with the many serious security threats our country faces.

We have enacted literally hundreds of changes to the law designed to improve agility, streamline processes, remove cumbersome statutory requirements, and foster greater commercial industry participation in the defense sector.

We have also augmented authorities to support rapid prototyping and fielding the use of other transaction authority, as well as engagement with non-traditional contractors, all intended to accelerate innovation during a time when, as Secretary Mattis testified here last month, “our competitive edge has eroded in every domain of warfare: air, land, sea, space, and cyber.”

A major part of the changes we have enacted have placed more authority and more responsibility for acquisition decisions back with the services. Thus, it is essential for us to closely monitor whether the law is being followed and whether adjustments need to be made.

In addition, we are looking to take additional steps in this year’s bill. We have done a lot, but a lot remains to be done. Today, we welcome as witnesses the service acquisition executive [SAE] from each of the three services. Only recently have all three services had their confirmed SAEs in place.

But I also know that each of these three witnesses have had extensive experience in overcoming DOD’s institutional challenges to agile acquisition in order to deliver better capabilities to our warfighters.

Having this discussion early in their tenure in these crucial positions is appropriate. But we will also be discussing these issues in hearings and briefings in the coming weeks with the service secretaries and with the service chiefs.

As with most initiatives in this committee, the push for acquisition reform has been nonpartisan with many members on both sides of the aisle making substantial contributions. I have no doubt that the commitment from the legislative branch on this issue will continue, and we look forward to working with our witnesses today and with others at DOD toward these essential goals.

I yield to the ranking member.

[The prepared statement of Mr. Thornberry can be found in the Appendix on page 51.]

**STATEMENT OF HON. ADAM SMITH, A REPRESENTATIVE FROM WASHINGTON, RANKING MEMBER, COMMITTEE ON ARMED SERVICES**

Mr. SMITH. Thank you, Mr. Chairman. I agree substantially with your remarks. I think it has been a huge priority for this committee to work on acquisition and procurement reform so that we can get more for the money that we spend, and I think the chairman here and also in the Senate has done great work on providing the Department with options to improve that process.

So several things we are interested in today; number one, how is implementation going on the acquisition reform. Have we done too much? Have we thrown too much process at them to get them to try and fix it? Is there more that we could do on that front?

And then the other thing, we had a discussion at our retreat with the Deputy Secretary about some of this. What would be really helpful I think on acquisition reform is, frankly, when you say acquisition reform people's eyes primarily glaze over. And this is not the most well-attended committee hearing I think we have ever had.

It is not terribly exciting. It is terribly important because it is a matter of how much money we spend. If we could come up with some measurables, some anecdotes. The Secretary was talking about some of his frustrations with the per airplane cost of the F-35 versus the per airplane cost of the 787 when he was working at Boeing.

Yes, it is worth noting that the 787, you know, did not have to be stealth, did not have to fire any missiles, did not have to go at Mach 3, so there are reasons for that. But he also mentioned how difficult it was to get a replacement part for a 737 in the DOD versus a 737 commercial. You can do it in like less than 24 hours commercial. It took like 2 months.

So as we are looking at acquisition reform, if we can have success stories, like here is a per unit cost, here are some things we are having trouble with repairs, we have cut that time in half, we sped that up. If we could show measurable improvements, I think that would help get people more excited about acquisition reform.

And also final point, and I think this is the most important thing in acquisition reform is changing the culture within the Pentagon. We can write whatever laws we want to write. We can write the best acquisition process the world has ever seen.

At the end of the day, the people over in the Pentagon are going to be there a lot longer than any of us and they are the ones who are going to make the decision.

And I think if the culture comes down to the point where everyone at the Pentagon is really excited because they replaced a flap on an airplane in half the time they used to and that becomes incentivized and rewarded, that is what is going to be the key to get us moving in the right direction.

So I thank the chairman for having this hearing and for all of his work on acquisition reform, and I yield back.

[The prepared statement of Mr. Smith can be found in the Appendix on page 52.]

The CHAIRMAN. I thank the gentleman.

We are pleased to welcome as witnesses today the Honorable James F. "Hondo" Geurts, the Assistant Secretary of the Navy for Research, Development, and Acquisition; the Honorable Bruce Jette, Assistant Secretary of the Army for Acquisition, Logistics and Technology; and the Honorable William Roper, Assistant Secretary of the Air Force for Acquisition.

Without objection, your full written statements will be made part of the record and we will turn the floor over to you all for any oral comments that you would like to make. Again, thank you for being here.

Dr. Jette, maybe we will start with you.

**STATEMENT OF DR. BRUCE D. JETTE, ASSISTANT SECRETARY OF THE ARMY, ACQUISITION, LOGISTICS AND TECHNOLOGY**

Secretary JETTE. Chairman Thornberry, Ranking Member Smith, and distinguished members of the Committee on Armed Services, thank you for the opportunity to appear before you today to address Army acquisition reform initiatives.

The Army is fully committed to leveraging the reforms Congress has provided. As the Assistant Secretary of the Army for Acquisition, Logistics and Technology, I fully support the Secretary of the Army's top priorities: readiness, modernization, and reform.

Readiness is essential to current world environment. However, today's modernization will be tomorrow's readiness. Acquisition reform is absolutely essential and is ongoing.

The Rapid Equipping Force and the Rapid Capabilities Office already provide rapid solutions. Streamlined processes, policies, and direct senior leader guidance to the acquisition workforce are setting expectations. Coherency between operational requirements and acquisition communities is being accomplished through the Chief of Staff of the Army's reinvigorated Army Requirements Oversight Council.

Moving milestone decision authority to the services for all but select programs has enabled both greater flexibility and accountability. NDAA [National Defense Authorization Act] 2016 section 804 bolsters and simplifies rapid maturation of viable requirements and select procurements. Better management of intellectual property provides contractor protection while we retain control of our destiny. Central to this is maximizing the use of modular open system architecture.

Other transaction authority can allow greater contract flexibility; however, all contract types offer strengths to be exploited, including in combination. Data transparency, one of my priorities, enables data-based decision making.

The Secretary the Army and the Chief of Staff of the Army have established six modernization priorities to ensure overmatch. Our acquisition system must switch from a slow, sequential Industrial Age model to one more aligned with commercial concepts and timelines.

Realignment of research and development programs and funding to the six priorities ensures a focus against military unique needs. A gating process enhances fiscal and project control. Innovation is enabled through better funding allocation rules. Crossing the valley of death from research programs to programs of record is now a deliberative process.

Directed energy, artificial intelligence, ultra-secure communications, robotics, energetics, and altered-design materials must provide advantages beyond mere commercial application to ensure an overmatch against our adversaries.

As I said during my confirmation hearing, there are about 5,000 government contractors but about 23 million corporations in the United States. We must make it attractive to do business with us in order to increase competition, decrease costs, and gain access to innovative technologies.

In order to fully realize the benefits of acquisition reform, it takes a talented, well-trained acquisition workforce. The Defense Acquisition Workforce Development Fund and the Defense Acquisition Workforce Improvement Act have been excellent tools. However, particularly in the uniform side, the 20-year career pattern of the Defense Officer Personnel Management Act places constraints on training and experience development.

Mr. Chairman and distinguished members of the committee, the Army has benefited greatly from this committee's ongoing emphasis on reform, for which I am grateful to the members of this committee. Thank you for your steadfast support to the outstanding men and women of the United States Army, Army civilians, and their family.

I look forward to your questions.

[The prepared statement of Secretary Jette can be found in the Appendix on page 53.]

The CHAIRMAN. Mr. Geurts.

**STATEMENT OF JAMES F. GEURTS, ASSISTANT SECRETARY OF THE NAVY, RESEARCH, DEVELOPMENT, AND ACQUISITION**

Secretary GEURTS. Chairman Thornberry, Ranking Member Smith, distinguished members of the committee, thank you for the opportunity to appear before you today with my fellow service acquisition executives.

I look forward to discussing how the Department of the Navy has embraced the new acquisition authorities, the obstacles and opportunities we have experienced in accelerating the benefits of these new acquisition authorities, and recommendations we have on how to continue to improve the defense acquisition enterprise.

We are taking a 3D [three-dimensional] approach to improving the Department of the Navy's acquisition: Decentralization, by that I mean putting authority and accountability at the right level; differentiation, having several acquisition tools available and choosing

the right tool for the job; and digitization, harnessing the power of the digital age in all we do and how we do it all.

All of this relies on our most important asset, our people, and the approaches we take to recruit, train, and retain the workforce we need to compete and win in support of our National Defense Strategy.

An experienced, trained, and empowered workforce is by far the most important driver in achieving strong, repeatable, and sustained performance in defense acquisition. I greatly appreciate the committee's leadership in helping the services improve our acquisition outcomes.

Thank you for the opportunity to appear before you today, and I look forward to answering your questions.

[The prepared statement of Secretary Geurts can be found in the Appendix on page 65.]

The CHAIRMAN. Dr. Roper.

**STATEMENT OF DR. WILLIAM ROPER, ASSISTANT SECRETARY  
OF THE AIR FORCE FOR ACQUISITION**

Secretary ROPER. Chairman Thornberry, Ranking Member Smith, and distinguished members of the committee, it is an honor to appear before you today to discuss defense acquisition reform and to do so with my fellow acquisition executives.

While I am still newly appointed as the Assistant Secretary of the Air Force for Acquisition, Technology and Logistics, I am encouraged by steps the Air Force is taking to implement recent reforms championed by this committee.

Our acquisition work force is strong, technically skilled, and motivated to build and sustain the world's most lethal Air Force. So my top priority is empowering them to leverage the newly restored power at the edge.

This is more than just delegating decision authority. It is creating opportunities to reorganize, retrain, refocus, and remove barriers so that our workforce can fully take advantage of having the reins in their hands.

To this end, I applaud your recent reforms and for your important action to lift the sequestration caps for fiscal years 2018 and 2019. Stable and timely budgets devoid of continuing resolutions and budget caps are absolutely necessary to build the Air Force this country needs and deserves.

The Air Force is aggressively implementing the recent acquisition reforms. We continue to delegate milestone decision authority to the lowest possible level to speed up decision timelines. We are also reinvigorating prototyping to accelerate technologies and to operational capabilities.

From platforms like the light attack experiment, to weapons like hypersonics, to enabling subsystems like the adaptive engine transition program, we have great examples of flying before buying that I will endeavor to make the norm, not the exception.

Finally, we are also beginning to adopt and adapt commercial technology and practices that can help solve today's military challenges with lower cost and speed.

But there are some areas I know we can improve. Software acquisition continues to lead to overruns. Though we have many rem-

edies underway, we need an enterprise cure. This will be challenging, but we have fertile ground in many areas, like space, to experiment with doing things differently and more commercially.

Another area is innovation in logistics and sustainment. As I look at the total Air Force costs, logistics and sustainment encompass the majority, yet it receives disproportionate focus in our research and development portfolio.

Many commercial technologies and practices have the potential to reduce cost while simultaneously increasing the availability of Air Force systems. These technologies should be explored.

A final area is operationalizing artificial intelligence. The Air Force has always pioneered new warfighting domains that allow us to observe, orient, decide, and act the fastest: first air, then space, then cyberspace, each new domain shrinking the decision loop.

Now a new domain looms that will likely draw this loop into a knot of unprecedented decision speed. We must dominate the new blue yonder of AI [artificial intelligence], but to do so we have to design for it.

In summary, the Air Force is off to a good start in reforming acquisition, but there is another level we can reach. Though reforming the process typically receives the focus, it is empowering people that historically made Air Force acquisition a powerhouse of innovation and agility.

It is time to return to those roots and build and sustain next-generation systems that will bequeath our current dominance and lethality to future airmen. Given our talent, leadership, and new authorities, I am very excited about what is to come. Thank you.

[The prepared statement of Secretary Roper can found in the Appendix on page 72.]

The CHAIRMAN. Let me ask each of you just a couple of basic questions. Number one, is there anything in the reforms we have enacted in the last 3 years you think we just got wrong?

Dr. Jette.

Secretary JETTE. Congressman, I think that there are two things that I think that might be addressed or considered. I mentioned 2016 section 804 allows us to do a rapid acquisition but it has a limitation on it. So it says you can do 0 to 5 years but in 0 to 5 years what you have to do is you have to be able to field the full set to the Army.

The Army is pretty big. It makes it very difficult to use that. If we were able to make that change from fully field to IOC [initial operating capability], and my preference would be IOC and/or block upgrade, that would give me a great deal more flexibility to apply that particular section to a broader array of opportunities.

The second one, I think I would probably get some agreement on this, we push everything down to—push more of the program decision making and the MDAs [milestone decision authorities] down to the services and then we can push them out. But we then turn around and have an 807 requirement to run everything back up through the DEPSECDEF [Deputy Secretary of Defense]. And of course whenever you move it down and then move it back up it adds a great deal of additional processes.

I would suggest that you might consider changing that. Either making it those select programs which remain a 1D or perhaps eliminate that requirement altogether.

The CHAIRMAN. Okay. Thank you. I appreciate that answer. I am not sure if those are big things we got wrong. Those are tweaks that need to be fixed, and I have no doubt there are some of those. But we need to identify them and so I think you are right.

Mr. Geurts, did we get something wrong?

Secretary GEURTS. Sir, I do not think you got anything big wrong, and I appreciate all the authorities. I think I speak for all of us here. There are plenty of authorities for us to go off and use in all the legislation that has been passed in the last couple of years.

So from the Navy perspective there is nothing I cannot go off and do because I am waiting on an authority or a limitation. I would agree with my counterpart here, Dr. Jette, that there are some areas where there is conflicting guidance.

One, we want to push it down, but then decisions still have to go up through different levels so I would put that in a refinement category. And then I think there is a little bit of, and again I would put this in refinement, decluttering. There is a lot of legislation out there. Some of it is very close, but just offset by a few degrees.

And so I think the opportunity for this year is we have had some runtime with these authorities so we can provide some input on what is working and what we are having trouble implementing. And then there are probably some opportunities to refine and declutter.

The big trick is transitioning from authorities to trained workforce and power to implement. And I think that is all of our challenge. And so as we can solidify the authorities, refine them, then we can perfect how to operationalize them through a trained workforce. That is our job moving forward here as service acquisition executives.

The CHAIRMAN. Okay. And I would just mention we are keeping a close eye on the [Section] 809 Panel for some of that decluttering, too.

Dr. Roper.

Secretary ROPER. Yes, Mr. Chairman. I think the committee should declare victory on the reforms. I think it is what we need as service acquisition executives to go try to restore the appropriate level of decision authority where it belongs.

I think I share the insights from both Dr. Jette and from Mr. Geurts that there are some implementation details in things like 807, but those are implementation details.

What I expect that each of us will do is keep coming back to you with slight friction points that can be refined but they are still going to fit within the overall construct of the reforms that you have put in place.

One of the very important things that this committee is doing, aside from doing the language, which we very much appreciate, is holding hearings on this topic, which is a useful way for us to share information between ourselves, but it also sends a clear message to the workforce that this delegation of authority and expecting people to be able to, be able to make decisions on their own and that

that is okay and is in keeping with the intent of Congress is very useful.

I share Mr. Geurts' view that we really now have to equip a workforce that are ready to take the reins that you have allowed us to put in their hands and to feel empowered to use them and also knowing what the boundaries are.

So I think over the next few years we will be coming back to you in a continuing dialogue about how to refine the process, but I think as a first step it is a very good one.

The CHAIRMAN. Let me ask one more question, and I am going to bounce off a comment that Mr. Smith made. He talked about how do you measure whether things are getting better or not?

It seems to me that a lot of what we talk about is process changes and what we ought to be looking at is what is the output because it does not really matter if we write lots of laws and you all educate the workforce and change the regulations. If we do not have the best our country can produce getting to the warfighter faster than all of this is—is for naught.

So what would you say to Mr. Smith's point about how you measure output—not process changes, but output? What can you all and what should we be watching for? Go down the line again if you do not mind.

Secretary JETTE. Mr. Chairman, I think you must have sat in the back of the room in my first briefing to all my PEOs [program executive officers]. In my time in the Army when I was a program manager I took over two programs.

Both programs I took over were considered successful programs from the program management perspective, but nothing worked. The process was adhered to to the nth degree, every box checked, everything square, but there is no product. That is an unacceptable outcome.

And in fact what I have done is I have turned around to my workforce and I have said we are going to be product-oriented. Your accountability is not whether you followed the process in detail but whether or not you generate a product.

And to that end you have given us great authorities. We have a sequence of things we have to do to make sure we get to the end state. Step one, step two, step three, step four, but underneath that is a series of opportunities in how do we do that.

I kind of tell them you have got subparagraph A which says do everything, all the boxes checked; B does most things; C do some things; D ask forgiveness.

They are being held accountable initially. My approach is they are being held accountable to make a proper selection of that pathway, not to take the safest path.

I then turn around and reflect on what metrics we have in place. What real tools do we have in place to do measuring and accountability? And I have to admit that the tools that we have in place are weak, too, as was stated by my colleagues. We need to establish good measurements of what is being done to train our workforce and then hold them accountable to it.

I think that your recent provisions in reform have given us some of those tools. We now need to go put them in place and make them work.

Secretary GEURTS. So sir, to add on to that I would say, and again my almost 12 years before coming here at Special Ops [U.S. Special Operations Command], it was delivery to the field. That is the ultimate outcome. Did we get product into the hands of our warfighters and let those men and women take those products and do the Nation's bidding. So ultimately that is always my measure of performance is did that get to the field?

I would also say though there is a portfolio view of the world, so just because something did not get to the field in itself may not always be a bad mission outcome. And so depending on what phase of acquisition we are talking about, it may be how fast did I approve, you know, did I actually want to have a requirement for that?

So on some of the prototyping in early science and technology, it is kind of I want to acquire to decide if I have a requirement. So I am going to quickly build a little expendable weather thing. And then I will decide if that can work and I can build it cheaply, I might have a requirement. If it is going to take me 10 years and cost a fortune, so I use acquisition in that phase to inform requirements. And so from that the mission outcome is could I better inform the requirement and then create a better acquisition outcome if we want to go down that line? And so I would go with those.

And then the last is what is our ability to push innovation out to the point of need? And again, some of the technology with either open source or with applications and software and cloud-based things or with 3D printing.

So how do I let the soldier in the field actually figure out how to build this tank impeller that he could get built in 3 weeks there locally for, you know, a fraction of the cost and, quite frankly, a fraction of the time it would have taken them to get that through the normal supply system?

So to Dr. Roper's point, you know, how do we apply technology in this, you know, every dollar counts, every day counts, every person counts approach all the way through to sustainment? And so in that phase the mission outcome is how much more available can I make the equipment that the Nation is invested in available to those men and women?

So I think there are different measures depending on which piece, but ultimately it comes down to is the equipment available, is it capable, and do we have it in enough quantity so that the men and women can use it to get the missions done that we have asked them to do.

Secretary ROPER. Mr. Chairman, it is a great question. I have thought a lot about this, especially during the first 2 weeks in this job. Most of the things that I am looking at in programs, the accountability and balance sheets are based on dollars. They are based on cost.

We have a lot of different ways to track cost in programs. And what I predict we are going to see greater need for and demand for is to have time-based metrics, tracking things like time to contract, time to complete development, time to field, time to fail, right? It would be a great one if we want to try to quit having these large program where the failure occurs 10 years after the start.

And one that is very important to me is time to upgrade. It takes a very long time for us to upgrade anything today, especially software, but we all brought smartphones in that can upgrade their software continuously. And so to me, thinking about the future military, we need to provide our warfighters capabilities that they can upgrade continuously in the field to deal with advanced adversaries.

And the new National Defense Strategy says we need to start building that military now. So I expect a lot more time-based metrics in the future that will balance the cost-based metrics.

The CHAIRMAN. Okay, thank you.

Mr. Smith.

Mr. SMITH. Thank you. You mentioned the, you know, 10-year process of investing in something and then finding out it does not work. And I think that, you know, for all the details of acquisition reform, again, if you wanted to sort of make it simple for people looking at it, the question is what can we do?

What is acquisition reform doing to help us avoid, and we all have our favorite examples, but if we could go back to 1997, we would not build the F-35 the way we are currently building it. It is, at the moment, too big to fail. It is the only jet fighter that we have or fighter attack plane that we have to replace. We have got to build it. We have got to make it work.

But you know, 20-some years later and, you know, hundreds of billions, coming close to trillion dollars, we have that example. You also have the expeditionary fighting vehicle in the Marine Corps, \$8 billion, I do not know, 7, 8 years, and then yes, this is not going to work. Let us get out of it.

You know, you had Future Combat Systems. Actually I love quoting Neil Abercrombie on this. See, he said that the only reason that the Army came up with Future Combat Systems is the Army really did not have any big systems.

You know, the Navy has got aircraft carriers, you know, the Air Force has got bombers and all this. So they wanted something that, you know, they could force to get started and then force people to spend an unlimited amount of money on it because they just could not walk out of it.

So they created Future Combat Systems, which was going to try to throw everything into one. I am not sure he is entirely wrong about that.

So how do we avoid that, get stuck in this pattern of, okay, this is what we have got to have? And I think a big part of it is the perfect becoming the enemy of the good. That is easy to say but what does it mean?

I mean, and I think going at the F-35 would be a good way to do it. You know, let us time travel back to 1997 with the benefit of foresight and what would we do differently in the way we constructed that program so that it did not become the money pit that it has become?

Secretary ROPER. Ranking Member Smith, I wish we had a time machine. We are working on it, but it is not going to field anytime soon.

Mr. SMITH. Yes, I get that part. I am speaking metaphorically here.

Secretary ROPER. Yes.

Mr. SMITH. This is with the benefit of hindsight.

Secretary ROPER. Yes. So Congressman, one thing that I really—

Mr. SMITH. Can you pull your microphone—

Secretary ROPER. Yes. So Congressman, one thing that I really encourage members to take an active interest in is prototyping. It is not just something that is a boundless term or word. It really means something when you do it right.

And when I look back at a time when the U.S. Air Force prototyped well was during the experimental plane heyday when we were continually spiraling advanced aircraft to try to stay ahead of the Soviet Union. The reason that that worked so well is there was discipline to only do one new thing per prototype.

So whatever we did before, we are going to build one thing on top of it. And if we are not able to achieve it then we know the thing we are hoping to do—

Mr. SMITH. Is this—

Secretary ROPER [continuing]. Is going to be the cost driver or the time driver.

Mr. SMITH. To make sure that I am tracking, you know, you have, like, a fighter plane. It's like, okay, we built this; it is good. It would be nice if we added this one thing to it.

So you added that one thing to it and you had a B model. Then you sort of moved slowly forward like that—

Secretary ROPER. In fact—

Mr. SMITH [continuing]. Instead of trying to say we are going to just eat the whole buffet in one big bite and we are going to make the perfect plane right now today.

Secretary ROPER. Exactly, sir. And most people will remember planes like the SR-71, an amazing plane, but rarely do people mention the A-12, which was the plane before it that mastered Mach 3 flight. So we knew when it was time to build the SR-71 that we had Mach 3 flight down and so then it was time to do the next thing, which was move it to a two-seater.

So there was a lot of discipline to spiral as opposed to just kicking off a large program where there are multiple difficult things to do and hoping that they will somehow all work out and in the end you will get the system that you want.

Mr. SMITH. I think that is absolutely crucial, and the only way I can see us avoiding that because the reason we get into this trap is because of the briefings that come our way to say, okay, you are building this thing, but my gosh, the Russians are building this, the Chinese are building that.

And you do not have this, and we have simply got to be willing to accept, build something that is going to work, because look, you know, I mean the odds are we are not going to be fighting the Russians or the Chinese.

We are going to be fighting something else anyway, and we can build up to it and it just puts us into this trap. And I think that, you know, that I totally agree with that. I just hope that we can start doing it on a consistent basis.

Secretary GEURTS. Sir, maybe taking a little more generalized than just the F-35 example, although if you looked at my resumé

I was the X-35 guy prior to that, so I was around in the late 1990s. I think the challenge is how do you grow resiliency in your programs?

And so how do you focus on getting a good base platform that then you can rapidly adapt and modify as the threat changes, as the technology changes, as the, you know, needs of the Nation change? And where we have got it right, I think in many of the programs—I will take submarines. We come up with a good submarine and then now we have got a very disciplined, rapid way to quickly get new technology onto those submarines.

But, you know—

Mr. SMITH. We all thank Joe Courtney for that, by the way.

Secretary GEURTS. Yes, sir. Yes. But, you know, we have been forced a little bit into shipbuilding side because you only get access to the ship at certain points.

And so, you know, taking a lot of time to actually think in advance how are we going to—and we did not have it on submarines, right, 20 years ago, and we had to actually sit down and think very methodically about how do we continue to always have the best submarine even though we only get a chance to, you know, build them on very small centers and then get them back in the yards.

And so I think that is another way that we have tried to approach it so that you have a good base platform with a lot of resiliency and margin so you can quickly iterate to wherever direction goes, because we will not know what we need on those platforms 10 years from now

Mr. SMITH. I will move on to other people here, but that seems so utterly logical. How did we get so off the beam in the late 1990s and the early part of this century?

Secretary GEURTS. I think, again, you start trying to do a lot of things simultaneously, right, and not really look at what I would call a minimum viable product. You know, if I take my SOCOM [Special Operations Command] experience, a lot of it is what is the minimum that adds capability to the commander in the field? Let us focus on that and then rapidly iterate.

Mr. SMITH. Yes. For—

Secretary GEURTS. So—

Mr. SMITH [continuing]. For all the acquisition reform, I mean, that is really what we have to do. And the SOCOM experience, I will close with this thought—sorry. I will move on to other people here, but I always tell a story of being down at AFSOC [Air Force Special Operations Command] about 10 years ago, 8 years ago, and talking about how, because, you know, they do not get to buy their own stuff. They have got to go through somebody most of the time unless it is small enough, but they do have flexibility within their acquisition.

And they were short of ISR [intelligence, surveillance, and reconnaissance] platforms. I am sorry. Long couple of days. And so normally the way we would do this within the bigger military is you would send out an RFP [request for proposal]. You know, people would give you all these different models.

And then people would look at it and say, well, I like that one, but what if it had a gun here? What if it had that? It would go through three, four—they went on Craigslist. And they found some

company down in Latin America that was selling, like, an eight-seater, I forget what it was. I think it was like a P-28 or something, plane from some company.

They bought a dozen of them and then they put a lot of electronics on it and they had themselves an [ISR] platform in about a month. That is what I would love to see us do in the Pentagon vastly more often than we do.

And I think having talked to the Secretary, the Deputy Secretary, and others over at the Pentagon, I think that is where you guys want to go. So I apologize, but I am going to yield back and let some other members get in here.

The CHAIRMAN. Mr. Wilson.

Mr. WILSON. Thank you, Mr. Chairman, and thank each of you for your service to our Nation.

I first would like to recognize Chairman Mac Thornberry for his continued work on reforming the outdated and inefficient acquisition process. And in light of today's hearings, one of my concerns is not only about the cultivation of research, development, test, and evaluation, RDTE, but the protection of subsequent intellectual property.

A recent issue of concern for the committee has been the Chinese government financing of Confucius Institutes, which have been partnered and embedded in over 100 universities across the United States.

In 2009, the head of the propaganda division for the Chinese Communist Party and a member of the party's politburo standing committee, called Confucius Institutes, quote, "an important part of China's overseas propaganda setup," end of quote.

In light of China's use of the nontraditional collectors like the Confucius Institutes, which, the FBI [Federal Bureau of Investigation] director stated in recent testimony, allow the Chinese government to exploit, quote, "the very open research and development environment that we have, which we all revere, but they are taking advantage of it," end of quote.

And this is for each of you, what protections are in place to protect the American people?

Secretary JETTE. Congressman, IP [intellectual property] is a really important issue to me. In fact, I was happy that the Patent Office issued me another patent yesterday. So our openness is one of our strengths and it is also one of our weaknesses.

When I was at MIT [Massachusetts Institute of Technology] there were a number of Chinese students that were in the student body and you could tell that they were specifically set there to gather, to understand, to gain, to be educated, and they were going back. And they were held in that position to do that.

If you take a look, before I took this position one of the things I did was teach over at Georgetown University, "Robotics and the Future of War." Without any classified sources you can get online and you can find the leadership of the Chinese government standing next to technologies that were developed using DARPA [Defense Advanced Research Projects Agency]—not their DARPA, our DARPA.

And so we do have a significant weakness in our overall protection of our intellectual property. Some of that I am not sure is real-

ly a protection issue that we can resolve because we have this open society and open publishing of patent data and intellectual property in that side of things.

We have openness on the side of education. These are not defense acquisition-related issues specifically. Where we can be involved on our side, and I think that we do try to do that in a fairly careful way is we do very little, if any, research in a classified mode at universities. And then if we have a classified or sensitive data research that we want to do using universities, we try to do that separately.

Are we doing it as well as we could or should? I do not think we looked at it as hard as we probably need to at this point. MIT has Lincoln Labs. Lincoln Labs is where they do any classified research. It is separate from, but the professors can move between.

We need to take a much stronger look at that type of a mode and make sure we are not doing any classified research at universities.

Mr. WILSON. Thank you.

Mr. Geurts.

Secretary GEURTS. Yes. Sir, I would second Dr. Jette's that we need to be sensitive to that and to agree we can separate out academic learning from academic research and in particular applied research.

And so as we look at it from the Navy and Marine Corps a lot of what we look at is how to think about those differently and then how do you use institutions like UARCs [university affiliated research centers] and some of these other affiliated institutions to get the benefit, and there is great benefit from that close integration with academic research, and that is an absolutely critical part of our national security, while protecting.

And now what we do in the Navy also is look very closely at the classification regimes and control measures around that to make sure that we have got the right guidelines in the right place and protect things.

But it is a balance and it is one I think, you know, the larger issue of supply chain integrity, I think, is, you know, this is part of that larger issue of how do we guarantee that we are protecting those either knowledge or actual solutions so that we remain competitive and in a position to win.

Mr. WILSON. Thank you.

And Dr. Roper.

Secretary ROPER. I will just briefly add, since I know we are past time, the divide between secret and below has long been something that we have had a few tools to defend. So data that is unclassified becomes more and more sensitive as it becomes more applied, but still is not across the line. Historically if we wanted to protect data we create a network, a protected network and we say put your data on it.

So one area that we really should focus on is there is a lot more focus on protecting data today. Technologies that are protecting data, whether it is encryption or block chain, not the network itself.

And so there is promise that maybe there is a way that we could protect sensitive but not yet classified data. And I think it is something that we should look at seriously.

Mr. WILSON. And thank you, Mr. Chairman, for allowing a bit more time for such an important issue. Thank you.

The CHAIRMAN. Okay.

Mr. Courtney.

Mr. COURTNEY. Thank you, Mr. Chairman and like Mr. Wilson, again, this is a great hearing and I want to salute both you and the ranking member for the 2016 and 2017 NDAA's. I mean, one of the signature brands of those pieces of legislation was acquisition reform, which is, again, not for the faint of heart in terms of trying to sort of plow into the very complex issues.

And as we have heard from the witnesses, I mean, this is really showing real results. So congratulations to both of you.

And congratulations to all three of you for your confirmation and, you know, it is an historic time lifting the caps in the bipartisan budget agreement obviously is going to hopefully take the handcuffs off in terms of moving forward in a smart way with the priorities of the country.

Assistant Secretary Geurts, you and I have talked a lot, in fact yesterday, about the fact that we are in a, again, a big sort of moment as far as shipbuilding goes. You know, one of the challenges of this sort of congressional process when you talk about shipbuilding is that shipbuilding is a long game and, you know, the sort of catechism in Congress is really to do sort of budgets on a 1-year increment.

And one of the things that this committee has tried to do is sort of to, you know, think smarter and move smarter with multiyear authorities in terms of block buys, incremental funding, continuous production authorities.

Your testimony on page 2 talked about the potential savings for the next block contract for *Virginia* and I was wondering if you could sort of talk about that a little bit, and really sort of connect it to the fact that this committee sort of, again, created the legal environment so that that kind of contracting process could move forward.

Secretary GEURTS. Yes, sir. You know, and as I have kind of joined the Navy team and got to see what is going on behind the scenes more than I did in my last role, I am impressed with the—again, it is a long game and you cannot just react on the spot.

And this idea of how do we create the right business environment to allow business to operate cost effectively and with an element of urgency? Part of that was putting together a shipbuilding plan which shows a multiple of trajectories depending on how, but at least lays out here is the framework with which we get a serial production that industry can understand where they can invest.

And where this committee has really helped out is we are saving on—you know, and I can point to multiple continuous production on—that is going to save \$1.2 billion.

The potential, our discussion yesterday of maybe block-buying the two carriers can save billions of dollars. We have saved, we think \$5.4 billion on *Virginia* just by, I know, all deciding what we want to buy and then creating the right environment to buy it as cost effectively as possible. And it is not just money. If you look at it, sir, you know, on *Virginia* we have taken 2 years out of that span time.

So back to, sir, your question of what do I measure? We are delivering submarines to the fleet 2 years earlier at a greatly reduced price with a more capable submarine. That to me is a good mission outcome. If you see what we are doing on P-8s, delivering those on time, under budget to the point where we could buy additional P-8s with the budget we had allocated because of that.

So I think when we can marry up, synchronize what do we want to buy with a long-term view, not just in the current budget session, and then allow us to bring forward options for how we can buy it, then I think we can see how we really get some savings.

And when I look at the 30-year shipbuilding plan, I do not think it is just on Congress if we want to go faster to add more money. We need to be challenged to deliver more capability for the money we have and that is where I think these authorities can really be powerful.

Mr. COURTNEY. Thank you. You know, as we sort of have our inevitable negotiations with the appropriators I may frame your remarks to pass around the room when we have those discussions.

Secretary GEURTS. Yes, sir, and in particular our efforts to think about not just the prime contractor but the supply base and to Dr. Jette's point of we often focus, at least in shipbuilding, on the primary yard, which is important. But the most critical thing in my experience, 30 years of being a program manager, is the supply base.

That tends to be what paces everything. That tends to be where your hidden risk is, and it tends to be where your biggest opportunity, if focused with resources and predictable production, where you have got an ability to really accelerate and so—

Mr. COURTNEY. Thank you.

Secretary GEURTS. So, you know, our first—

Mr. COURTNEY. So yes, and just for the record I will submit a follow-up question on that point. The Procurement Technical Assistance Centers which provides technical assistance to the small guys is a critical program that obviously as a committee we want to protect. And again I will submit a question for the record so that you can respond to that in the future.

Secretary GEURTS. Yes, sir. Will do.

Mr. COURTNEY. With that I yield back.

The CHAIRMAN. Ms. Hartzler.

Mrs. HARTZLER. Thank you, Mr. Chairman. It is a great hearing and I, too, applaud your leadership in moving us forward here and appreciate your comments today.

A number of large programs are being managed by rapid capabilities offices, and for example, in the Air Force, the B-21 Raider Long Range Strike Bomber and the X-37B Orbital Test Vehicle are both being run by the Air Force Rapid Capabilities Office [RCO].

And if such large and complex programs are run using rapid capabilities offices and authorities, the question is should we scrap the current acquisition process and have all DOD procurement go through rapid acquisitions?

So I guess we will start with you, Dr. Roper, since I cited two examples in your department.

Secretary ROPER. Yes, Congresswoman. One, I am a big fan of the Air Force RCO. I have had the privilege to work with them

through my career and a lot of what we need to do in acquisition reform is taking the best practices from organizations that know how to get it done and spreading them across our respective services.

One thing about the Air Force RCO that I do not think is commonly known is they do not have any special or unique acquisition authorities. They follow the 5000 series like everyone else. But they do have something that we could learn a lot from, and that is a much thinner oversight mechanism.

They have a board of directors' advice through the continual review process through the bureaucracy, and they also really value workforce. They put an effort into making sure that their program managers are properly trained, know how to streamline. And so that we start today needing to do acquisition reform with a few bastions in the Air Force that know how to do it well.

And what I think my job is is to take the best practices from those organizations like the RCO and move them across the service so that in the future everyone is a rapid capabilities office.

Mrs. HARTZLER. So are you actively doing that?

Secretary ROPER. Yes, Congresswoman. I did my first review with the RCO yesterday. I am very pleased with what they are doing on all of their programs, including the B-21. There are a lot of lessons learned.

And I think what we can do to speed the transition is getting people out of our normal program offices and just having them interface with an organization that does have a different business model and I think the migration of learning should happen quickly.

Mrs. HARTZLER. That is great. I know change is hard but I am glad you have a model you feel confident in and that you are taking steps. And you mention workforce and that is my second question, and I guess to you and Dr. Jette at this point, and if we have time certainly Mr. Geurts.

But it seems like, you know, many major defense acquisition programs are troubled by lack of government ownership of key research and design information which we have heard about, especially software developed at the research and design phase of acquisition. A notable recent instance is the F-35 program. But the problem extends to many other major weapons that have been fielded for decades.

Some have asserted that these problems stem from the government being outgunned when it comes to contract negotiation. And in other words, relatively young, Active Duty service members with only a few years' experience compete with very highly paid corporate lawyers with decades of experience on the other side of the negotiating table.

And I am wondering first what you think about that acquisition, but then also in your testimony, Dr. Jette, you reference the Army Acquisition Workforce Human Capital Strategic Plan where you are trying to focus on the acquisition workforce. And you say it is also about recruiting and retaining high or top-notch acquisition professionals to sustain the workforce through time.

You say the Army is examining these things, but then you say we are examining the constraints of the Defense Officer Personnel Management Act [DOPMA] on offering full development of acquisi-

tion professionals. So there are several questions in this, but I think this is a key point.

I have met with multiple people in the Pentagon. These personnel are key to this to be able to move this forward, and so I would like to hear your thoughts about first of all on the assertion are we outgunned by corporate lawyers and others?

And two, do you feel like what is going on in the Army, Dr. Jette, is going to help address this?

And third, what are—you say you are examining the constraints of the Defense Officer Personnel Management Act. So what are some of those constraints you feel like to gaining those high-quality acquisition professionals?

So I guess, you know, go ahead and start with you and then hopefully Dr. Roper can answer, too.

Secretary JETTE. Congresswoman, that is a great question. First, I will tell you that we do have tremendously talented and high-quality people.

It is often difficult to have a person whose primary goal in life had been to be a soldier turn around and have to develop all the skill sets necessary to sit across the table from somebody who went through Harvard Business School and got a law degree at Yale and then suddenly is sitting on the other side of the table with 15 years' experience in negotiations. So just simply, we need to up our game to be able to properly manage that.

From the talent development piece, soldiers—the DOPMA piece is soldiers have 20 years. Things have to fit in there. They have certain things they have to do on the military side. We have certain things we are supposed to do to make sure they are qualified acquisition individuals.

When you get done, I am limited on the experience I can offer them. I have begun talking to the Chief of Staff of the Army about the possibility of perhaps generating a sabbatical, allowing them to have a paid sabbatical so we can send them off to additional graduate school, to additional experiences in industry.

I would love to have some of my acquisition officers [be] lawyers, not to be JAG [Judge Advocate General] officers, not to be in the general counsel's office but to sit there at the table with that type of background so that I can sit across the table more effectively. And to look at those who are going to bring me the technical competencies I need to be able to predict the future 5, 10, 15, 20 years out and be leaders in that area as opposed to simply program managers.

And I am not diminishing program management. I am just saying there are skill sets we tend to develop one and not the other. And I am sorry I went over.

Mrs. HARTZLER. Well, I appreciate your indulgence, Mr. Chairman. Maybe Dr. Roper or Mr. Geurts, if you have something you could get me in writing or something? Thank you, for the record.

[The information referred to was not available at the time of printing.]

The CHAIRMAN. Thank you. I am trying to be a little more flexible as long as the questions are good.

So Mr. Carbajal.

Mr. CARBAJAL. Thank you, Mr. Chair. In today's environment, where operational needs are constantly changing and services are pushed to meet emerging needs while quickly fielding new capabilities, we must ensure the most efficient authorities and processes are in place.

Acquisition reform is also significant because it fosters innovation and opens more opportunities for services to take advantage of these new technologies. My question is, aside from what you all are all doing now, what are some of the future plans to improve and expand innovation?

For example, I know there are many academic institutions that are engaged in these emerging technologies that the services are pursuing. Are we taking advantage of these resources?

Secretary GEURTS. Sir, I will start and then obviously turn it over to my colleagues. I would say, yes. Part of what I am bringing from SOCOM is how do we—how do we get our problems out to the non-traditionals as Dr. Jette mentioned? The number of the suppliers in the DOD versus the number of suppliers available is a fairly small number.

The challenge, I think, is how do we interact with them from a business standpoint so that they do not have to change their business to work with us. We can adapt how we are asking them for work so that they can be cost efficient and efficient in the way they do work I think in particular as we look at software and how do we really think about data, artificial intelligence, and software development.

That may be a completely different model, and I think it is going to have to be a completely different model than the traditional hardware-based acquisition approach.

And I think we are using the authority that this committee has put out there to prototype. So when I think of prototyping, I do not just think of a thing. I think of prototyping a process or prototyping how we develop folks.

So I think all of us are experimenting in different ways how to prototype processes and cultural change to allow us then to get that iteration speed and that iteration cost down, and bring in lots of different nontraditional suppliers.

Secretary ROPER. Congressman, I am glad you brought up universities and colleges because I do think, although we are using them, I do think that we are generally guilty in the Department of thinking of universities as places where we do basic research and not applied. We created UARCs and FFRDCs [federally funded research and development centers] to try to transition from basic to applied work.

But technologies today aided by agile manufacturing, 3D printing, artificial intelligence, really allow universities to do applied research that we can go directly into the field. So I am very thankful that we are getting new contracting authority so we can work more closely with universities and colleges.

But I think it is generally we need to retrain the workforce, that there is a lot they can get out of the universities that maybe do not have a UARC attached to them but can do the basic ground-work laying that we can then build upon with our government scientists and engineers.

Mr. CARBAJAL. Great.

Secretary JETTE. Congressman, just a little over 2 months ago I was a contractor myself and my company had to reach into the Army. Now, I know my way around acquisition and it is still daunting to go through the SAMs [system for award management] process, open that up and see the pages of clauses which I then have to certify that I will abide by under penalty of law.

That scares away a lot of potential vendors, a lot of people that we would like to have involved with us. They look at that, and they say I am done. I am not going there. I have got commercial applications I can pursue with my company.

So I think one of the things I am looking at is in my commercial sector I would become a qualified vendor. I had a major company's qualified vendor. They had a set of things I had to abide by. I would set those down. I would sign up, my contract would be signed, and then it would become a simple task order, and it was a very simple process.

They held me to the standard. If I failed in the standard, maintaining the standard, I was off their qualified vendor list, and they could not make internal purchases directly through me. It simplified the entire process.

I know we have got one of the acquisition reform efforts is concerning e-commerce. It is focused primarily on, at this point, on GSA [General Services Administration], but I believe I want to take a look at whether or not I might create Army's On or something similar.

Mr. CARBAJAL. Let me cut you off there because I am running out of time. What is the protocol or staffing within your organizations that continue to manage continuous process improvements?

You have all identified a number of reforms and efforts, but unless there is a strategic focus that is guiding and managing those efforts, everybody is just spinning their wheels. There is no focus, there is no timelines, there is no action plans. Is there a mechanism that does continuous process improvements, that manages that in your offices?

Secretary GEURTS. Sir, one of the things I am taking from SOCOM is I had an agile acquisition cell. And their entire job was to look out right, left, talk to their partnerships. Obviously, the three of us are very well-connected and know each other from past lives, so we are sharing back and forth.

But that cell for me was the cell that their sole job was to figure out what everybody else is doing and what can we do to bring that in and do it better and then measure that? I am planning to bring that same mentality here to the Office of the Navy as we look at that across the Navy and the Marine Corps.

Mr. CARBAJAL. Thank you. Mr. Chair, I yield back.

The CHAIRMAN. Mr. Scott.

Mr. SCOTT. Thank you, Mr. Chairman. Gentlemen, thanks for being here. Secretary Geurts, you come from the SOCOM community and as you know the Marines are about to buy, as I understand it, 15,000 M27s without putting out a competitive bid. Is that right on the number, the 15,000?

Secretary GEURTS. Sir, let me take that for the record and make sure I get you the exact number.

[The information referred to was not available at the time of printing.]

Mr. SCOTT. Fair enough. The Marines just testified before us yesterday and one of the things that they said was that it would cost between \$5 million and \$25 million to compete the purchase. Well, the total purchase value of 15,000 rifles will be somewhere in the \$40 million range. I think I am pretty close on that.

And then there is a range that we were given that it would cost to compete for that \$40 million purchase of between \$335 and \$1,650 a rifle. That is a pretty broad spread. So any information that could be provided there would be appreciated.

And to me it is very different in competing something that is a rifle versus the more advanced systems that we have. And certainly, coming from SOCOM, you would be able to provide a lot of input there.

I do worry that from an industrial base standpoint, that if we start giving these contracts without competing the bid then we will turn around and put companies out of business that, quite honestly, we need to be in business, so that we are paying \$2,500 for the rifle instead of—instead of \$3,500 or \$4,500 if there is no competition.

Secretary GEURTS. Yes, sir, I will be happy to take a QFR [question for the record] and then go and get the specifics. I would say—and again, we face big challenges, you know, think of ships. And we have come up with some creative ways, which I will call continuous competition, which may mean you are not doing individual competitions but you are always looking at multiple products and you are always—

Mr. SCOTT. Right.

Secretary GEURTS [continuing]. Weighing those and it gets to Dr. Roper's point about modularity and open architectures.

Mr. SCOTT. That is right.

Secretary GEURTS. So that whatever the next best product is—

Mr. SCOTT. Yep.

Secretary GEURTS. I am not vendor-locked to whatever decision I made 5 years ago.

Mr. SCOTT. Absolutely.

Secretary GEURTS. And I think that is something we are all going to drive in. And as commercial products and the ability to integrate products becomes easier because we are more thoughtful on our architectures, I think that will allow us to get after continuous competition. So you do not have this false kind of decision of I—

Mr. SCOTT. Absolutely.

Secretary GEURTS [continuing]. You know, you are choosing between two bad decisions.

Mr. SCOTT. Absolutely, and I think that that is probably fairly easy with a rifle where you have multiple high-quality manufacturers that have provided good service. And I hope you get the best rifle at the best price as we go forward and look forward to continuing that discussion with you.

My colleague, Mrs. Hartzler, mentioned the data. Data is a big deal with the F-35. It is a big deal with anything that we procure today. And I represent Robins Air Force Base, and we have compa-

nies around the base and in surrounding counties that have very advanced CNC [computer numerical control] machines. 3D printing and other things have changed our ability to manufacture our own products.

As you used the example of the impeller, one of the concerns that we have had is that when we have a contractor or a company, major defense contractor, that they do not have the part available, they want to charge us for the schematic for us to go to a local machine shop to have the part made, when we paid for the development of the system.

And I just wonder from the standpoint of the impeller, did the original contractor try to claim a patent on the impeller so that we could not manufacture it ourselves?

Secretary GEURTS. Sir, not in this case, but I would say your more general issue is one we have got to tackle. And again, this is a mutual issue across both sides of the aisle here, understanding the data rules and rights, ensuring we have those accurately captured on a contract and then fighting for those rights so that we protect the interests of the taxpayer, are all things I would say we need to be doing a better job of doing.

It is no single person's fault, it is just not—

Mr. SCOTT. I agree.

Secretary GEURTS [continuing]. It is not something we have focused on. And if we drive to this new data-driven world where whoever owns the data wins, and it is something I think there is opportunity to do much better in the future.

Mr. SCOTT. When we pay for—it seems to me that we could have some type of uniform language in contracts where when we pay for the research and development of the system, then we should own the data, including the schematics. And therefore, the right to manufacture the parts ourselves if the defense contractor chooses to charge us an unreasonable price or not make the product available.

Secretary GEURTS. Yes, sir, and I am happy to follow this in more detail with you. It is one thing we have been talking to the committee about is, you know, refining those intellectual property laws and guidelines as we go in the future. Pretty complex issue but one we have got to, I think, spend some more time on together.

Mr. SCOTT. Well, thank you for your service. I look forward to the further discussions on the M27 and why it would cost between \$5 million and \$25 million to simply compete a rifle.

The CHAIRMAN. Mr. Suozzi.

Mr. SUOZZI. Thank you, Mr. Chairman. Thank you for your testimony today, for your good work. Legislators like to legislate. They like to pass a lot of rules, especially to go after waste, fraud, and abuse.

And sometimes we end up with so many rules and regulations that we spend more preventing waste, fraud, and abuse than there would be an actual waste, fraud, and abuse if we did not have all those rules.

And one of the manifestations is something that Dr. Jette talked about, is that there are only 5,000 contractors in this business. And Mr. Geurts talked about the clutter that exists.

What do we need to do—you started to talk about it. I wanted to get some more out of this. What do we need to do to get more,

to go from 5,000 contractors to 10,000 contractors? How can we get more people competing to do this type of business?

How many corporations did you say there were in the country, overall?

Secretary JETTE. Congressman, from the research I did, and I know I was told there are 5,000 government contractors. The reason I know is, I was told I cannot own any of their stock anymore.

Secretary GEURTS. Yes.

Secretary JETTE. And then I looked up on the internet, a very simple process, finding 23 million contractors in the country.

Secretary GEURTS. Right.

Mr. SUOZZI. Right. I would be curious, you probably do not know off the top of your head. We should find out, you know, did it used to be a bigger number? Did there used to be 10,000 contractors? Did there used to be 20,000?

We should really track how that has changed over time as to how many people have participated in supplying the United States Department of Defense. But how can we get more contractors competing in this field? What do we need to do to make it more attractive to do business?

Secretary JETTE. Congressman, I will take the first shot at this. I mentioned earlier, if you just simply go on and try and open your own account—you could all do this and just open the SAM—

Mr. SUOZZI. SAM stands for?

Secretary JETTE. I do not know what SAM—it's the government registration point where you get on so that you can be a contractor.

Mr. SUOZZI. Okay.

Secretary JETTE. And I can provide you, sir, the contact point, how you get on the website. If you go through that, you will find there are just these enormous numbers of you must testify that you are not going to hire Bangladeshi children to make your—I mean there are things that specific in there. You will not ship any goods by foreign carrier.

And these things become just onerous to people who are smaller companies that do not want to—they do not have lawyers on their staff on a day-to-day basis. And they do not understand the implications of the rules.

So we seem to have this one-size-fits-all. There was a comment earlier about one-size-fits-all approach to doing our contracts with these rules that get put in place. The end state of that is, if I am a small company, and I think I would like to try and participate in government contracting, I immediately have to go to that top level. It is no different. What I have to do is no different than what Lockheed or Raytheon or Northwest.

Mr. SUOZZI. It is overwhelming.

Secretary JETTE. Yes, sir. And so we need to take a look at whether or not there is some way to scale that or make it simpler for those smaller companies who do not have lawyers on the staff all day, to be able to participate. That is an area I am trying to take a look at, this qualified vendor concept. Perhaps an alternative website that might allow simpler connectivity with smaller vendors, both for products and services. We spend a lot of money in consolidated services because the consolidator does all that paperwork for the smaller companies.

Mr. SUOZZI. And that was something that I always thought about at local government levels and worked on is to move from mandates, you know, rules you must—to guidelines. And then if you are someone who is complying with the guideline, you know, we leave you alone.

And if you are someone who abuses the guidelines, then you start going after that person and you make it a little bit more difficult. But that is very interesting way of trying to—I will work with you on that if you would like me to.

Mr. Geurts, you want to add something to that?

Secretary GEURTS. Sure. Sure. I agree with everything Dr. Jette—I think the other issue we have is we do not do a very good job of informing, you know, as the percentage of military in the country has gotten smaller or folks who have had families, there are a lot of folks that want to help the DOD and they just do not know how. And our mechanisms to tell them what we need or what we are interested in, you have to be a jujitsu expert in [inaudible].

Mr. SUOZZI. It is too overwhelming.

Secretary GEURTS. And so another, I think, key element is how do we simplify how we let individuals, academic institutions, small companies, nontraditional companies know what we are looking for and then make it easy for them to supply it.

Mr. SUOZZI. I have only got 10 seconds left, Mr. Chairman. You know, I will work on this if you would like me to. The bottom line is is that you—would you all agree, including you, Dr. Roper, that it would be better if we had more than 5,000 contractors? Would that be better?

Secretary ROPER. Yes.

Secretary GEURTS. Absolutely.

Mr. SUOZZI. Okay. Thank you, Mr. Chairman.

The CHAIRMAN. I thank the gentleman.

Dr. DesJarlais.

Dr. DESJARLAIS. Thank you, Mr. Chairman.

Dr. Roper, I wanted to talk to you for a minute about a conversation we had with Deputy Secretary of Defense Patrick Shanahan. He was at our HASC [House Armed Services Committee] retreat about a month ago. And over the past years, we have been hearing the stories about half of our military aircraft that cannot fly due to maintenance issues.

He told us a story about when he was in the private sector—and obviously he brings a lot of expertise in that area—about an example if a Southwest plane were to land with a problem, let us say—I think he used a wing flap. They could have that turned around, order the part, get it in, fix it, and flying in 24 hours. But put that same plane in a military skin, you might be looking at 6 months to get the part, another 3 months to fix it.

First of all, is that even close to accurate? And if so, you had mentioned in your opening remarks about adopting commercial principles to help deal with our acquisition reform. Is this an area that we can improve on? And what would you say to that analogy and what is being done to help improve that situation?

Secretary ROPER. Congressman, I am glad you brought up keeping aircraft up in the air because it is a big part of the Air Force's business. It is also an area where we spend a lot of money. And

I think it is ripe for—for new emphasis of research and development.

One thing that I have seen, at least at a cursory level coming into this job, is that air worthiness and safety certification is something that will be a challenge for using things like 3D printing or agile manufacturing. Who will say that the thing you want to use from commercial industry, whether it is a practice or a part, is safe?

And so we are trying to think of ways to get around—not get around, but to navigate our safety processes but still allow us to get data on things that are made with advanced—advanced processes like agile manufacturing.

And we are even kicking around ideas like calling a plane with 3D printed parts an X-plane, which is a process we have for development side of the house. When something cannot be certified as absolutely safe because it is new and cutting-edge, you slap an X on it and you can go fly it and get the data you need to certify it is safe.

To my knowledge, we have never done that on the sustainment side, but we spend a lot of money there. So I really think this is an area that is ripe for new thinking, new investment, and expect it to be an area of focus for me in this job.

Dr. DESJARLAIS. Is he correct in the amount of time? Does it really take that long on military aircraft?

Secretary ROPER. Well, sir, if the Deputy Secretary was sharing from his past experience I certainly trust his expertise in this area. It is true that it takes us much longer than commercial industry for a variety of reasons.

Sometimes our planes are a lot more complicated than theirs, but just because we have extra hurdles that we have to cross does not mean we cannot adopt best practices from them.

Dr. DESJARLAIS. Give—give us a few examples of those hurdles? What are they? What is the bureaucracy that slows you down so much?

Secretary ROPER. Well, parts obsolescence is one issue. So we get backlog on parts, but we need it from the particular vendor who made it because that is what is safety certified. And then we have a lot of airplanes that are grounded currently waiting on backlog parts that we currently cannot get easily because they are not made anymore.

That is an area you could imagine, well, if you could make that part yourself and have the data rights to it, which is another issue, then maybe you could sweep that backlog. And in some cases we have planes that are going to be down for months, even close to years waiting on parts.

Another is just switching to predictive maintenance. We wait for things to break and then we fix them. The commercial airline industry predicts when things are going to break and they fix them ahead of time. So that is an area that we should look at.

Dr. DESJARLAIS. And obviously they are very concerned about safety as well?

Secretary ROPER. We would not be flying, sir, if they were not, so they are just as concerned about safety. I think they are just using more modern technology to achieve it. And even though our

mission is more complicated, there are a lot of things that we can adopt from them.

And it would be great to make sustainment as cool as doing development so we get the same talent in the workforce focusing on that side. Developing new things is cool. I loved doing that in my past job. But sustaining things and keeping it up in the air is necessary for readiness, so it needs the equal focus from us.

Dr. DESJARLAIS. Okay. Thank you, Dr. Roper.

And I yield back.

Secretary GEURTS. Sir, could I maybe add one—

Dr. DESJARLAIS. Absolutely.

Secretary GEURTS. Well, sir, and I just brought some toys along. This is actually a 3D parted—3D printed nacelle to a V-22 that is fully flight certified. And so at the working level between the Air Force and the Navy, because we have a lot of aircraft as well, creating the standards by which we can then 3D print what we need.

And on some—some are flight critical so you need to make sure you have got really tight standards. Some are not. Maybe the valve on this thing we printed, designed, and flew in 5 days. And we were having a problem with one of our masks.

That is a little different than this, but we are looking at how do you think about—how do you separate the different parts and their criticality? How do you create the certification regimes, and then how do you then operate at speed? And as Dr. Roper said, there is tremendous opportunity to be more operationally responsive and more cost effective.

Dr. DESJARLAIS. All right. Thank you.

The CHAIRMAN. Mr. Langevin.

Mr. LANGEVIN. Thank you, Mr. Chairman. I want to thank all of our witnesses for your testimony here today and what you are doing to help the warfighter.

I am glad to hear the last line of questioning, especially on 3D printing. I think it is essential that we be aggressive in owning the intellectual property, both for hardware and software. On the 3D printing side there should be no such thing as obsolete parts anymore. And that is going to help us on the readiness side and maintenance and keeping our equipment in top-notch shape.

So I will not—I am not going to go into that area since those issues have already been touched on. But I wanted to focus on our industrial base as it grows. We obviously have to ensure the security of our supply chain.

So how are you safeguarding our commercial and dual-use and in-house end products for the warfighters while still pursuing a more rapid and agile acquisition process?

Secretary ROPER. So, Congressman, it is—you hit nail on the head, is we are going to have to use commercial technology to keep our advantage. There are going to be a lot of technologies that we will want to operationalize for warfighters that are going to come from private industry. And we need to be able to use them faster than our enemies can.

But coming with the opportunity hand-in-hand are risks associated with things that we do not control. I think this is going to be an area where we are going to have to fundamentally shift how we think about developing.

And you see in industry standards like fault-tolerant designs, where you use a variety of different, say, processors that have a variety of different computers associated with them, all of which sum total to give the output because the maker does not want to trust any one individual computer or processor with the decision. It is a way to spread out the reliability.

I think there are some analogs for that for safety is you may be able to be part of our supply chain, but can you be all of it? And so I think we will have to design things differently to use commercial tech.

And part of what I am looking to use prototyping for over the next few years is to not just prototype systems for warfighting, which is very important, but to also prototype new design philosophies that allow us to use commercial tech more readily.

Secretary GEURTS. And sir, I would just pile on. You know, CFIUS [Committee on Foreign Investment in the United States] and some of the other, 806 and all those authorities I think are critical for us. If we find a supplier that is suspect, our ability to then exclude them under the right sorts of circumstances, I think is another critical authority.

And I think that one is due to expire here at the end of the fiscal year, and so I think all of us would agree, anything we can do to get more assurance in the supplier chain and then if we see some issues, have the ability to deal with that in competitive situations would be beneficial.

Secretary JETTE. I agree with my colleagues, Congressman. It is a significant challenge to try and make sure that we have dependable parts. I am somewhat less concerned about things which are components, metal components, those type of things. We can qualify them. It is fairly straightforward to make sure that they function the proper way.

My bigger concern is embedded systems that are embedded in another system that we finally buy as a total system. And our ability to make sure that somebody—when you get an item, you buy a U.S. chip from a U.S. manufacturer, however, the chip itself was manufactured in another country. And how do I know that that chip does not have some other things embedded in it?

And I do not think that our method of ensuring that that is not occurring is quite as robust as it needs to be, particularly with our systems getting us—you know, becoming more and more dependent upon those technologies.

Mr. LANGEVIN. So let me go into a related issue. How are each of your services building cyber resiliency measures into the requirement-setting and acquisition processes to ensure that our platforms and systems will fulfill their—still fulfill their missions despite being exposed to hostile network actors? And what more should we be doing to enhance this part of the process?

Secretary GEURTS. Sir, I think at least the Department of the Navy, we are attacking it in a couple different areas. One is how do we get the requirements upfront and then build the testing on the back end so we have got confidence in the either piece of IT [information technology] software or hardware system, whatever that is.

And then I would say more broadly we are looking at it architecturally so that we do not rely on, you know, so we build resilience into the architecture so if one element of that architecture gets attacked or gets thrown offline or something, that does not have a cascading effect throughout the entire system.

So, you know, there are efforts we are doing at the individual platform and component level and then larger efforts all the way through operational design of how we, you know, intend to fight to deal with the fact that pieces may come and go but we do not want that to in itself take out the entire capability.

Secretary ROPER. And very briefly, Congressman, there is a lot that we can use from commercial technology as well. I mean, the idea that we are going to have networks or systems that we can say at 100 percent no enemy will ever penetrate, that era is probably coming to an end. So we need to change the way that we design systems to deal with threats that get inside of systems that are critical for national security.

Artificial intelligence provides an opportunity to be able to fight back and protecting data vice the network perimeter itself is another opportunity. So I think there is some hope here, but it is going to require change.

Mr. LANGEVIN. Dr. Jette. Dr. Jette, do you have anything to add?

Secretary JETTE. Sorry. Thanks. We are doing—working with the other services as well in very similar ways, sir. We have requirements to test against cyberattack. There is a lot that is being done in the cyber regime for the network-type of side of things. But one of the concerns we have greatly is how much of our electronics are embedded inside of the systems themselves? How do we make sure that those things are safe?

So we have got a number of things that require testing inside of the systems. We have a red team established specifically to do cyberattack against all of our systems before we are allowed to get them fielded so we can determine if there is a method of corruption.

And it was interesting, the Secretary of the Army asked me the other day why he saw PEOs [program executive officers], PEO teams that had cyber people in them? Are they all doing cyber? We have got a cyber command over here. And I said they are the ones who are making sure that the cyberattack is not occurring.

So we do have—we do have some pieces in place. I just would not say that we are where we need to be yet.

Mr. LANGEVIN. And the sooner we—the earlier we can vet it and look at that in the requirements process and the acquisition process and the requirement setting the better I think we will be.

Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. Mr. Banks.

Mr. BANKS. Thank you, Mr. Chairman.

Mr. Geurts, the Fat Leonard scandal was back in the news again last week, and the shadow that it has cast on the United States Navy continues to be an issue that seems to be far from an end. Can you give us an update today on what the United States Navy is doing to make sure this never happens again and how we are addressing the scandal?

Secretary GEURTS. Yes, sir, and if I could maybe take a QFR to give you a more comprehensive than I can in the time, but obviously our key concern for us, what I have done in my portion, which is the contracting element, is put the safeguards in place on those [inaudible] contracts, looking at authorities, looking at where unilateral authorities are versus oversight authorities.

And I believe we are getting that balance, taking the lessons learned and ensuring that we have got both trust and transparency in that, so that, you know, we are—we can hold folks accountable as well as have a transparent system so we can understand if there is something that is occurring that does not appear to be within the rules we have set forward.

And then obviously, as you are seeing through the Secretary of the Navy, holding folks accountable if we do find they are out—acting outside of those norms.

Mr. BANKS. But what do you do from day-to-day or regularly to stress to those acquisitions and contracting officers, both in uniform and civilian under your authority to try to raise the level of integrity to make sure that this never happens again?

Secretary GEURTS. Yes—yes, sir, and again, I think it all comes to the culture they are operating in and the people we are selecting. I think we have great folks. It is stressing the culture of accountability. That is empowering also.

So I need to empower them. If I do not empower them to act I cannot hold them accountable. They can, you know, blame somebody else. So part of it is get that empowerment down but then have an accountable system with the right checks and balances.

You know, our contracting officers are many times the last line of defense and so making sure that they are comfortable that if something does not look right, they are not going to let the pressure of the operational mission pressure them into doing something that is not right.

And then I would say the last is trust in leadership. And so me getting the word out and me going around and them having the trust that I will back them up if they see something that is wrong and I am not going to, you know, I am not going to blame them for the failure.

Part of what we are also trying to do by decentralizing a little bit more on the acquisition piece is we will let folks operate at a lower level so that they can learn at a low level where if they do not have it perfectly right they can learn without a massive impact.

Part of the challenge when you have a bureaucracy that pushes decision making too high up, the first time they actually learn is when it is very risky if they do not get it right. And so part of the culture is it is okay to fail if you are failing doing the right thing. It is not okay to fail if you are willfully or—or, you know, acting in a deceitful way to try and—

Mr. BANKS. So we both agree it is culture?

Secretary GEURTS. Yes, sir.

Mr. BANKS. When did the culture change? When did it change? Assure us today that the culture is different than it was.

Secretary GEURTS. Yes, sir. I mean, I have got a dates time—you know, daytime group of 2 December, so I can tell you that is everything I have been doing since the 2nd of December, you know, in

looking at the Navy. I know the CNO [Chief of Naval Operations] and the SECNAV [Secretary of the Navy] have been pushing that since they have got on tenure.

Mr. BANKS. Can—can you elaborate on what that culture looked like then that led to the scandal to begin with and why you think it is different today?

Secretary GEURTS. Sir, I can. I would be happy to take a QFR for you and get more details. That was before my time in the Navy, but I am—I am—I would be happy to provide my perspective, at least on what we are doing going forward and my personal commitment that, you know, we are putting the safeguards in place so that that could not have happened either from a, you know, instance perspective or from a cultural perspective.

Mr. BANKS. Fair enough. Thank you very much.

The chairman of this committee last week said that, quote, the Pentagon does not have enough contracting officers to obligate all the money it is about to get. Everyone on this committee has been focused on rebuilding and restoring the strength of the United States military.

And I thought that—I do not have time left for a question, but as a former supply corps officer in the United States Navy myself, my hope is that each of the branches will explore avenues to go out and recruit contracting officers, both in uniform and civilians to join your ranks.

But find those in the private sector who have good experience, that have the right background and integrity, and that you will find innovative and creative ways to do that.

So with that, I yield back.

The CHAIRMAN. Mrs. Murphy.

Mrs. MURPHY. Thank you, Chairman. First I want to thank you all for appearing before the committee today. I also want to thank the chairman and the ranking member for holding this hearing to continue to provide oversight over such an important topic. You know, I wholeheartedly agree that the Department's traditional acquisition process is too slow and cumbersome, especially when it comes to keeping up with the short technology life cycle.

And Mr. Geurts, it was great to see you in Tampa last November when you were still the acquisitions executive at SOCOM. I want to congratulate you on your new role with the Navy and I think the entire acquisition community will benefit from your extensive experience and your appreciation for innovation and rapid acquisition.

I want to ask you, Mr. Geurts, and all of the witnesses, about the value of rapid acquisition models. In particular, I know that SOCOM had used an alternative acquisitions authorities and exemptions with great success, including the use of other transactional authority or OTA, which was granted to the Department as an alternative business process to quickly and flexibly fund research and prototype development.

In my district in Orlando, the Army just recently stood up an OTA consortium called the Training and Readiness Accelerator, which is affectionately known as TReX. This OTA consortium will focus on investing in opportunities to expedite prototypes in areas

like AI, cloud computing, medical modeling and simulation in cyber in order to increase our readiness.

Can you talk a little about—about the value of alternative acquisition models like OTAs. Specifically, how are you currently using OTAs in each of your respective services? And how are you ensuring that this contract instrument is properly managed and used to its greatest effect? Thank you.

Secretary GEURTS. Ma'am, maybe I will start and then I will pass on to my colleagues, and thank you for those nice comments.

It gets back to my opening comment. I talked about kind of the 3D approach we are taking. One of that is differentiation and I think one of the challenges we have had in the acquisitions system was trying to create one perfect process to do everything. And I would say some of our success at SOCOM was related to having many different ways to do things and then empowering the workforce to choose the right things to do.

And I think this committee has done a great job of giving us more tools to use. Our job now is to train the workforce to use those tools effectively. I would put OTAs in that category, prize challenges, rapid prototyping events. And I think we are each doing all of those.

I will at least speak for the Navy, you know, we are doing all—putting OTAs in place. But OTAs are good for some things and not for others so you have got to put the education and training in there.

So I guess my final plea is, you know, the continued support for the Defense Acquisition Workforce Fund because we will not succeed if we cannot get the training out to all the workforce members so they know how to properly use the tools: one, so they know the tools are available, and two, so they use them in the correct manner.

As we do that, I think we can really accelerate our capability. And I will turn it over to—

Mrs. MURPHY. And before I have the other witnesses answer, do you feel that the Defense Acquisition Workforce Fund today is adequate for what the needs are?

Secretary GEURTS. I think we are going to have to continue that dialogue. I think over the years it has been whittled down some. I think there is some more flexibility we might be able to put in there that would allow us to do some things.

You know, each of the services I think uses it uniquely for their particular situation, which I think is a strength. And so I think that is probably something worthy of continued dialogue. I am happy to take a question for the record and have a follow-up with you on that specifically.

Mrs. MURPHY. Thank you. I look forward to that.

Dr. Jette.

Secretary JETTE. As you cited, the OTAs are a vehicle that we have been using. We did 361 agreements last year for \$1.5 billion, so we have gone from basically \$634 million to \$1.5 billion in 3 years, though we are trying to find the most appropriate applications for them.

But as I said in my comments, and I totally agree with Mr. Geurts, the right type of contract gives us the best vehicle. And one of the pieces there is in combination as well.

Recently one of my program offices PEOs came in and he had a project, it had always been a cost-plus contract so he was proposing a cost-plus contract but it was near the end of the deliverable. And I said no; go back and take a look.

How much of that is cost-plus? Because cost-plus I am essentially hiring that company to be part of my staff. They are just my additional workers. How much is deliverable? How much is something that takes more research?

And we broke the contract into two pieces, one being a firm fixed incentive fee because I would like them to be motivated to do well on the firm fixed piece and a much, much smaller piece that was actually the cost-plus. So there are other mechanisms, too, we are trying to use.

Mrs. MURPHY. Great. Thank you.

The CHAIRMAN. Mr. Brooks.

Mr. BROOKS. Thank you, Mr. Chairman. By way of background, I am from the Tennessee Valley of Alabama where Redstone Arsenal is located and the Army Materiel Command, and so we have a lot of acquisition work that emanates in my district. When there is a bid or a contract award protest, who pays the various parties' attorneys' fees and litigation costs?

Secretary JETTE. I am going to yield because I am not sure I would give you the right answer. I can provide you the QFR for that, sir.

Mr. BROOKS. Well, is it the parties themselves?

Secretary GEURTS. Yes, sir. I think it is the parties themselves up until the point where there is a—depending on the settlement or the resolution of that. But obviously there is the legal fee piece of that and then there is the impact of the program as we are going through their protest.

And so, you know, there are two or three different elements of cost depending on if you are talking the legal fee for the activity or the impact as we are going through the—

Mr. BROOKS. I am talking about the legal fee incurred by a party who hires an attorney and then also the associated litigation costs for the appeals process, whether you are the proponent or you are defending.

Secretary GEURTS. So I think, why do we not take one for the record because what I am not—there is a direct cost. I do not know what is billable downstream in overhead.

[The information referred to was not available at the time of printing.]

Mr. BROOKS. Right.

Secretary GEURTS. Because there may be within the cost accounting standards, a way to bill that.

Mr. BROOKS. Well, by way of background, again, long, long ago, in another life it seems, I litigated a number of Federal Acquisition Regulation disputes, contract award protests and the like before various boards of contract appeals. And unless things have changed, one of the strategies that was often employed by a losing

party in a bid would be to file a bid protest or contract award protest.

And they would do it even if it lacked merit. They might do it for strategic or tactical reasons rather than substantive reasons, i.e., substantive being because they were wronged and now they want to be righted.

And these kinds of bid protests and contract award protests often result in contract award delays and ultimately as a result much higher costs in the acquisition process occasioned by those delays.

So what I would like for you all to consider, to the extent the law has not changed from the time when I was in this process, is please give consideration to a loser pay rules wherein the loser in a protest must pay the prevailing party's attorneys' fees and litigation costs.

And the reason that I would suggest you consider that as you are looking at all the acquisition rules that are currently in play is that creates a deterrence to a party filing a meritless bid protest or contract award appeal when they do it for tactical or strategic reasons rather than substantive reasons.

Certainly, if that party is looking at having to pay the prevailing party's costs incurred by what turns out to be a frivolous protest, that might cause that party to pause and have a second thought about whether to engage in that kind of strategic maneuver, which in turn might mean that the contract actually does get awarded promptly, which in turn saves time and saves cost during our procurement system.

And that is my personal experience. And if any of you three gentlemen would like to comment on that, I would love to hear your opinion about how the current process works or what changes we can make to try to reduce the number of bid protests that lack merit and are filed for tactical or strategic reasons rather than substantive reasons.

Secretary JETTE. Congressman, I will make a quick comment on this area. I know that in the NDAA 2018, section 827, there is a new section in there, a pilot program on payment of costs, much as you are talking about for denied government accountability, GAO [Government Accountability Office] bid protests, that have a threshold of \$250 million. The pilot begins 2 years after enactment of the act, so we are kind of ahead of the game. You are thinking ahead of the game.

We—we are looking at this very carefully because if—what we see is if an incumbent is in place and they lose the next competitive bid, they protest. Why not? They are going to keep—they are going to cause the contract to get extended and then they get paid during that extended period. So there are a number of little loopholes in the way we do our business that encourages them with no penalty on the other side.

Mr. BROOKS. Well, if I might, if the chairman will permit, I would encourage—I am vaguely familiar with that provision in the last National Defense Authorization Act. But it seems to me, if my memory serves me correctly, it was somewhat limited in scope. It did not apply to all the parties who were involved in the protest. And you have got the dollar figure.

But anything you can do to help deter these frivolous protests, I would submit, would better enable the acquisition process to do what it is supposed to do, and that is get what our warfighters need and get it faster and cheaper and better.

Dr. Roper, the chairman says you can also add your insight.

Secretary ROPER. Just one quick comment for consideration. So you are absolutely right that the government pays for protests. Whether we pay 100 percent, we will get back to you, but we definitely pay for it. And the warfighter pays, too, because it delays fielding.

And one thing that has always given me concern is you can really protest twice. You can do the protest through the GAO and then you can go to claims court. And I think it is worth considering.

It is not something that we can do, I think, regulatorily. But it would be great if a—if a protestor had to pick where they wanted to go, so you only get to protest once. And that would take two steps out of the process.

So I definitely agree that this is an area that is ripe for thinking. We love OTAs because you can't protest them. But that is really—we are really looking at the symptom. The thing we need to actually fix is not making protests where they are so hard to get through that they delay time and increase cost. So I am glad you brought that up today.

Mr. BROOKS. Well, if I could conclude with this one, short comment. In the private sector, the fee award system, losing party pays, does act as a deterrent to the filing of meritless lawsuits in the private sector. And I would hope that you would consider applying that to the acquisition process in order to raise the stakes, put more skin in the game. You better be right if you are going to protest.

Thank you for the additional time, Mr. Chairman.

The CHAIRMAN. Yes. Good questions.

Ms. Davis.

Mrs. DAVIS. Thank you, Mr. Chairman. Thank you to all of you for being here today. I know there has been a great deal of discussion about, you know, how do we measure the way we train the acquisition workforce, finding a way to get this better incorporating not just civilians and military as well as the private sector.

One of the things that I think has not come through as—strongly and I wanted to ask you about is how we actually reform contracting in the war theater? How do we make sure that people are thinking not just in acquisition, but strategically? How do you train acquisition officers to be strategic thinkers?

Secretary GEURTS. Ma'am, I will start, then I will—I will pass you to Dr. Roper. I think a key piece of decentralization what I found coming back into the big service was decision making had been pressed up to such a high level that your senior folks were spending your time, in my mind, doing tactical work, not taking the time to have strategic discussions. So part of the decentralization piece is in pushing accountability down so the work can move down there to free up thinking time.

And then the second piece, at least the way we are attacking it, is have a much more thoughtful dialogue very early in the program. What are the framing assumptions, what are the outcomes

we are trying to achieve? Have that before we starting writing documents and creating budget exhibits and those things that the process requires.

And what we are finding is having that discussion much earlier and freeing up the leaders' time so that they can have those discussions is enabling us to be much more thoughtful on the front end. Okay, what is the strategy? We do not need—it is not just cost-plus or fixed-fee. Are we going to do—you know, you can have multi varying strategies.

Mrs. DAVIS. Not just faster and better, but yes. Yes.

Secretary GEURTS. Yes, ma'am.

Mrs. DAVIS. Is that aligning with NDU's [National Defense University's] program?

Secretary GEURTS. What was that, ma'am?

Mrs. DAVIS. Is that aligning with NDU's program?

Secretary GEURTS. Yes. I think that is. Again, I would ask other colleagues to break in here. Another piece we are looking at—like on commercial, where we get in trouble on commercial is we try and use it differently than it is used in commercial.

So how do we buy the way it is sold, not buy a commercial product and then try and do a bunch of things to it so that we no longer get the value of it being commercial and we kind of own our own variant of it. I think that is a similar kind of thing.

I do not know, Dr. Roper, if you—

Mrs. DAVIS. And maybe you all could describe what—to the extent that all the services are learning from one another in this area?

Secretary ROPER. Yes. Congresswoman, it is a great point is we need to think more strategically inside acquisition. Just know, like, coming into this job, I have been extremely impressed with the talent that the Air Force acquisition workforce has. And I know from my past job that that same talent is resident in the other services. Amazing people, technically competent, skilled, and motivated.

But for years, they have had to not just be experts in acquisition, they have had to be experts in bureaucracy. The best skill you could have as a program manager, a program executive, is navigating the many, many hurdles of the Pentagon. So as we take that skill set down, we have an opportunity to reinvest it in training in the new authorities that you have given.

I think it is going to be very important that as we push authorities down, we invite the acquisition workforce to think horizontally. There is not much that is horizontal in acquisition. If you are building an airplane, you are building an airplane.

But what—what frustrates me is that we have software in every system that we build, almost, but none of it is common, none of it is recycled. And when we look at commercial industry, the same software is resident everywhere.

So one of the things that I am interested in doing, and I am certainly going to work with my colleagues here, is to try to experiment with some horizontal things in acquisition while we still focus on doing the verticals.

Mrs. DAVIS. Do they ever bring in multidisciplinary teams that can—perhaps have not had the same experience, but have a whole different way of looking at things? Is that part of what you need?

Secretary ROPER. Yes, Congresswoman. Cross-functional teams are very much in vogue and I am a big supporter of them. They bring together people that have different backgrounds so they may be an acquisition person, a requirements person, a technical person. And even though not every member of the party may be related to the type of decision that is being made, they bring something that allow the decision maker to make a broader set.

Mrs. DAVIS. Yes.

Secretary ROPER. So I really wish that we would take things that were serial in decision making and make them parallel by getting all the right people in the same room at the same time to make a decision. It is common sense. The common sense is really what we need to bring back to acquisition.

Mrs. DAVIS. Thank you.

Dr. Jette.

Secretary JETTE. Yes, Congresswoman. One of the things I will say is that cross-functional teams, the Army has placed a big bet on these. We have put together teams that are—one team behind each of the Secretary and the Chief's priority areas, plus two additional ones, which are critical enabling technology areas.

And they are led in a way that bring in the military competency with technical competency with the acquisition competencies so that we can try and get that team to look for realistic and viable solutions to problems.

Internally, I am also reinvigorating our—we have an office. We call it system-to-systems integration. I think that that is probably not quite the way it is going to turn out, but I have to crosscut these organizations and make sure that we are looking across them.

And I think that, as my colleagues have said, pushing the decision-making process down to our senior leaders in the PEOs in particular, is just tremendously enabling because all of a sudden they are not just process people.

They are looking for products. They are looking to make something happen and they feel the responsibility. And it is making a big difference.

If I had one last comment to make, it would be that I am looking at specifically how to get contracting not something that gets done over there and you watch it leave the station once you buy your ticket. But bring the two, the program management and the contracting much closer together so that we have a more coherent process.

Mrs. DAVIS. All right. Thank you. I hope we can measure that in a year from now. Thank you.

The CHAIRMAN. Thank you.

Ms. Stefanik.

Ms. STEFANIK. Thank you, Mr. Chairman. Last fall, Cyber Command began executing limited acquisition authority to speed up the acquisitions process for cyber-specific tools.

This was based on an authorization included in the fiscal year 2016 NDAA for Cyber Command to execute contract actions up to \$75 million a year through the end of fiscal year 2021. Has that improved the acquisitions process in our rapidly changing cyber world—our rapidly changing world of cyber warfare?

Secretary JETTE. I will—Congresswoman, I will give you my quick examination of this to this point. It has expedited an ability to reach out and grab a lot of readily available tools that would have otherwise been very difficult to just bring into the system, particularly because cyber changes constantly. It is a constant battle.

And so if you do not have that tool set availability and upgrades to those tool sets, then you are going to be falling behind. So far, the examination I have made, and it is not as deep as I plan to, has shown that this ability to reach out and go directly to get the things they need more quickly and more directly has allowed them to keep up much better with the cyber threat than trying to go through the classic system.

Ms. STEFANIK. Do you see any challenges with this new format when it comes to introducing this into the acquisitions process?

Secretary JETTE. Whenever we put rules in place which give people a lot more freedom, eventually, what I see is, we back up. And my concern is making sure that we measure what we want to do, measure what we expect of them, make clear what that is, and then we allow them to do what you have given authorities to do.

Otherwise, you know, I give my great example as, Rapid Equipping Force is an organization that procures things rapidly and gets them to the field. It does not have a milestone decision anywhere in its path.

It now must report to a milestone decision authority, because we just want to make sure that they are doing things right. And so the same type of process encroachment can happen to this process as well if we do not watch it.

Ms. STEFANIK. Yes.

Secretary GEURTS. Ma'am, good to see you again.

Ms. STEFANIK. You, too.

Secretary GEURTS. As I think you know, we at SOCOM had kind of put in a person there in CYBERCOM [United States Cyber Command] to get them kind of up to speed and at least start with that model. And at least in my discussions with him as he came back was, you know, they are getting the discipline in.

I would say, though, that in terms of impacting acquisition programs may not be a direct correlation, and so, you know, in the Navy we have designated tech warrant holders just like we do for shipbuilding in the cyber domain. So we have tech warrant holders who are the technical authority of any cyber capabilities either we are developing or we need to put into programs.

And those warrant holders are the ones I hold accountable as we birth programs, as we test programs, as we field programs to ensure we have got cyber resilience and all that. They are connected with CYBERCOM and obviously there is some learning there, but that CYBERCOM acquisition element is not directly acquiring the cyber capability or testing in, you know, in the Navy weapons systems, if that makes sense.

Ms. STEFANIK. Yes.

Secretary ROPER. Well, Congresswoman, I think what you should expect to see over the next couple of years from me, and I would not be surprised if it is true for my colleagues, is a continual frus-

tration with applying normal acquisition processes that were really developed for hardware-driven things to software.

My opinion is just a different beast, and we probably need a different process and need to train people fundamentally differently than we would someone that is going to build something that is very hardware-driven like a plane or a bomber.

Whether or not we have the authorities to do it as currently given, I think that is an open question that we will keep coming back to say, you know, this is an area where what you have given us is not quite tailored for this.

But in order for us to build the military that is going to be needed to deal with peer competitors, which the National Defense Strategy demands of us, we are going to have to dominate in software. And we cannot do it the 1990s way.

And so I think you will see lots of things pop up, but we really need a systemic change. And that is something I look forward to working with my colleagues. We cannot do this one way in the Air Force and then do it a different way in the Navy and the Army, so we have committed to work together on these things that are enterprise-wide.

Ms. STEFANIK. Yes, I think your point, Dr. Roper, about applying the acquisitions process from hardware to software is not the right approach, so we need to continue hearing from you about the authorities in terms of how we move towards a software-specific acquisitions process.

My time has expired.

The CHAIRMAN. Mr. Lamborn.

Mr. LAMBORN. Thank you. Last but hopefully not least. Thank you for having this important hearing and I could not be here earlier. I got here as quickly as I could, so hopefully my two questions have not already been asked.

But the first one is on innovation strategy. In June of last year GAO identified several key enablers for promoting innovation. Having a strategy was one, aligning investments with goals is another, and the third one I want to focus in on, protecting funding for riskier projects.

And I think of directed energy. A lot of times that has been starved for funds because people say, oh, it is always over the horizon. The potential is there, but it is too far in the future.

Now we are seeing both strategic and tactical applications and possibilities for all of the branches, all of the branches that you represent. So but that is an example where you can starve the funding because there are always more urgent needs that are current.

So how do you protect riskier projects and technologies and innovations by giving them the proper funding that they have to have as they are being matured?

Secretary GEURTS. Yes, sir, I again appreciate that. You know, a challenge in my previous life at Special Operations Command, a very busy command, and if you were not careful you would prioritize readiness today and then lose readiness tomorrow.

And so a piece of it and I will go back to Dr. Roper's comment earlier, was we also have to look at how do we really drive cost ef-

fectiveness and sustainment and readiness to create headroom for continued funding in science and technology?

And then how do we then create processes and a culture that—in that early on really rewards risk-taking, quick iteration speed, get a quick lesson, get with the operators, put it in the field, see if it works, a little bit of the acquire before you require mentality.

So we need to make sure we are driving costs down that—in the readiness accounts that do not crowd out our ability to invest in the modernization accounts.

And then I think the last thing I would say, and we all get together fairly regularly. Congresswoman Davis had a question, do we interact? You have got an Air Force SOCOM guy in the Navy and you have got a—you know, you have got a very—you know, we are—we are here as a very interesting brand.

We spend probably more time together now than ever in figuring out how to cross-deck ideas, technologies, because the fastest way to get into the field is take what somebody else has already taken to one point or another.

Secretary ROPER. Congressman, there is a lot that we can do. And if we are going to achieve a military that can deal with peer competition, we are going to have defense funding that is for the future and be very, very strategic and dedicated to not making it a sacrificial lamb for today.

Now, often this is a classic readiness versus future capability argument, and that, I think is—will be recalibrated based on the National Defense Strategy.

But there is a lot we can do to make that recalibrating easier. We could certainly try to get the cost of logistics and sustainment down where a lot of money is going. I feel like that is a place where we have got bad cost, what we could fix that would free up money that we could invest elsewhere.

I am frustrated that we do not design for upgradability, so we pay a lot upgrading systems. It takes a long time. It takes a lot of money. Commercial technology upgrades sometimes on its own. So we can learn a lot from them, that a way you can maintain readiness is to have systems that can upgrade and spiral faster than the enemy.

And if we were to do those two things, there might be even more resources that we could dedicate to the future so we could finally have laser weapons and hypersonics and all the other things that we want but so often become the bill payer because of the here and now.

The funny thing is you can get everyone to agree, the most important thing for us to do is to have those capabilities in the future; but it is never the most important thing today.

Mr. LAMBORN. Yes.

Secretary ROPER. And so we need to make it easier to make it the most important thing today.

Mr. LAMBORN. Yes, thank you.

Secretary JETTE. Congressman, the Secretary of the Army has said that readiness is critically important. Modernization comes next. And—but he also has said that modernization is our next readiness. It is a continuous process. It is not, that is modernization, this is readiness.

So to that end we have been working on developing some methodologies and policies to ensure that we do not allow our seed corn to be eaten by today. One of the things is we have a 60/40, 80/20 rule that we are putting in place in Policy which helps 61, 62 money. Sixty percent of it has to be tied directly to a path to some sort of programmatic application, but 40 percent of it does not.

It gives—you can be a little more circumspect in exactly how you are going to apply it. And that gives the freedom for innovations you do not expect and you do not see.

And the same way even at the 63, 64 level, same situation; 80 percent for something that is pretty well tied, 20 percent a little less so. It gives us an ability to leverage that creativity again.

We keep talking about the valley of death, and then we do nothing about it. So we are actually fencing off money specifically that senior leaders will then decide, yes, I am going to transition that and I am going to take—I am going to deliberately decide to delay the program 6 months, whatever it takes to get this technology into the program as opposed to leaving it to the technologists and the PM [program manager] to try and figure out.

I think the last thing I would bring up is that we have a mechanism for funding. The RCO, the Rapid Capability Office and the Rapid Equipping Force. The Rapid Equipping Force is sort of a pot that gets refilled.

The RCO is a decision-making process with the funding people in the room and the Chief and the Secretary make decisions on that. That is, in fact, how we are funding right now an accelerated effort on directed energy is through those processes.

Mr. LAMBORN. Thank you.

The CHAIRMAN. Let me touch on just a few other things or maybe rehash a couple of them, starting with a couple questions I have been asked in the last day or two.

Dr. Jette, why are not these cross-functional teams that the Army has set up just another layer of bureaucracy?

Secretary JETTE. Mr. Chairman, I have been looking at the cross-functional teams [CFTs]. I am being introduced to their purpose and objective, and I think that there are some real values to them. The biggest issue to me is I see the value. I want to see whether or not there is a decay in the value over a long period of time. And I do not think there is any intention with the senior leadership to allow that to happen.

If you were to ask me what the biggest problem I would have with respect to acquisition, it would be that I do not have a tight linkage between the people who generate the requirements, the technology people who can bring the capabilities to the table that you want to think about as you are looking to the future, and the acquisition people who actually have to get it into the field.

The idea of the cross-functional teams is to bring that entity together in one place for specific areas of critical importance. And those are the eight areas that they have been designed for.

By putting these CFTs together and selecting leaders that have a lot of operational experience to be the leaders of the teams, so they would bring leadership as well to the team, and then you tie across that, we are required by the Chief and the Secretary to put good people underneath that team.

I think that it may well be a much more expeditious way of getting to good requirements and prototyping and prototype experimentation on the operational side of things than each is here, here, and here. The question is can we sustain that effort? And I know the Chief and the Secretary are committed to do so.

The CHAIRMAN. Okay. I think it makes sense, for what it is worth. I think the challenge is not just making—having it be something other than just another hurdle that a program has—has to get through. And obviously a lot of that falls on your shoulders.

Second question I have been asked in the past couple days is suppose that we have a firm fixed price contract on a vehicle or a ship or an airplane that requires steel or aluminum and the government takes an action that raises the cost of steel or aluminum. Are you all going to renegotiate those contracts?

Secretary GEURTS. I guess, sir, I will go first being the shipbuilder with a lot of steel or aluminum. I think all three of us would, you know, certainly support the SECDEF's [Secretary of Defense's] position on this whole issue.

I think with the Buy America Act, particularly in the shipbuilding industry, and all the U.S. ships being built in the U.S., we do not see a huge issue yet. Still trying to understand the policy at the big level.

I think some more studies are going to have to be done and it is at the supplier level and as the policy becomes better understood and its final implementation side then we are going to have to look at what those implications are and then what does that mean to each of the individual programs.

So I would say too early to say yes, we are going to renegotiate or not. I think we are—still need to understand the policy and the impact perspective and then from there we will go investigate the impacts of the programs.

The CHAIRMAN. Okay.

Secretary ROPER. Mr. Chairman, I think this is one of the issues that we will truly have to have a Department position on. So I think for the Air Force's point of view we are committed to work with the other services and the Office of the Secretary of Defense to make sure that whatever our response is it is done together. But your point is well taken that this will impact programs and we need to understand that sooner rather than later.

The CHAIRMAN. Yes. Well, I think that is definitely true.

There was some discussion earlier on intellectual property and data rights. And I think you all have alluded to the fact that there is criticism from contractors when the government comes in and says give me all your data or else. There is criticism when a different contractor wants to bid for repairs, but the initial contractor owns all the data and will not let loose.

We put some provisions in previous legislation to try to help build up a pool of expertise on intellectual property so that there could be a negotiation from the get-go about this, so these concerns could be part of the negotiation every step of the way.

My question to you all is today do you have the expertise you need to navigate through these different considerations and challenging issues?

Secretary ROPER. Mr. Chairman, I think this is an area we are going to look for additional expertise in the acquisition workforce. I felt one of the important questions earlier is about putting in the young officer to negotiate a contract against a team of lawyers from a large company.

And although we ought to train that officer or acquisition professional to be as good as they can at the negotiating table, I think there is a broader issue, which is we are not really incentivizing the behavior that we want.

We say we want open architecture. We say we want modularity. We say we want data rights, but it is hard for us to actually reward a contractor for giving them to us.

And so I think we will want to balance being able to have the right expertise in the government to be able to argue well, but also explore ways to try to make giving us a truly open system where we can change things quickly an advantage to the company that gives them to us. And it is something that I feel that we have not done a great job of in the past that I hope we will think about very earnestly for the future.

Secretary JETTE. Mr. Chairman, I think that this is an area that is critically important. I mean, I own IP. I was a small company. I do not have big corporate headquarters. I do not have lots of land. I do not have a shipyard. My value was in my head and on a piece of paper. So I understand and appreciate the IP issue from the commercial sector side.

On the other hand, I also understand the government's side of things. And I have worked for many other commercial companies as well. If you pay me to do it, you own the IP. If I bring something to the table, then we can negotiate a license. The issue is I do not believe that we pay attention to that, particularly at the beginning of our discussions and contracting.

So someone bids, I am going to bring this IP to the table and I need you to mature it through a cost-plus contract into something else. And this is the type—it is a linkage like fingers together. And the next thing you know, you are stuck. He is holding you and you cannot let go.

In the commercial sector, particularly with modular open system architecture and our proper definition of that at that beginning of the contract proposal, you bring a proposed IP to the table, you put a box around it. I know the goes-intos, the goes-out-ofs, and what the functionality is. What is your license fee for it?

Tell me in the beginning. I will not even ask you for the innards. I will not ask you to deliver it because I own the license. If I buy your product and your contract, I will own that license in perpetuity. Then when you develop something I want the commercial standard.

Commercial standard is if I paid you to deliver it. It comes with a piece of paper telling me how it looks. I think that we need to take a much harder look at this issue that companies, if we ask them after we put that in—we did not put that in the contract. We asked them later on and we get these huge bills for delivery of something they have on hand because they cannot make it themselves if they do not have it on hand.

So I think the biggest focus is we need to take a hard look at the front end the way we do contracts to make sure we honor theirs and have control of ours.

The CHAIRMAN. I would just say that is exactly where we have been trying to push things, and I continue to worry about whether the government has the knowledge and expertise and experience base to get into those negotiations early on, which is what needs to happen.

Secretary JETTE. Yes, sir, Mr. Chairman. I think that we have a lot of people who are talented in this area. I do not think that we have—it is a cultural issue we have been talking about. We have got to get them to think differently about these things and IP is not government rights use or use rights, whatever that is.

I always love to have the government pay for research and development because I knew even if I delivered them the package with the intellectual property, it would go right next to the Ark of the Covenant in that warehouse someplace in a government warehouse. Nobody ever in the government pays attention to either honoring or using their IP rights.

The CHAIRMAN. Yes. Congratulations on your patent by the way.

Secretary JETTE. Thank you, sir.

The CHAIRMAN. Mr. Geurts, do you have something else you would like to—

Secretary GEURTS. Sir, I mean I would—I mean and there are a couple different issues. One is new efforts, how do we get those right? How do we create the tools so it is not just mandraulic response? If we have to hire a lot of folks what are tools, guidelines and training?

And then we have got some fairly challenging legacy issues where there are reversely asserted rights. And in that case I think we just have to get to those discussions and resolutions whether it is within the program or not as fast as we can to understand.

Part of my challenge is we have had a lot of lingering disagreements that linger on through and do not get resolved in one way or the other. So I think where we have got legacy programs it is driving to quick resolution, whatever that is, so that we can move on.

For the new programs it is having the workforce and the guidelines so we can put the right things in upfront. And we will be working both of those simultaneously.

The CHAIRMAN. Everything we have talked about pretty much today has been hardware or software. We have not talked about service contracts where, according to some estimates, most of the contracting money goes. Can each of you offer some observations about the challenges with service contracts and areas of reform you think we ought to consider together?

Secretary GEURTS. Sir, I think the number one thing I found over my experience as a service contractor is it is requirements-driven. Many times the requiring agent, if they are an operational unit or they are using component, they do not tend to be, you know, heavily steeped in acquisition expertise, so training a requiring agent and working with them to get an actionable requirement that we can create a good business solution for I think is a critical step.

Actually, understanding the spend and looking where we have got cross-enterprise spend, and so Big Data and all that I think will help in that regime.

And then some of the discussion on protest reform and understanding, particularly in service contracts where you have got incumbents and we are re-competing those contracts, how do you have fair, transparent but mission-effective re-competitions? Those would be the three areas where I think continued emphasis would be worthwhile on all sides on that equation.

Secretary ROPER. Mr. Chairman, I certainly think that one of the themes from today are metrics for acquisition for the new authorities we have been given. I think service contracts are a great example of a contract where we do not have great metrics to determine the value that we are getting to the government.

So I think it is an area where we are looking at new ways to weigh value and auditability is the way that we can do that. There are a lot better tools that are available today than would have been available, say 10 years ago, that do auditing of where spend is going and where workflow is happening.

So that is an area we should up our game because when we talk acquisition reform, we tend to talk hardware and software. To your point, we talk systems, we talk, you know, the ACAT-1 program that so often start snowballing in risk and costs. But a lot of the money is in service contracts so I am glad that you brought that up.

Secretary JETTE. Mr. Chairman, last year my contracting command, just the Army Contracting Command, ACC, did about 210,000 contract actions. About 100 of them cover 80 percent of my money. So that means that I have got a lot of contracting officers do a lot of other contracting actions.

One of the methods that they do to try and reduce that number, because it would be even greater if we would have—to really get a better handle on these service contracts, is they consolidate. So they hire one consolidated vendor, who then does really all their contract actions.

The end state of that is whatever you negotiate on day one is what you have 5 years later on that contract. And you have no real competition internal to that contract, and you have difficulty adding and removing people that are performing well or poorly or new players.

I think that this goes back to one of my issues of taking a look at our contract methodologies, not necessarily the vehicles themselves but how we allow small vendors to participate. The mom-and-pop shop cannot just enter the marketplace, get involved.

You have to become a SAM-registered contractor to be a part of the team that wins the local base contract for plumbing. And then you have to agree to the price to install a water heater, the price to, you know, fix a toilet, the price to dot, dot, dot. And these service contracts, those types of service contracts are not inconsequential. And they add up and we have little control once we let them go.

I just bring it all back to us taking a hard look at exactly how we can reduce the need for consolidation and put a much more qualified vendor or some other system in place that makes it very

easy to just let a task order instead of a whole contract for some of these smaller service issues.

The CHAIRMAN. Well, that gets back to the data transparency, which is what we ran into last year as we started to look at this issue. Just a lack of information and obviously it spans a wide range from mowing the grass at the base to everything, you know, space services or something. So it is a wide range.

Thank you all for being here today. Thank each of you for being willing to serve in these positions at this time. As I said at the beginning, I think we have done a lot but I think there is a lot more to do and we can all be more successful working together.

We may not agree on everything. A lot of the reforms we passed in the last 3 years have not exactly met with enthusiastic support from the Department. But as I said, we are committed to continue and we look forward to working with each of you to make acquisition more agile and to get more value for the taxpayers.

Hearing stands adjourned.

[Whereupon, at 12:13 p.m., the committee was adjourned.]



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**A P P E N D I X**

MARCH 7, 2018

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**PREPARED STATEMENTS SUBMITTED FOR THE RECORD**

MARCH 7, 2018

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**Statement from Chairman William ‘Mac’ Thornberry  
House Armed Services Committee Hearing:  
Assessing Military Service Acquisition Reform  
March 7, 2018**

A major priority for this Committee over the past three years has been reforming DOD’s acquisition system to help ensure that the taxpayers get more value for their money and to improve our agility in dealing with the many serious security threats our country faces.

We have enacted literally hundreds of changes to the law designed to improve agility, streamline processes, remove cumbersome statutory requirements, and foster greater commercial industry participation in the defense sector. We have also augmented authorities to support rapid prototyping and fielding, the use of Other Transaction Authority (OTAs), as well as engagement with non-traditional contractors, all intended to accelerate innovation during a time when, as Secretary Mattis testified last month, “our competitive edge has eroded in every domain of warfare—air, land, sea, space, and cyber.”

A major part of the changes we have enacted have placed more authority and more responsibility for acquisition decisions back with the Services. Thus, it is essential for us to closely monitor whether the law is being followed and whether adjustments to it need to be made. In addition, we are looking at taking additional steps in this year's bill. We have done a lot, but a lot more remains to be done.

Today, we welcome as witnesses the Service Acquisition Executive from each of the three services. Only recently have all three Services had their confirmed “SAEs” in place. But I also know that all three witnesses have had extensive experience in overcoming DOD’s institutional challenges to agile acquisition in order to better deliver capabilities to our warfighters. Having this discussion early in their tenure in these crucial positions is appropriate. We will also be discussing these issues in hearings and briefings in the coming weeks with the service secretaries and with the service chiefs.

As with most initiatives of this Committee, the push for acquisition reform has been non-partisan with many Members on both sides of the aisle making substantial contributions. I have no doubt the commitment from the legislative branch will continue, and we look forward to working with our witnesses today and with others at DOD toward these essential goals.

**Statement from Ranking Member Adam Smith**  
**House Armed Services Committee Hearing:**  
**Assessing Military Service Acquisition Reform**  
**March 7, 2018**

Thank you Mr. Chairman for holding today's hearing on this topic of critical importance. Also, thank you to the witnesses for updating the Committee on the status of applicable acquisition authorities. I look forward to hearing your thoughts on whether recent legislative changes are positively or negatively affecting your ability to procure goods and services and get them to our service members faster.

The FY 2016, FY 2017 and FY 2018 National Defense Authorization Acts (NDAA), included significant acquisition changes for the Department of Defense. The FY 2016 NDAA moved decision-making authority for large acquisition programs from the Undersecretary of Defense for Acquisition Technology and Logistics (AT&L) to the Service secretaries.

The FY 2017 NDAA, split the AT&L position into two secretariats; creating an Undersecretary for Acquisition and Sustainment (A&S) and an Undersecretary for Research and Engineering (R&E). Most recently, the FY 2018 NDAA required the government to purchase goods with commercial e-commerce portals and permitted agencies to purchase commercial products from these portals to introduce more competition into the process, expedite purchases and get the best price for the taxpayer.

All of these policy shifts have introduced elements of uncertainty into the acquisition process and it is not yet clear whether these changes have been effective. I look forward to hearing from our witnesses how these dynamics have affected the acquisition environment at the service level.

The FY2016 NDAA empowered all three witnesses with decision-making authority to make expedited, but responsible, choices on larger acquisitions. We are here today to make sure those decisions are being made wisely. The rationale was to help the Service Chiefs meet the needs of the military service customers in the most cost-effective manner, as they can make a fair and equitable tradeoffs on cost, schedule, technical feasibility and performance on these large programs.

Lastly, I'd like to touch on commercial item procurement. Since 2013, this committee has pushed the Department to purchase commercial items and change its definition of commercial item determinations and the how it evaluates commercial item pricing. While DOD issued a final rule this year, I would like to hear about the senior level management buy-in on this topic and how that process is evolving.

Once again, thank you for coming over to testify before this Committee, and I look forward to the discussion.

**RECORD VERSION**

**STATEMENT BY**

**THE HONORABLE BRUCE D. JETTE  
ASSISTANT SECRETARY OF THE ARMY  
(ACQUISITION, LOGISTICS AND TECHNOLOGY) AND  
ARMY ACQUISITION EXECUTIVE**

**BEFORE THE**

**COMMITTEE ON ARMED SERVICES  
UNITED STATES HOUSE OF REPRESENTATIVES**

**ON**

**ACQUISITION REFORM**

**SECOND SESSION, 115TH CONGRESS**

**MARCH 7, 2018**

**NOT FOR PUBLICATION UNTIL RELEASED BY THE  
COMMITTEE ON ARMED SERVICES**

**Introduction**

Chairman Thornberry, Ranking Member Smith, and distinguished Members of the Committee on Armed Services, thank you for this opportunity to appear before you today to address Army acquisition reform initiatives. With the continued advice and support of Congress, the Army remains fully committed to leveraging the bold and innovative reforms we have, to date, been provided to equip America's Army and its individual Soldiers with the weapon systems and equipment, they need, when they need them, to fight and win our Nation's wars. I hope to provide some insights on our approach to leveraging those reforms, identify some successes, present the emerging organizational and procedural structuring being taken, and identify potential enhancements which will strengthen our ability to execute within your original intent.

**Army Priorities**

The Army acquisition community is fully supportive of the Secretary of the Army's top priorities:

- **Readiness**, today, to ensure the Army's ability to deploy, fight, and win across the entire spectrum of conflict, including in a near peer competitor conflict;
- **Modernization** through continuous improvement and integration of existing capabilities while maintaining and expanding overmatch through aggressive application of innovative and inventive technologies establishing dominance and eliminating near peer status; and
- **Reform** by taking full advantage of those authorities we have been provided to improve the way we develop, acquire, and maintain weapon systems, services, and support through more commercial and efficient business practices.

As Secretary Esper has said, "today's modernization will be tomorrow's readiness." Acquisition reform is absolutely critical to our modernization program and the future readiness of the force. Our acquisition reform efforts will increase the Army's ability to

provide capabilities to Soldiers rapidly, while being fiscally responsible with taxpayer resources.

**Top 6**

The Secretary of the Army and the Chief of Staff of the Army have established six top priorities to contend with the full spectrum from existing and emerging threats.

- Long Range Fires
- Next Generation Combat Vehicle
- Future Vertical Lift
- Army Network
- Air and Missile Defense Capabilities
- Soldier Lethality

While our modernization efforts will focus on these six priorities, we will continue to invest to a lesser degree in technologies which are not directly related to combat effectiveness, but which enable those that are. Even in this area, advancements are possible and will be pursued in order to enable the priorities. To some degree, they may also provide efficiencies in sustainment and operations which may allow for greater investment in those priorities as well.

**Modernization**

The Army Modernization Strategy has one focus: make Soldiers and their units more lethal so they can fight and win our Nation's wars. It establishes a vision for the future Army in a complex threat environment by identifying the essential capabilities needed for the Army to accomplish its future mission, proposing conceptual organizations and processes, and providing the foundation for resourcing these capabilities. Yet, it must balance near-, mid-, and far-term investments in resources and activities of the Army's

science and technology, capabilities development, and acquisitions enterprise to create new capabilities while mitigating tactical, operational, and strategic risk.

To accomplish this, our acquisition system must shift from a linear, closed, industrial age model with unacceptably long timelines to align with modern industry practices in order to get cost-effective capability to our Soldiers fast.

We must adopt commercial products, standards, and methods while employing greater use of prototypes, spiral and incremental development, and modularity when appropriate. Our labs must be focused against challenges that are military unique, are more important to the military environment than the commercial, or advance commercial technologies that have military application and could be leveraged and matured by adversaries.

Prototyping provides an excellent method for managing cost while maturing both technologies and requirements. Spiral prototyping also allows for transitioning from basic analysis of capabilities to systems of systems analysis to resolve integration of capabilities with existing systems or platforms. Our laboratories, Research, Development and Engineering Centers, and arsenals offer excellent partners for industry and a solid foundation from which to produce, then, transition prototypes.

Intellectual Property (IP) management has been handled in such a way as to neither protect industry nor the government agency funding development or maturation. Because innovative companies risk losing their IP, they chose not to do business with the government and, by extension, the Army often does not benefit from the most creative minds. Through deliberate and commercially oriented IP management, greater innovation is possible while preventing the loss of military technologies to open sources which may benefit adversaries.

While not a panacea, modularity and open system architecture often allow more efficient upgrades as technology becomes available either through a program of record or in the commercial marketplace. It further is beneficial when a new threat emerges possibly allowing reapplication of existing systems. These approaches, to include IP

management, require proper and effective partitioning of design and function to ensure simplicity in truly implementing modular open systems architecture.

#### **Strengthen Our Capabilities**

The authorities provided by Congress are encouraging our review of existing programs of record, particularly Major Defense Acquisition Programs (MDAPs) to determine if these authorities offer new paths for more rapid fielding of new capability or upgraded equipment. In some cases, we are ensuring that our requirements documents, which drive acquisition, meet the emerging needs of the existing competitive environment and are informed by operational needs.

When balanced with resourcing, it is often necessary to modernize, rebuild, extend, or modify existing platforms and weapons to maintain readiness, today, while transitioning to more advanced technologies in development to ensure overmatch in the future.

#### **Cross-Functional Teams (CFTs) and Requirements**

The Secretary of the Army has laid out several acquisition reform efforts designed to promote unity of effort, unity of command, efficiency, cost effectiveness, and leader accountability. These include:

- The formation of a three-star-level task force responsible for mapping options to consolidate the modernization process under one command.
- Eight directives intended to improve our capability and materiel development process by refining how we generate requirements, improving how we educate the acquisition workforce, simplifying our contracting and sustainment processes, and evaluating our progress through metrics.

The intent of this effort is to bring highly experienced operational commanders together with technologists and acquisition professionals to gain a deeper look into the operational environment tempered with a realistic, yet, bold view of what technologies may be possible. Requirements, then, can be developed that provide a definable, achievable vision of the future, which allows for growth as technology matures.

Technologies which could maintain and expand overmatch can be advanced faster with focused development efforts in areas which will provide the greatest benefit to provide technological superiority.

#### **Technology Development and Implementation**

The Army no longer has the luxury of ignoring technology development in the commercial sector while remaining focused on its own developments. It is essential that the technical competencies of the Army, its battle labs, and laboratory/development systems be focused in two ways: first, to know what is being developed commercially which may benefit the Army and, second, what must be developed by the Army because of its unique military value.

As part of our acquisition reform, an extensive analysis of the programs under development were reviewed and over a billion dollars realigned to the six priorities of the Secretary and the Army Chief of Staff.

We have also adjusted our management of funds for Research and Development. Funds for basic and applied research, budget activities 6.1 and 6.2, tend to be 60 percent committed to clearly identifiable technologies of military utility. Forty percent can be applied at the director's discretion with greater flexibility and only a close relationship to potential application. Similarly, funding for more immediate development, advanced technology development and prototyping, budget activities 6.3 and 6.4, is allocated in an 80 percent, 20 percent split. The objective is to ensure clear focus for the majority of funds while allowing for breakthrough technologies. True innovation is not necessarily predictable, nor can it be planned.

We are instituting a method of tracking research programs which are not well suited to earned value programs. Using a method of "off-ramp" reviews based on program objectives encourages increased innovation and aggressive pursuit of technology.

To make the research tracking more effective, we are also instituting a process of "quickest path to failure." This is not to encourage failure but to move those parts of the effort which, if they cannot be made to work, would indicate failure for the approach.

This prevents a large expenditure only to discover the last, yet most critical step, is not possible. It is possible to cost more for the critical step than if left to the end, but, collectively, should lead to both time and financial savings.

The Army is working diligently to both advance our technical edge quickly while maintaining accountability.

#### **RCO and Further Expeditious Procurement**

To implement the opportunities in Section 804 of the National Defense Authorization Act (NDAA) for fiscal year (FY) 2016, the Army is expanding on the successes of the Rapid Capabilities Office (RCO) with the intent of leveraging its ability to develop rapid prototypes, conduct experimentation, and implement limited field testing and operational equipping.

Because the mission of the Rapid Equipping Force (REF) is to harness current and emerging technologies to provide immediate solutions to our Soldiers, the REF will also leverage the authorities in Section 804 of the FY16 NDAA.

It appears the initial objective of meeting both the prototyping and the fielding of the Army's full needs within five years can initially be met through the RCO; however, other opportunities to restructure these entities in order to gain greater capabilities remains nascent and, with full cooperation with Congress, will be modified to ensure the greatest advantage of the legislation is taken.

#### **Top Technology Pursuits**

The Secretary of the Army and the Army Chief of Staff have provided their priorities. An initial examination of the broadest underlying technologies essential to these priorities has been made but will continue, much like the idea that technology will evolve, often rapidly. To enable the modernization of the Army's Top 6, we must invest in technologies such as Directed Energy, Artificial Intelligence, ultra-secure communications – short haul, ultra-secure communications – long haul, robotics, quantum computing, virtual reality, internet of things, energetics, and ultra-designed

materials. These are not to be seen as limiting but focusing. Revision is continuously possible.

#### **Rapid and Innovative Contracting**

The Army is committed to streamlining the contracting process and reducing the time it takes to plan and award a contract. Contracting timelines for systems acquisition can take from one to two years, slowing the acquisition process and delaying the delivery of capabilities to Soldiers. It must be faster.

The Army Finance and Acquisition communities were recently granted authority by the Office of the Secretary of Defense (OSD) to reinstate a Pilot Program known as Supplier Self-Service (SUS), a module already within Army's Financial Management Enterprise Resource Planning System. The purpose of SUS is to streamline and improve the invoicing process for Army contracts funded by the General Funds Enterprise Business System (GFEBS). Our goals demonstrated by the pilot to date are faster payments to vendors (up to 20 day reduction or more on average over Wide Area Workflow (WAWF)), reduced payment processing costs, negligible interest penalties, zero late payment claims, reduced data errors, and improved data accuracy and payment processing efficiency. The pilot enables vendors to invoice directly in GFEBS, our primary accounting system, so that the accounting, payment, invoice, and contract data are exact matches, leading to speedier and accurate payments. We will continue collect data and share with OSD to demonstrate the efficiencies we have noted so far.

To streamline the overall acquisition process, expand technological innovation, and attract non-traditional contractors, the Army continues to emphasize the use of Other Transaction Authority (OTA). In FY17, the Army awarded \$1.5 billion under 361 actions, an increase of 61 percent in dollars and 71 percent in actions from the previous year. We are also in the process of establishing metrics to improve efficiency and effectiveness to include timeliness and quality of contracting. To gain the greatest opportunity and cost savings/avoidance, we need to change the culture of our nearly 8,000 contracting professionals at more than 300 locations worldwide.

**Thoughts on Continued Improvements**

Mr. Chairman, I applaud the distinguished Members of this Committee for your continued focus on acquisition reform. Your clear direction and strong support have made a substantial difference to the Army. Some of the great examples include the following:

- Enabling OTA use;
- Raising the simplified acquisition threshold from \$150,000 to \$250,000; and,
- Pushing MDAPs down to the Services;

Still, more can be done. With regard to "middle-tier" acquisition for rapid prototyping and rapid fielding addressed in Section 804 of the FY16 NDAA, we are significantly hampered by the requirement to "complete fielding" within five years, as opposed to achieving Initial Operational Capability (IOC) or a block upgrade. Our conventional acquisition process assumes that, at milestone C, we plan fielding of the same system for all of the Army which often takes up to 20 years. This is incongruent with reality. System enhancements, upgrades, and changes make it clear that five-year increments are more in line with practice. Therefore, it makes more sense to leverage Section 804 for IOC and Block Changes. This is actually a very powerful tool that can accelerate the Army's development and procurement process. Spirals of prototypes can result in spirals aligned with block fieldings. In some cases, cycles shorter than five years are possible, such as for software. However, this affords even major systems to be advanced through such a process. Such a small change in language is of great value for true acquisition reform.

**Talent Management and Development**

The Army Acquisition Workforce Human Capital Strategic Plan (HCSP) is our blue print for working together across organizations and agencies to enhance our work environment and focus our workforce on acquisition excellence.

Talent management is an Army enterprise-level effort to identify, grow, and develop our future military and civilian acquisition leaders to recognize opportunity, embrace new ideas, manage risk, and realize their true potential. It is also about recruiting and retaining top-notch acquisition professionals to sustain the workforce through time.

The Army is examining those things that are now stable due to the enactment of the Defense Acquisition Workforce Improvement Act, which stabilized the professional acquisition workforce. However, we are also examining the constraints of Defense Officer Personnel Management Act on offering full development of acquisition professionals.

#### **Continued Reform**

Mr. Chairman, the Army has benefited greatly from this Committee's ongoing emphasis and collaboration on reforming the defense acquisition system.

Through the FY16 NDAA, we reinvigorated the Army Requirements Oversight Council (AROC) to serve as the hub for enabling collaboration across the requirements, resourcing, and acquisition communities, establishing priorities to balance resources and requirements, and enforcing accountability, including concurrence with the Secretary of the Army and the Chief of Staff of the Army with Milestone A, B, and C cost, schedule, and performance trade-offs. With the assistance of Congress, we have strengthened the Army Acquisition Workforce by expanding hiring authorities and making the Defense Acquisition Workforce Development Fund permanent. Most importantly, we are grateful for your support for the delegation of program authority from the Office of the Secretary of Defense (OSD) to the Army, which allows the Army to exercise more influence over our programs.

In accordance with the FY17 NDAA, the Army has initiated greater transparency in our MDAPs, including the requirements for the Milestone Decision Authority to establish cost, schedule, and performance targets and provide an "Acquisition Scorecard" to the appropriate Committees of Congress 15 days after granting a major Milestone approval. In FY17, the Secretary of the Army and Army Chief of Staff reviewed and certified 19

programs. To comply with the FY17 NDAA, the Army designated that MDAPs initiated after January 1, 2019, must be designed and developed with a modular open system approach to the maximum extent practicable.

In the area of acquisition reform to reduce costs and gain efficiencies, the Army is using a firm fixed price development contract for our Mobile Protected Firepower program. This will limit the use of cost contracts that require expensive government unique processes to manage and focus on more commercial-like fixed price contracts.

### **Conclusion**

I am grateful to the Members of this Committee for your efforts to improve the acquisition process to better serve our Army and ultimately our Soldiers. We know that the security challenges of tomorrow will be met with the equipment we develop, modernize, and procure today. We cannot allow our own process to hinder the agility we so desperately need to maintain our technological superiority and deliver affordable capabilities to our Soldiers faster. With your help, we will continue to field the best equipment to the best Army the world has ever known in the most expeditious and cost-effective way.

Mr. Chairman and distinguished Members of the Committee, thank you for your steadfast and strong support of the outstanding men and women of the United States Army, Army Civilians, and their Families. I look forward to your questions.

**The Honorable Dr. Bruce D. Jette**  
**Assistant Secretary of the Army (Acquisition, Logistics and Technology) and**  
**Army Acquisition Executive**

Dr. Bruce D. Jette was confirmed by the United States Senate as the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) on December 20, 2017, and sworn into office on January 2, 2018. In this position, he serves as the Army Acquisition Executive, the Senior Procurement Executive, the Science Advisor to the Secretary of the Army, and the Army's Senior Research and Development official. He also has principal responsibility for all Department of the Army matters related to logistics.

Dr. Jette leads the execution of the Army's acquisition function and the acquisition management system. His responsibilities include providing oversight for the life cycle management and sustainment of Army weapon systems and equipment from research and development through test and evaluation, acquisition, logistics, fielding, and disposition. He is also responsible for appointing, managing, and evaluating program executive officers and managing the Army Acquisition Corps and Army Acquisition Workforce. In addition, he oversees the Elimination of Chemical Weapons program.

Prior to his confirmation, Dr. Jette served as President and Chief Executive Officer of Synovision Solutions, LLC, an innovative company he founded to provide management and technical consulting, engineering services, and project management in support of military and governmental agencies, as well as commercial industry.

A decorated veteran of 28 years of active duty, Dr. Jette retired as a Colonel following a career that included several armor and cavalry company commands, two overseas tours, various staff assignments at the battalion and brigade level, and over two years of operational deployments to Afghanistan, Iraq and Kuwait. Highlights of his previous acquisition service include founding the U.S. Army Rapid Equipping Force; serving as Program Manager for Soldier Systems which led to the establishment of Program Executive Office Soldier; and being honored as U.S. Army PM of the Year for his success as Product Manager for all Army airborne electronic warfare systems.

Dr. Jette is a graduate of the United States Military Academy with a Bachelor of Science degree in Nuclear Engineering and Chemistry. He also holds both a Master of Science degree and a Doctorate in Electronic Materials from the Massachusetts Institute of Technology. He was an Adjunct Professor at the Edmund A. Walsh School of Foreign Service Security Studies Program at Georgetown University.

His numerous military awards and commendations include the Distinguished Service Medal, Legion of Merit (3), Bronze Star Medal, Meritorious Service Medal (3), Army Commendation Medal, Army Achievement Medal (2), National Defense Medal (2), Operation Iraqi Freedom Campaign Ribbon, Operation Enduring Freedom Ribbon, Army Service Ribbon, Army Overseas Ribbon (2), Parachutist Badge, Army General Staff Award, and Order of Saint Maurice (Legionnaire).

NOT FOR PUBLICATION UNTIL RELEASED BY  
THE HOUSE ARMED SERVICES COMMITTEE

STATEMENT OF

THE HONORABLE JAMES F. GEURTS  
ASSISTANT SECRETARY OF THE NAVY  
RESEARCH, DEVELOPMENT AND ACQUISITION  
BEFORE THE  
THE HOUSE ARMED SERVICES COMMITTEE  
ON  
ASSESSING MILITARY ACQUISITION REFORM

MARCH 7, 2018

NOT FOR PUBLICATION UNTIL RELEASED BY THE  
HOUSE ARMED SERVICES COMMITTEE

Mr. Chairman, Ranking Member Smith, and distinguished members of the committee, thank you for the opportunity to appear before you today to discuss acquisition reform efforts, recommendations for further reform, and requests for Congressional support to improve acquisition outcomes.

We in the Department of the Navy (DoN) succeed in acquisition when we work as part of a team that includes our acquisition workforce, our scientists and engineers, our resource professionals, and our men and women in uniform who identify what we need, and then test, train, and deploy with the resulting systems. That team cannot succeed, however, without the full participation of our industry partners and you in the Congress. No acquisition process can be successful without a true partnership by all stakeholders. And by partnerships I mean shared risk resulting in shared benefits. We must all be good stewards of our resources for the American taxpayers and leverage every tool and every approach at our disposal to ensure we provide our Nation with a Naval Force that can Compete, Deter and Win.

To deliver on this need for our Nation we have established four focus areas within the Navy-Marine Corps acquisition community: deliver lethal capacity for the Naval forces; increase agility; drive affordability; and lastly, build a workforce to compete and win. These support the 2018 National Security Strategy and the 2018 National Defense Strategy and will enable our forces to be more lethal, resilient and agile.

Additionally, recently enacted laws have offered new tools that will allow us to streamline how we develop and deliver necessary weapon systems, promote a healthy industrial base, and strengthen our acquisition workforce, and we thank you for these authorities.

The DoN has embraced recent acquisition reform efforts on multiple fronts to drive speed and cost. For example, we have developed and implemented an accelerated acquisition policy and established an Accelerated Acquisition Board that I co-chair with the Chief of Naval Operations (CNO) and the Commandant of the Marine Corps. This policy improves our ability to leverage technological innovations by relying on rapid prototyping and fielding and hastens our ability to respond to urgent needs. It establishes two paths. For priority needs where a suitable material solution has been identified, the preferred path is through a Maritime Accelerated Capability Office (MACO) program. The DoN designated our first MACO Program - MQ-25 - as a Key Performance Parameter (KPP) Reduction Pilot Program, utilizing authority provided by Congress in the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2017. Having just two KPPs allows the Department to better manage cost, schedule, and performance by focusing on MQ-25's most important capabilities - Carrier Suitability and Aerial Refueling. Other MACO programs include the Large Displacement Unmanned Undersea Vehicle (LDUUV), and the SM-2 Block IIIC active medium range missile.

For priority needs where a suitable materiel solution is not sufficiently developed, the preferred path is through a Rapid Prototyping, Experimentation and Demonstration (RPED) project. Current RPED projects include the Navy Laser Family of Systems and the Expeditionary Surveillance Towed Array Sensor System, and most recently an abbreviated acquisition program on the standard missile SM-6 Block IB, which will field initial capability up

to three years earlier than the previous programs of record. The DoN recently awarded a contract for High Energy Laser and Integrated Optical-dazzler with Surveillance system (HELIOS) as a part of the Navy Laser Family of Systems RPED effort. Contract award was made less than one year from initiation by the Navy's Accelerated Acquisition Board and two months ahead of the program's internal schedule.

The Marine Corps has also established a Rapid Capabilities Office (RCO) to exploit emerging technological opportunities for rapid prototype development, fielding, and operational assessment that will improve the lethality and survivability of Marine units. Projects initiated or planned include Ship-to-Shore Maneuver Exploration and Experimentation, Tactical Electro-Magnetic Signature Operations and Support, Long Range Precision Fires, and Unmanned Swarm Systems. I intend to work with Congress to seek support for flexible funding constructs and associated appropriations, alongside an agreed-upon framework of governance and oversight that will ensure the effective and efficient use of RPED/RCO funds for their intended purpose. All of these represent exciting new efforts that we are pursuing with vigor, but that also serve as case studies in action that allow us to measure, assess, and refine our approaches to gain even greater efficiency and effectiveness over time.

The DoN is accelerating capabilities to the warfighter not just in our large and enduring programs but throughout the enterprise. Our Sailors, Marines and civilians are utilizing technologies like additive manufacturing in laboratories, shop floors and deployed environments in direct support of the warfighter. For example, when a restricted flight on the Onboard Oxygen Generation System resulted in a T-45 Goshawk operational pause, the Naval Air Systems Command was able to use distributed additive manufacturing across multiple printers/locations to meet production timeline for a T-45 vent assembly, completing an initial production run in 10 days and enabling T-45 Instructor and Student Pilots to maintain currency and readiness.

The DoN also continues to leverage available tools to drive down procurement costs, which is imperative as we move towards a 355-ship Navy. We continue to refine our requirements, seek to maximize competition, capitalize on multiyear and block buy contracts, explore cross-program efficiencies, and manage our cost of doing business to ensure we obtain as much warfighting capability out of every dollar as we can. For enduring programs, such as the VIRGINIA Class Submarine, the Navy uses these approaches to manage costs and stabilize the industrial base, as well as explore proven strategies such as making appropriate use of block buys and multiyear procurements as we have in the past with various ship types (carriers, subs, etc.) when supported by thorough analysis. These kinds of authorities can result in substantial savings; we estimate they may be as much as \$5.4 billion for the Block V VIRGINIA Class Submarines Multiyear Procurement. The President's Fiscal Year 2019 budget requests multiyear procurement authority for the F/A-18E/F Super Hornet and the E-2D Advanced Hawkeye aircraft, as well as the SM-6 program.

Additionally, the DoN is developing agile policy and procedures aligned with commercial best practices to support our defense business systems (DBSs) and information technology infrastructure, eliminating many of the regulatory requirements and documentation

requirements that are not suitable for DBSs. By purchasing commercial-off-the-shelf solutions that satisfy the majority of our requirements, modifying our business processes to adopt the commercial product to the maximum extent possible, and only configuring the products where needed to meet our unique Naval requirements, DoN will minimize costly custom development and shift our resources from capital investment to operations and maintenance. Lastly, an appropriate cloud-based infrastructure will maintain a secure cyber posture, support flexibility and technology software updates, and reduce total ownership costs.

We are actively working to encourage small businesses and non-traditional companies to do business with the DoN. Last month I hosted a small business roundtable with the CNO where we discussed the increased use of Other Transaction Authority (OTA) that offers a great deal of flexibility in working with non-traditional suppliers. The DoN has delegated authority to utilize OTA to our major acquisition commands for projects under \$50 million, and is taking steps to ensure that highly trained contracting and acquisition personnel are assigned to DoN OTA projects. We will continue to develop new collaboration models such as SOFWERX, to enable more robust sharing of our capability gaps and allow earlier identification of potential existing commercial solutions from non-traditional suppliers.

The DoN is pursuing initiatives to capitalize on the new mid-tier acquisition and other acquisition authorities provided in the FY 2016 and 2017 NDAAAs. In the first application of the new authorities the DoN intends to develop a new increment of capability for the SM-2 program. In addition, the DoN continues to leverage important DoD Laboratory authorities, executing over 1,100 initiatives to make impactful improvements in critical technology areas as well as ensure we have the technical expertise we will need in the coming years. For example, the DoN is taking advantage of the authorities provided in Section 233 of the FY 2017 NDAA by delegating authority to the Naval Research Laboratory and Warfare and Systems Centers in the areas of business processes, rapid contracting, and R&D facilities upgrades, enabling more efficient and effective operations.

Taken as a whole, these new authorities provide the DoN many new and important tools which we can tailor to our specific needs. This tailored approach retains the required rigor and oversight but relieves us of the requirement to make every program and project fit into a traditional defense acquisition program model, increasing acquisition velocity and reducing fielding times. Through the use of these reforms, we are beginning to move the needle on our priorities and increase the readiness and lethality of our forces. While we have made progress, there is the potential for still more. As is described more fully below, we would welcome further adjustments in connection with assignment of milestone decision authority (MDA) to the Services, additional expansion of funding mechanisms for rapid prototyping and fielding initiatives that will increase our ability to operate within a budget cycle, and further autonomy in Defense Acquisition Workforce Development Fund (DAWDF) execution.

The FY 2016 NDAA directed that program oversight and MDA for major defense acquisition programs (MDAPs) be returned to the Services to speed decision making, improve efficiency, and ensure greater involvement of the Service Chiefs in acquisition programs. As the

DoN Service Acquisition Executive (SAE) I am currently the MDA for 40 Acquisition Category (ACAT) 1C MDAPs.

In addition, we worked with the Under Secretary of Defense for Acquisition, Technology and Logistics (now Acquisition and Sustainment) to delegate MDA for eight of our 10 ACAT 1D programs to the SAE. Meanwhile we are decentralizing and devolving authority within the Navy to push decision making to lower levels where appropriate. This ensures that the Program Executive Office and Program Offices most familiar with the issues are the organizations resolving key decisions. These authorities also allow us to differentiate and manage the scale differences and required oversight between mega programs and small programs. Every contract and action should not have the same bureaucratic oversight as a large ship or aviation program. Our current model must be flipped so that we can separate the programs and pull those that can tolerate more risk forward faster, and streamline processes.

None of these efforts will result in meaningful and sustainable change unless the people who carry them out are properly trained and incentivized. In January, we completed a DoN Acquisition Workforce Summit to identify key activities, actions, and measures of performance for the next year to ensure we are recruiting, selecting, developing, and retaining the talent needed for the future - an important step in implementing our Acquisition Workforce Strategic Plan. Our efforts to execute this plan have been enhanced by congressional extension of the Expedited Hiring Authority that streamlines recruiting selection and hiring processes for acquisition professionals. We appreciate Congress' extension and expansion of the successful Acquisition Demonstration Project in the FY 2018 NDAA, and your support of the DAWDF, which allows us to provide the appropriate training to our professionals and continue their development. DAWDF will be a key enabler for the Services to maintain effective oversight of acquisition programs in light of the Services' increased authority and responsibility.

While efforts have been made to better support the acquisition workforce, the DoN would like greater autonomy in our ability to target the areas of greatest need, develop and implement more efficient acquisition workforce development programs, reduce administrative burdens, and increase the rate of delivery of resources. DoN is also exploring the value of making greater use of rapid prototyping. We will work with our fellow Services, the Department, and the Administration as we consider the utility of current authorities and whether or not refinements to these authorities would be helpful.

Finally, and most importantly, meaningful acquisition reform will remain elusive until we can obtain timely, predictable funding. I cannot overstate how critical this is to our success. Resource predictability gives small businesses, second- and third-tier suppliers, non-traditional companies, as well as major prime contractors and suppliers, confidence to smartly invest in a skilled workforce, infrastructure improvements, and research and development to inform our future options. The DoN appreciates the bipartisan efforts establishing budget caps for FY 2018 and 2019 that will provide the resources and stability needed. All of this translates into delivering lethal capacity more efficiently - which in turn reduces time and cost, the goals all of us share.

The DoN would like to thank the committee for the significant efforts you have made to improve defense acquisition policy, our processes, and the people who conduct this critical work. The new authorities provided in the FY 2016, FY 2017, and FY 2018 NDAA's, the continued support of acquisition workforce development initiatives, and the return of acquisition program oversight to the Services have been important steps towards our common goal of improving the affordability and speed of acquisition outcomes for the Department. All of these changes are needed for the Navy-Marine Corps team to deter and defeat our adversaries and deliver the capabilities needed for the future. I appreciate the opportunity to testify before you today and look forward to your questions on how we might further work together to use agile acquisition authorities to successfully deliver critical warfighter capability.

**James F. Geurts**  
**Assistant Secretary of the Navy**  
**(Research, Development and Acquisition)**  
**12/5/2017 - Present**

On Dec. 5, 2017, Mr. James F. Geurts was sworn in as Assistant Secretary of the Navy for Research, Development & Acquisition (ASN (RD&A)), following his confirmation by the Senate November 2017. As the Navy's acquisition executive, Mr. Geurts has oversight of an annual budget in excess of \$60 billion and is responsible for equipping and supporting the finest Sailors and Marines in the world with the best platforms, systems and technology as they operate around the globe in defense of the Nation.

Mr. Geurts previously served as the Acquisition Executive, U.S.. Special Operations Command (USSOCOM), at MacDill Air Force Base (AFB), Florida, where he was responsible for all special operations forces acquisition, technology and logistics. In this position his innovative leadership and technological ingenuity provided rapid and affordable acquisition that positively impacted the USSOCOM acquisition work force and the special operations forces capability on the battlefield. These contributions were recognized by both private and public institutions during his tenure to include earning the Presidential Rank Award, USSOCOM Medal, William Perry Award and Federal Times Vanguard Award for Executive of the Year.

Prior to Senior Executive Service, Mr. Geurts began his career as an Air Force officer where he served as an acquisition program manager with engineering and program management leadership positions in numerous weapon systems including intercontinental ballistic missiles, surveillance platforms, tactical fighter aircraft, advanced avionics systems, stealth cruise missiles, training systems and manned and unmanned special operations aircraft.

He has over 30 years of extensive joint acquisition experience and served in all levels of acquisition leadership positions including Acquisition Executive, Program Executive Officer and Program Manager of Major Defense Acquisition Programs.

Mr. Geurts is a distinguished 1987 ROTC graduate from Lehigh University where he received a Bachelor of Science in Electrical Engineering. He holds a Master of Science in Electrical Engineering from Air Force Institute of Technology, Wright-Patterson AFB and in National Security Resourcing from Industrial College of the Armed Forces, National Defense University, Washington, D.C. Mr. Geurts also attended executive leadership and international studies programs at Harvard Kennedy School and George Washington Elliot School.

Updated: 19 December 2017

NOT FOR PUBLICATION UNTIL RELEASED BY  
HOUSE ARMED SERVICES COMMITTEE  
U.S. HOUSE OF REPRESENTATIVES

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE  
HOUSE ARMED SERVICES COMMITTEE  
U.S. HOUSE OF REPRESENTATIVES

SUBJECT: Assessing Military Acquisition Reform

STATEMENT OF: The Honorable William Roper  
Assistant Secretary of the Air Force  
for Acquisition

March 7, 2018

NOT FOR PUBLICATION UNTIL RELEASED BY  
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U.S. HOUSE OF REPRESENTATIVES

**The Honorable William Roper**  
**Assessing Military Acquisition Reform**  
**House Armed Services Committee**  
**March 7, 2018**

Chairman Thornberry, Ranking Member Smith, and distinguished members of the Committee, it is an honor to appear before you today to discuss both progress and remaining challenges in achieving Defense acquisition reform and to do so with my fellow Service Acquisition Executives. Though I am still newly appointed as the Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics, I am encouraged by steps the Air Force is taking to implement recent reforms championed by this Committee. Our Acquisition Workforce is strong, technically-skilled, and motivated to build and sustain the world's most lethal Air Force, so my top priority is empowering them to leverage newly-restored "power at the edge." This is more than just delegating decision authority; it is creating opportunities to reorganize, retrain, refocus, or remove barriers so that our workforce can take full advantage of having the reins in their hands.

Cost-effective modernization is a top Air Force priority, and the need for it has never been more pressing. Twenty-six years of continuous combat operations has done more than just take a toll on Airmen and equipment; it has allowed the national security environment to change while our time, talent, and treasure were otherwise engaged. I know the Committee is well aware that many capabilities developed decades ago were studied, copied, and, in many cases, exploited by our adversaries. The industrial base continued contracting as long-standing Defense companies merged and new start-ups often remained unconnected to our military. New commercial technologies likely to revolutionize warfare—particularly artificial intelligence and machine learning—accelerated significantly. Technologies our government must develop—like hypersonics and directed energy—

have slowed compared to other nations, like China. It is no wonder fundamental changes to how the Department designs, acquires, and sustains our military are a focus of this Committee. I applaud your recent reforms to effect it and for your important action to lift the sequestration caps for FY18 and FY19. Stable and timely budgets, devoid of Continuing Resolutions and defense budget caps, are absolutely necessary to build the Air Force this country needs and deserves, so I ask for your help in ending the remaining sequestration limitations and passing the FY18 and FY19 budgets.

During my time as the Director of the Strategic Capabilities Office, I was able to use streamlined acquisition to get much needed capabilities into the hands of warfighters. Through use of extensive prototyping, experimentation, and Other Transaction Authorities, we turned development and acquisition into a contact sport of doing, failing, learning, and refining that was significantly faster—and more creative—than normal processes. I see the Air Force adopting much of this approach (as it also adopts me) and applying it to many new initiatives. My goal is to continue this paradigm shift using reforms created by past and future National Defense Authorization Acts (NDAAs). I am excited to be in this position at this time and will work with the Committee, and all of Congress, to modernize the Air Force affordably and effectively.

### **Implementation Progress**

#### **Delegation of Authorities**

The FY16 NDAA directed that Milestone Decision Authority (MDA) for programs reaching Milestone A reside with the Service Acquisition Executive after 1 October 2016, unless otherwise designated by the Secretary of Defense. The Air Force currently has milestone decision authority

over 41 of 54 Acquisition Category (ACAT) I Major Defense Acquisition Programs and Major Automated Information System programs. This is up from 19 of 49 programs prior to the enactment of the FY16 NDAA.

These programs will reach key decision points faster because fewer levels of review are now involved in each decision. Air Force programs like GPS III Follow-On, Mk 21A Reentry Vehicle, and Protected Tactical SATCOM have already benefited from these shortened timelines, saving months of work normally spent coordinating meetings to clear Defense Acquisition Boards.

I firmly believe in this philosophy: putting empowered people, vice cumbersome processes, in charge. Consequently, I support and will continue to expand additional delegation of authority for smaller acquisition programs to the lowest feasible level. Currently, MDA for 43 of 43 ACAT II programs has been delegated from me to the Program Executive Officer (PEOs), and MDA for 274 of 376 ACAT III programs has been delegated from PEOs to Deputy PEOs or Program Directors. Not only does this save valuable time, it sends a clear signal of trust to the Acquisition Workforce.

#### **Things We Are Getting Right**

##### *Prototyping and Experimentation: Flying Before Buying*

New authorities granted by Congress make it easier for Services to prototype concepts and conduct experimentation campaigns before committing to buy them. Prototyping is the natural bridge between new technology and programs of record and is the appropriate place for new concepts to “fly or die”. I am pleased to see that the Air Force has embraced this approach both organically and in partnership with other organizations.

One Air Force example is the Light Attack Experiment (LAE) test campaign. Phase I was successfully conducted last August where four aircraft participated in less than five months after invitation. Planning for Phase II is currently underway with the AT-6 Wolverine and A-29 Super Tucano, which will explore logistics and maintenance support, weapons and sensor issues, training, and networking. We also plan to demonstrate interoperability with partner forces by participating in the BOLD QUEST 18.1 exercise in July of this year. Other important prototyping examples include hypersonics development for long-range strike and the Adaptive Engine Transition Program for improved thrust-to-fuel ratio. Retiring the risk to receive the potential rewards of these programs is why prototyping proficiency is a skill we will continue to strengthen in our workforce.

Some examples of prototyping partnerships with external organizations include those with my former organization, the Strategic Capability Office. We are working high-end military capabilities like the Arsenal Plane; military-commercial “frankensteins” such as installing smartphone-camera navigation on Air Force weapons; and commercially-derived capabilities like Perdix swarming microdrones. Each effort is worked in partnership with Air Force Program Offices, which provide program management, engineering, test, and contracting expertise to speed development and transition when concepts succeed. The Air Force is also partnered with the Defense Advanced Research Projects Agency on important hypersonics development like the Air Launched Rapid Response Weapon. Partnerships such as these are important to ensure the Air Force can ingest promising technologies and concepts from both the broader Defense and commercial ecosystems. These efforts are to be applauded, and I hope this Committee will support making them standard practice across Air Force development.

*Leveraging Commercial Technology and Practices*

As the Committee is well aware, many commercial technologies and practices have huge applicability to current military challenges. The Department must be able to adopt and adapt them at commercial speed or risk ceding opportunity to adversaries who can. Traditional acquisition has historically struggled with commercial technology for a variety of reasons, one of which is rigid requirements. I am fortunate to work with a visionary Service Chief and Vice Chief who are integrating requirements with acquisition into a more streamlined process. This opens new opportunities for the Air Force to leverage commercial technology at commercial speed.

One example is the Low-Cost Attributable Aircraft Technology (LCAAT), which leverages recent advances in advanced manufacturing, like 3-D printing, to design limited-life unmanned aircraft rapidly. Mastering the art of designing for attributability—cheap enough to take risk, expensive enough to reuse, dangerous enough to kill the enemy if ignored—will be key to imposing cost on adversaries while also keeping future Airmen safe in a contested fight.

Another example is our Enterprise Information Technology as a Service (EITaaS) initiative. This initiative will shift the burden of providing IT at military bases to commercial providers who can do it more efficiently and upgrade more agilely than traditional Defense procurement. Though this should be simple and straightforward, it is this type of initiative that often struggles in a one-size-fits-all process used for all things from books to bombers. Flexibility in the new acquisition authorities makes common sense endeavors in IT easier to jumpstart.

Though there are many other programs using commercial technology, I believe this is an area we can elevate to the next level. I look forward to exploring options within the Air Force in the coming months.

*Other Transactions Authorities*

I am very pleased with the Air Force's early adoption of Other Transactions Authorities (OTAs). The Air Force Research Laboratory has the lion's share of OTAs through Open System Acquisition, which supports development in command and control, communications, and cyber and intelligence, surveillance, and reconnaissance (C4ISR). The Space and Missile System Center employs OTA agreements on the Evolved Expendable Launch Vehicle program through the Space Enterprise Consortium, which increases access to non-traditional defense contractors for space-related prototyping. Additionally, the Air Force Life Cycle Management Center recently leveraged OTAs to complete the Light Attack Experiment. The fact that three separate Air Force communities—a laboratory, space program office, and aircraft program office—found a way to make OTAs work for their mission is encouraging, so I look forward to expanding the practice across our enterprise.

**Things We Can Improve***Software Development*

The Department's approach to software acquisition still trails current industry standards. Modern development tools have the potential to speed up both production and spiral upgrades while also reducing cost, but leveraging them remains a challenge as top talent often lies outside the traditional Defense Industrial Base. Of Air Force ACAT I programs exceeding their original cost baselines, the majority (5 of 9) are software-driven: GPS Next-Generation Operational Control System, Joint Space Ops Center Mission System Increment 2, Defense Enterprise Accounting/Management System, Air Operations Center Weapon System Increment 10.2, and Mission Planning System Increment 5.

The cost statistics reinforce my view that we should train and resource our Acquisition Workforce to manage software-related programs differently than hardware-related ones. One promising example of doing so is the Air Operations Center (AOC) Pathfinder—a joint initiative between the AOC Program, Defense Industrial Unit Experimental, and the Air Force Digital Service—to apply modern software development to the struggling AOC program. This initiative has shown great promise thus far, averaging 120 days from development to delivery of new application. One specific application slashes the time to develop by 85 percent, while halving error rates. A key lesson learned from this initiative is the importance of adopting a modern software architecture upfront to continually spiral application deliverables.

Reforming software acquisition is a top priority for me and the Air Force. We must train our workforce appropriately and have dedicated subject matter expertise, just as we do for other science-related fields. I look forward to working with the Committee on this important topic.

#### *Innovation in Sustainment*

As I look at total Air Force cost, sustainment encompasses the majority, yet it receives little focus in our research and development portfolio. Many commercial technologies and practices—agile manufacturing, artificial intelligence, augmented/virtual reality, digital twins—have the potential to reduce cost while simultaneously increasing the availability of our systems. These technologies must be aggressively explored, especially in light of current fleet aircraft availability and uncertain F-35 sustainment costs.

This does not come without its own unique challenges. Qualification of aircraft parts is not simply a material issue. Due to the variability of the additive manufacturing equipment, technical data packages will likely become machine dependent. We are also likely to encounter data rights issues,

a more general problem in Department acquisition, which will motivate looking at new contract incentives, new vendors, and academia as means to increase innovation and competition throughout a system's life cycle.

We should be cognizant of these challenges, but when looking at the opportunities and potential rewards, the Air Force must go "all in" on revolutionizing sustainment. The flight line of the future could be the difference-maker in future conflicts. This will be a major focus for me.

#### *Operationalizing Artificial Intelligence*

If the U.S. military goes to war today, only our operators will be smarter after day one. In today's world of continually evolving smart devices, "dumb" hardware will not suffice for future Airmen. Artificial intelligence (AI) will fundamentally change the character of warfare, so future Airmen must have systems that learn faster than their enemy's. To harness this technology from commercial industry, we must design, acquire, and update software like them. This will change all facets of the Air Force—requirements, acquisition, operations, sustainment—but can you imagine a future Air Force with a myriad of drones, planes, satellites, and cyber tools sensing, learning individually, sharing data, and learning collectively at machine speed. This kind of "skyborg" is not science fiction. We could build it today if data, software, and networking became as important to us as platforms. The Air Force has always pioneered new warfighting domains that allow us to observe, orient, decide, and act (OODA) the fastest: first air, then space, and then cyberspace; each new domain shrinking the OODA loop. Now, a new domain looms that will likely draw this loop into a knot of unprecedented decision speed at global scale. We must dominate the new "blue yonder" of AI, but to do so, we must design for it. Important pathfinders with the Strategic Capabilities Office are already underway, but the paradigm shift must be faster and at a larger scale across the

Department. Consequently, the Air Force is holding an AI Summit in May 2018 to gather leadership and determine our way ahead.

**Other Areas for Congressional Consideration**

As identified by Secretary Wilson in her testimony before the Senate Armed Services Committee on December 7, 2017, there are several areas we continue to explore that could lead to further improvements to the acquisition process:

- Current law requires us to establish program cost and fielding targets that are approved by the Secretary of Defense or the Deputy Secretary of Defense. We are working with our counterparts within the Office of the Secretary of Defense to determine where such authority would be best located. These targets are already included in annual reports and baselines. (FY17 NDAA, Section 807)
- Exploring funding flexibility to align with more modern software practices;
- Weighing the value of requiring contractors to select one bid protest forum—either the Court of Federal Claims or the Government Accountability Office—recouping protest time and accelerating fielding;
- Exploring statutory requirements that may be imposing duplication of effort on internal processes and working with the Committee to streamline them.

**Conclusion**

The Air Force is off to a good start in reforming acquisition, but there is still another level we can reach. Though reforming the process typically receives the focus, it is empowering people that historically made Air Force acquisition a powerhouse of innovation and agility. Throughout our history, we conducted the highest technological developments, most ground-breaking tests, and fastest deployments. Decision power was at the edge, and the center (i.e., upper management) enabled it. It is time to return to those roots, to build and sustain next-generation systems our successors will name alongside the likes of the SR-71, GPS, B-2, F-117, and X-37B, and to do so at cost and speed. Given our talent, leadership, and new authorities, I am excited about what is to come.

**William B. Roper, Jr.**

Dr. Will Roper is the Assistant Secretary of the Air Force for Acquisition, Technology and Logistics. As the Air Force's Service Acquisition Executive, Dr. Roper is responsible for and oversees Air Force research, development, and acquisition activities totaling an annual budget of over \$40 billion for over 465 acquisition programs. In this position, Dr. Roper serves as the principal advisor to the Secretary and Chief of Staff of the Air Force for research and development, test, production, and modernization efforts within the Air Force. In addition to his Air Force responsibilities, Dr. Roper is the Service Acquisition Executive for the Joint Strike Fighter. Dr. Roper also serves on the DoD's Cloud Executive Steering Group.

Before assuming his current position, Dr. Roper was the founding Director of the Pentagon's Strategic Capabilities Office (SCO). Established in 2012, the SCO imagines new—often unexpected and game-changing—uses of existing government and commercial systems: extending their shelf-life and restoring surprise to the military's playbook. Since 2012, SCO has grown from \$50M/year to the current \$1.5B/year request in President's 2018 budget with projects spanning new concepts such as hypervelocity artillery, multi-purpose missiles, autonomous fast-boats, smartphone-navigating weapons, big-data-enabled sensing, 3D-printed systems, standoff arsenal planes, fighter avatars, and fighter-dispersed swarming micro-drones which formed the world's then-largest swarm of 103 systems. During his tenure as SCO Director, Dr. Roper served on the Department's 2018 National Defense Strategy Steering Group and Defense Modernization Team.

Previously, Dr. Roper served as the Acting Chief Architect at the Missile Defense Agency (MDA) where he developed 11 new systems, including the current European Defense architecture, advanced drones, and classified programs. Before this, he worked at MIT Lincoln Laboratory and served as a missile defense advisor to the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD/AT&L).

**EDUCATION**

- 2001 Bachelor of Science in Physics, Georgia Institute of Technology
- 2002 Master of Science in Physics, Georgia Institute of Technology
- 2010 Doctorate in Mathematics, Oxford University

**CAREER CHRONOLOGY**

1. January 2006 – June 2010, Missile Defense Advisor, MIT Lincoln Laboratory, Washington, D.C.
2. August 2010 – August 2011, Member, Missile Defense Advisory Committee, Missile Defense Agency, Washington D.C.
3. June 2010 – August 2012, Acting Chief Architect, Missile Defense Agency, Washington D.C.
4. August 2012 – February 2018, Director, Strategic Capabilities Office, Office of the Secretary of Defense, Washington, D.C.
5. February 2018 – present, Assistant Secretary of the Air Force for Acquisitions, Technology and Logistics, Headquarters U.S. Air Force, Washington, D.C.

**MAJOR AWARDS AND HONORS**

Department of Defense Medal for Distinguished Public Service  
 Secretary of Defense's Award for Excellence  
 USD/AT&L Award for Innovation  
 MDA's Contractor of the Year  
 MDA's Innovation and Technology Awards  
 Rhodes Scholar

(Current as of February 2018)



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**QUESTIONS SUBMITTED BY MEMBERS POST HEARING**

MARCH 7, 2018

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## QUESTIONS SUBMITTED BY MR. COURTNEY

Mr. COURTNEY. The Procurement Technical Assistance Program provides critical training and in-depth, individualized counseling that small businesses need to compete and succeed in defense contracting. There are 98 of these procurement centers, or PTACs, in all 50 states, Puerto Rico, and Guam, with over 300 local offices. These programs help existing local businesses jump through the hoops that are required to do business with a nearby military base or facility.

- How important are small businesses and small producers with respect to maintaining a broad-based, resilient defense industrial base?
- Even as we seek to reduce red tape through many of the acquisition reform efforts discussed today, would you be supportive of expanding local technical assistance programs to increase competition and expand the supplier base for your respective military services?

Secretary JETTE. Small businesses and resilient defense industrial base to enable the Department of the Army and Department of Defense to maintain a pool of suppliers to procure products and services to meet our mission requirements and compete in the current and future threat environments. Small businesses are the suppliers of innovative products, techniques, processes and services to help the Department maintain its competitive advantage, improve its technological advantage, and increase readiness of the warfighter. Small Businesses assist the Army with meeting the Secretary's priority of readiness, modernization, and reform. I would support expanding local technical assistance programs to include training on Small Business Innovative Research, Small Business Technology Transfer, and Other Transaction Authorities and other acquisition mechanisms, and dissemination of changes to contracting requirements such as the Defense Federal Acquisition Regulation Supplement (DFARS). Organizations such as the Procurement Technical Assistance Centers provide critical resources to small businesses and help them remain a competitive and viable part of the industrial base.

Mr. COURTNEY. In your testimony, you use the example of the Virginia Class Submarine as a success story for using block buys and multiyear procurements to take advantage of economies of scale and consistent, long-term funding to maximize efficiency and drive down costs. You state "These kinds of authorities can result in substantial savings; we estimate they may be as much as \$5.4 billion for the Block V VIRGINIA Class Submarines Multiyear Procurement."

- Your savings of \$5.4 billion in a large, multiyear procurement contract is in comparison to individually contracting those same submarines?
- The Navy's 30-year shipbuilding plan notes that there is additional industrial base capacity in 2022 and 2023 that could allow the procurement of two additional submarines during the years covered by the Block V contract.

Do you believe that the most efficient way to procure those two additional submarines would be to individually contract those submarines or would it be more efficient to explore adding those boats to Block V as authorized by the FY18 NDAA?

Secretary GEURTS. The Navy estimates that the use of Multiyear Procurement (MYP) contracts for 10 submarines between FY 2019 and FY 2023 will result in savings of \$5.4 billion as compared to single year procurements. The Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2019 notes additional industrial base capacity exists in FY 2022 and FY 2023 to allow for the procurement of one additional VIRGINIA Class submarine in each of those years. The most efficient way to procure two additional submarines would be to add them as options on the Block V MYP contract. Since these submarines are not part of the Navy's budget and there is no economic order quantity (EOQ) for these two submarines, they would not achieve the full MYP savings.

Mr. COURTNEY. The Procurement Technical Assistance Program provides critical training and in-depth, individualized counseling that small businesses need to compete and succeed in defense contracting. There are 98 of these procurement centers, or PTACs, in all 50 states, Puerto Rico, and Guam, with over 300 local offices. These programs help existing local businesses jump through the hoops that are required to do business with a nearby military base or facility.

- How important are small businesses and small producers with respect to maintaining a broad-based, resilient defense industrial base?
- Even as we seek to reduce red tape through many of the acquisition reform efforts discussed today, would you be supportive of expanding local technical assistance programs to increase competition and expand the supplier base for your respective military services?

Secretary GEURTS. Small businesses and small producers are critical to maintaining a broad-based, resilient defense industrial base. These innovative and agile companies participate in the industrial base as both prime and sub-contractors and provide capable and affordable solutions to meet the needs of the Navy and Marine Corps.

Yes, the Procurement Technical Assistance Centers (PTACs) provide information and support that is vital to competing for Government contract awards. The Department of the Navy Office of Small Business Programs collaborates with PTACs to assist small businesses entering the federal market place and to increase awareness of solicitations and outreach events. The Navy and Marine Corps have multiple opportunities for small businesses and non-traditional suppliers to be part of our team. The local technical assistance support provided by the PTACs is vital to helping these businesses become “procurement ready” thus expanding the defense industrial supplier base and increasing competition.

Mr. COURTNEY. The Procurement Technical Assistance Program provides critical training and in-depth, individualized counseling that small businesses need to compete and succeed in defense contracting. There are 98 of these procurement centers, or PTACs, in all 50 states, Puerto Rico, and Guam, with over 300 local offices. These programs help existing local businesses jump through the hoops that are required to do business with a nearby military base or facility.

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- Even as we seek to reduce red tape through many of the acquisition reform efforts discussed today, would you be supportive of expanding local technical assistance programs to increase competition and expand the supplier base for your respective military services?

Secretary ROPER. [The information was not available at the time of printing.]

#### QUESTIONS SUBMITTED BY MS. SPEIER

Ms. SPEIER. What mechanisms (if any) does your service have in place to review the relative type, size, and goals of programs moving through traditional (including Major Defense Acquisition Program) and newer acquisition authorities and processes (such as Other Transaction Authority, Rapid Capabilities Office, etc.)? Have you or do you plan to review their comparative strengths and weaknesses in terms of their ability to identify clear requirements, build a business case for a program before making large purchases, and meet mission requirements? What are the conclusions of any such reviews?

Secretary JETTE. The execution and oversight of Major Defense Acquisition Programs (MDAPs) continues to be carried out in accordance with the statutory requirements of Chapter 144 of Title 10 U.S.C. and the regulatory requirements of DOD Instruction 5000.02. DOD and Army policy (Army Regulation 70-1) also provide guidance for the use of rapid acquisition authorities for urgent capabilities that can be fielded within two years. A defined and repeatable mechanism to review program type, size, and goals to determine the appropriate pathway (traditional or middle tier) is still being defined. We are pursuing an efficient solution in earnest and expect it will be codified in policy by the end of this quarter. Coherency between operational requirements and acquisition communities is being accomplished through the Chief of Staff's participation in the Army's reinvigorated Army Requirements Oversight Council (AROC). In addition to and in support of future AROCs, the ASA(ALT) is developing a revised method of producing and tracking requirements for a given program and its related products. Clear traceability from the National Defense Strategy through the Army Operating Concept to a material need is the objective. Characteristics of that material need are to be further traceable to specific offensive, defensive, and other system requirements. For example, if a radar must see ballistic missiles, specify which ones. This will allow for development of technically reasonable Key Performance Parameters, Key System Attributes, and other requirements which can further be tied to the program plan. By doing so in cooperation with the requirements generating portion of the Army, it will be possible to link trades to operational requirements. Such a clear framework will also facilitate greater input from modeling and simulation and other study methods to

provide decision makers with the data necessary to make informed decisions. Furthermore, the Army is examining methods of ensuring that overall coalition and joint battlespace is considered in development of guiding systems architecture requirements which support the integration of systems developed under a single Battlefield Operating System (BOS). Each system will also have specific requirements for integration capabilities. This will facilitate a more holistic view toward total battlespace operations and allow for the impact of trades on that space to be assessed. A number of systems are being used as exemplars to develop this more detailed analysis. First examples are to be completed within 12 months. The Army is implementing initiatives to encourage its program managers to identify suitable candidates for newer acquisition authorities. The intent is to promote awareness of the new acquisition flexibilities to help ensure the Army acquisition community is postured to take full advantage of “middle tier” acquisition for rapid prototyping and fielding, commercial items procurement, and the use of other transaction authority. The Army is improving its data transparency to enable data-based decision making. As the Army uses these new authorities and collects performance data it will be able to best use these new acquisition authorities. While these are aggressive reform initiatives with expected successful outcomes, improvement is the actual objective of each. Therefore, periodic and, in some cases, continuous reviews are being made to assess the results versus the expectation and to make changes as necessary in as timely a manner as possible. Reviews accomplished to date are the basis of the above initiatives.

Ms. SPEIER. What mechanisms (if any) does your service have in place to review the relative type, size, and goals of programs moving through traditional (including Major Defense Acquisition Program) and newer acquisition authorities and processes (such as Other Transaction Authority, Rapid Capabilities Office, etc.)? Have you or do you plan to review their comparative strengths and weaknesses in terms of their ability to identify clear requirements, build a business case for a program before making large purchases, and meet mission requirements? What are the conclusions of any such reviews?

Secretary GEURTS. The Department of the Navy (DON) conducts annual Gate Reviews and Configuration Steering Boards of all Major Defense Acquisition Programs to conduct appropriate oversight of Navy acquisition program execution, meet program baseline goals, and validate existing and new program requirements. The DON has intentionally embedded accelerated acquisition initiatives within its existing organizational constructs and processes. DON has no current plan to develop a separate Rapid Capability Office as embedding new accelerated pathways in the Navy culture will maximize their benefits.

DON released interim guidance for Middle Tier Acquisition and Acquisition Agility on 24 April 2018, which describes the implementation of those authorities. That guidance directs System Commands and Program Executive Offices to assess their organizations’ contracting, technical, legal, and financial processes to facilitate program acceleration, when appropriate and possible. The DON is actively evaluating current processes and procedures to better use and integrate accelerated acquisition when it best achieves the goals of the Navy and with proper stewardship of taxpayer dollars. This guidance supports a new strategic focus on better managing the Navy’s acquisition portfolio to deliver lethal capacity, drive affordability, increase agility, and build a workforce to compete and win. I am currently undertaking a comprehensive internal review with the Navy’s acquisition community to develop and share best practices, decentralizing decision making, differentiate program management, and digitize data and information sharing, where possible.

For example, Other Transaction Authorities are being actively implemented across the Naval enterprise to accelerate knowledge and/or accelerate acquisition, where appropriate. The DON recently delegated the authority to enter into transactions other than contracts, cooperative agreements, and prototype projects grants not expected to exceed costs of \$100M, which may be further delegated to Agreements Officers.

Ms. SPEIER. If the Navy builds new Ford class carrier hulls before shock testing the existing hull, what is the range of potential costs for retrofitting each hull already being constructed?

Secretary GEURTS. The cost risk of requirement to retrofit subsequent FORD-class hulls following Full Ship Shock Trials (FSST) on CVN 78 is assessed as low.

The hull form for CVN 78 is identical to the Nimitz hull form which was executed a shock trial on CVN 71. However, CVN 78 has been designed and built to meet the requirements for shock hardening and is projected to complete 99 percent component shock trial qualification prior to FSST. Existing FORD-class system and equipment designs will have already incorporated component design revisions based

on component level shock qualification tests, reducing most of the liability of FSSST findings.

Ms. SPEIER. What mechanisms (if any) does your service have in place to review the relative type, size, and goals of programs moving through traditional (including Major Defense Acquisition Program) and newer acquisition authorities and processes (such as Other Transaction Authority, Rapid Capabilities Office, etc.)? Have you or do you plan to review their comparative strengths and weaknesses in terms of their ability to identify clear requirements, build a business case for a program before making large purchases, and meet mission requirements? What are the conclusions of any such reviews?

Secretary ROPER. [The information was not available at the time of printing.]

#### QUESTIONS SUBMITTED BY MRS. HARTZLER

Mrs. HARTZLER. Many Major Defense Acquisition Programs are troubled by the lack of government ownership of key research and design information, especially software developed as part of the research and design phase of acquisition. A notable recent instance is the F-35 program, but the problem extends to many other major weapons systems that have been fielded for decades. How are the DOD and Services avoiding these problems in ongoing acquisition efforts like the B-21 and other major programs moving forward?

Some have asserted that these problems stem from the government being “out-gunned” when it comes to contract negotiation. In other words, relatively young active duty service members, with only a few years’ experience, “compete” with very highly-paid corporate lawyers with decades of experience on the other side of the negotiating table. What do you make of that assertion?

Secretary JETTE. The Army is in the process of crafting a service level Intellectual Property (IP) policy to assist program managers and other material developers with an understanding of IP and the importance of a properly integrated, synchronized and tailored IP Strategy as part of their programs. This is an area of weakness that has needed clear guidance and focused attention for some time. The objective of the Policy is to ensure both the vendor and Army are fairly treated in IP management. Vendors who integrate IP into an offering should make clear any licensing constraints and identify all foreground IP in such an offering. No acquisition strategy will be acceptable that requires the use of foreground IP linked in an intimate and inseparable manner from government funded IP. This results in the government being captured by vendors through IP and is not an acceptable approach. If the government pays for the IP development, there are clear laws and regulations concerning differing levels of IP rights (government use rights, etc.) but its delivery needs to be considered at the outset in the RFP and not a follow-on negotiation after contract award. We are currently looking for an appropriate pilot program to require IP foreground and licensing, to include whose responsibility maintenance of such IP would be, and delivery of all IP funded by the Army to be priced as a separate bid item. This will reduce the dependency on the negotiating skills of a specific contracting officer and allow the Army to get competitive costs for the proposed IP and all delivered government IP from all offerors in a manner which allows clear comparisons between them. The programs referenced, F-35 and B-21, are not Army managed programs. On Army managed major weapons systems there is a deliberate process to determine parameters for an appropriate management and allocation of risk. There already exists a process that includes decisions on management of intellectual property, including key research and design information, to align with the requirements for the weapons system. Contract negotiations are a vital part of the procurement process. The Army provides all active duty service members and civilians involved in negotiations, the tools and support to ensure negotiations are in accordance with the Federal Acquisition Regulation (FAR) and have an effective outcome. To ensure active duty service members and civilians have the experience to effectively conduct negotiations, the Army conducts negotiations using a team approach. The team approach ensures the proposals are negotiated with appropriate experts. If a lawyer attends the negotiation, the Army team will also include an experienced lawyer. The team approach mitigates being “outgunned” during contract negotiations. All active duty service members and civilians assigned to an acquisition position comply with the Defense Acquisition Workforce Improvement Act (DAWIA) and achieve the certification level required for their position. Certification requires both training and experience. The training is both on-the-job and formal training. The formal training is conducted by the Defense Acquisition University (DAU). The required training provides a solid foundation in negotiations. In addition, courses are available to enhance negotiation skill sets, including: Contracting

Negotiation Skills; Contract Negotiation Techniques; Negotiation Essentials; and, Contract Negotiation Strategies and Techniques. The Army recognized the need to better understand what drives industry behavior and assist negotiators to predict how industry will react to government requests for proposals (RFP). The goal was to allow Army professionals to structure RFPs for favorable outcomes to the government. This led the Army to develop two courses at the Darden School of Business, University of Virginia. The two courses, U.S. Army Understanding Industry Course and Advanced Program in Acquisition Excellence, provide students with education and training in current and cutting-edge business practices sufficient to allow them to recognize business risks and opportunities.

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Secretary GEURTS. While the assertion cannot be ruled out for every acquisition, a number of other considerations explain the acquisition of less design information and rights to design information than would ultimately be in the Government’s long term interests. These include that the cost to obtain such information or rights is often quite high. Obtaining data rights is one of many trade-off decisions often made in identifying how to spend funds. In addition, in the early stages of a major defense acquisition program, what data will be most useful during sustainment is often difficult to predict. Most hardware undergoes refinement during development and early production such that data from the award of development contracts may be superseded or obsolete by the time of sustainment. Such considerations explain why DOD has sought broad deferred ordering authority and has opposed statutory limitations on deferred ordering recently incorporated into 10 USC 2320.

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Secretary ROPER. [The information was not available at the time of printing.]

#### QUESTIONS SUBMITTED BY MR. SCOTT

Mr. SCOTT. What specific actions are you taking to promote the use of prototyping to inform requirements, encourage competition, and deliver capability faster?

Secretary JETTE. The Army has been utilizing prototypes to help reduce risk for programs of record through discovery of any issues early in the development cycle, including refinement of operational requirements. Early prototyping informs requirements and encourages competition helping the Army achieve a high level of maturity of our technologies before we invest deeply in time and money while facilitating delivery of capability faster. The Army is undertaking the following specific actions. The Army’s Technology Maturation Initiative (TMI) further matures technology options emerging from Science & Technology before transitioning to acquisition programs. The TMI is for research and development in advance of requirements to conduct experimental prototyping for emerging or future Programs of Record to inform capabilities and system requirements. The Army has established Cross Functional Teams (CFTs) to inform requirements and buy down risk for the Army’s Modernization Priorities. These CFTs will use prototyping to inform requirements, obtain early Warfighter feedback, and buy down risk for the Army’s Modernization Priorities of Long Range Precision Fires, Next Generation Combat Vehicle, Future

Vertical Lift, the Army Network, Soldier Lethality, and Air & Missile Defense. The Army is committed to leveraging the Rapid Prototyping and Rapid Fielding authorities Congress has provided in recent National Defense Authorization Acts to drive down and manage risk. Army is currently establishing an Army Prototyping Board to set strategic direction for the use of these authorities and to encourage their use. To better facilitate implementation of prototype development, the Army is examining redesign of several of our acquisition organizations. One such consideration is transforming the the Rapid Capabilities Office into PEO Rapid Capabilities focused on prototype development which provides testable items within five years. While this can be accomplished using DOD 5000, use of 804 may be a more expeditious method more fitting the purpose of more complex prototype systems which must eventually fit into larger architectures. Furthermore, the Rapid Equipping Force which focuses on two years or less developments is being considered for a more focused effort for prototyping which is less systemic in character and more rapidly developed. This balanced approach allows responsiveness while facilitating transition to more deliberate development.

Mr. SCOTT. What specific actions are you taking to promote the use of prototyping to inform requirements, encourage competition, and deliver capability faster?

Secretary GEURTS. The Department of the Navy (DON) engages the Naval Research and Development Establishment, industry, and academia through a series of technology explorations and Advanced Naval Technology Exercise (ANTX) to evaluate technology advancement and apply them to the Navy and Marine Corps pressing problems. Examples of these technology exploration/ANTX include Smart Mining, Counter-Unmanned Aerial Systems, Urban 5th Generation Marine, Ship-to-Shore Maneuver, Unmanned Systems, and Advanced Combat System Technology. These efforts have provided the platform for the DON to more efficiently utilize the organic prototyping capabilities and focus the efforts on the DON's most pressing needs.

Additionally, the DON established the Accelerated Acquisition Board of Directors (AA BoD), that I co-chair along with the Chief of Naval Operations/Commandant of the Marine Corps, to provide clear capability objectives within the DON, to create urgency to enabling organizations, and to address acquisition system impediments and barriers. The AA BoD has several prototyping initiatives in development including Navy Laser Family of Systems, the Expeditionary Surveillance Towed Array Sensor Systems (SURTASS-E), and Standard Missile (SM)-6 Block IB and SM-2 Block IIIC which inform requirements, encourage competition, and will deliver capability to the fleet faster than under traditional acquisition processes.

On April 24, 2018, the DON promulgated interim guidance for implantation of the Middle Tier of Acquisition and Acquisition Agility authorities. The guidance directs the establishment of pilot programs to exercise these authorities and inform further policy development. Both the SM-2 Block IIIC and SM-6 Block IB mentioned above are programs that are being executed under the Middle Tier Acquisition authority to rapidly prototype enhanced capabilities in order to rapidly field interim capability to mitigate the future threat.

Mr. SCOTT. What specific actions are you taking to promote the use of prototyping to inform requirements, encourage competition, and deliver capability faster?

Secretary ROPER. [The information was not available at the time of printing.]

#### QUESTIONS SUBMITTED BY MR. GALLAGHER

Mr. GALLAGHER. The Secretary of Defense and the President have endorsed reform of the Committee on Foreign Investment in the United States (CFIUS) process and the FIRRMA legislation in particular. Why is this legislation important to the services? Can you offer any concrete examples of why this legislation is important to your service?

Secretary JETTE. The Army shares the Administration's concern about foreign investment and supports the Foreign Investment Risk Review Modernization Act (FIRRMA) to maintain military readiness by closing the related gaps in CFIUS and export control processes to keep pace with rapidly changing world. Specifically, through broadening the Committee's abilities to review transactions beyond those that involve just the transfer of control of a U.S. businesses, to include the capability to review certain real estate acquisitions near sensitive Army installations, FIRRMA help facilitate the Army's efforts to safeguard its critical technologies and intellectual property. For example, the Chinese previously acquired vacant land in close proximity to a U.S. military base; a transaction that was then outside the scope of CFIUS because it was considered a greenfield investment. With FIRRMA in place, CFIUS can review, and potentially prohibit, transactions like this from oc-

curing which will help guard against adversaries from establishing collection platforms outside of our military installations. Additionally, FIRRMA expands the scope of critical technologies and provides expanded jurisdiction over investments into those critical technologies to help guard against transfers of critical technologies in a manner that threatens national security interests of the Army. The CFIUS process has proven invaluable to protecting Army assets and FIRRMA will help continue that in the future. For example, the Army was able to mitigate national security risks arising from the purchase of a single domestic, qualified source of activated carbon by a foreign company. Activated carbon is used in water purification, toxin removal, gas mask and fire resistant clothing in support of over 70 DOD programs. Working with the Committee, the Army was able to secure a commitment from the foreign company to continue supplying activated carbon for a minimum of two years, which will allow time for a new domestic company to qualify as a replacement source. FIRRMA will only broaden the Army's ability to establish similar protections to help maintain a resilient domestic supply chain.

Mr. GALLAGHER. The Secretary of Defense and the President have endorsed reform of the Committee on Foreign Investment in the United States (CFIUS) process and the FIRRMA legislation in particular. Why is this legislation important to the services? Can you offer any concrete examples of why this legislation is important to your service?

Secretary GEURTS. The FIRRMA legislation provides significant and necessary improvements to CFIUS. The Navy depends on critical, foundational, and emerging technologies as well as our installations and ranges to maintain military readiness and preserve our technological advantage over potential adversaries. FIRRMA legislation is very important to the Navy because it enables review of several types of foreign transactions that are not covered under current CFIUS legislation, and better addresses the growing complexity of foreign transactions.

For example, with respect to testing and training missions, FIRRMA clarifies the scope of CFIUS review to include real estate transactions in close proximity to DOD/Service assets across the United States and territories where critical technologies are tested or training capabilities are demonstrated. FIRRMA also closes significant gaps in the current legislation by extending CFIUS review to new start up investments known as "greenfields," which are transactions involving no preexisting business. Overall, FIRRMA is necessary for the Navy in order to strengthen our ability to better protect intellectual property, our naval industrial capabilities and supply chain, and critical testing and training missions on our ranges and installations, which enables us to preserve our warfighting advantage and military readiness.

However, broadening the scope of covered transactions will not result in success without the associated resources to perform the reviews and to monitor mitigation agreements. The process changes and resources, including the establishment of a CFIUS Fund, addressed by FIRRMA are welcome and necessary, in light of the increasing complexity and caseload.

Mr. GALLAGHER. The Secretary of Defense and the President have endorsed reform of the Committee on Foreign Investment in the United States (CFIUS) process and the FIRRMA legislation in particular. Why is this legislation important to the services? Can you offer any concrete examples of why this legislation is important to your service?

Secretary ROPER. [The information was not available at the time of printing.]

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#### QUESTIONS SUBMITTED BY MR. BACON

Mr. BACON. DOD has a poor history of IT acquisition programs that cost billions, fall years behind schedule, and deliver technology that is inferior to what is readily available in the commercial market. To improve the cost, performance and timeliness of IT acquisition, Section 2377 of Title 10 requires a "commercial first" approach to IT acquisition. The AOC modernization program is another example of a failing program that was in need of a "rescue mission." Can you tell us what the AF is now doing that will accelerate the upgrade and fielding of the IT enterprise that we use to plan and execute joint air operations around the world?

Secretary ROPER. [The information was not available at the time of printing.]

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#### QUESTIONS SUBMITTED BY MR. BANKS

Mr. BANKS. In a follow-up to our discussion regarding the culture of the military in the wake of the "Fat Leonard" scandal, I want to inquire as what was the culture of the affected service like before and at the time of the scandal?

Furthermore, how has it specifically changed in response to this lack of oversight? I want to make sure scandals like these are stopped and avoided entirely in the future. Specific measurements of change or success would be helpful in this answer to quantify if the problem has been fixed.

Thank you in advance for your insight.

Secretary GEURTS. After the arrest of Leonard Francis, Chief Executive Officer and President of Glenn Defense Marine Asia (GDMA) and others on September 16, 2013, the Secretary of the Navy (SECNAV) directed the DON to discontinue all active contracts, task orders, and delivery orders with GDMA and affiliated companies.

On September 19, 2013, the DON Suspending and Debarring Official (SDO) suspended Francis, and Glenn Defense Marine (Asia) Pte. Ltd., and its 55 affiliates (collectively, GDMA). Additionally, as of July 30, 2018, nineteen other individuals have been suspended or proposed for debarment, and ten individuals have been debarred by the SDO. These parties remain excluded from federal contracting. The SDO has yet to suspend or debar several individuals who have been indicted and/or convicted in court because they have not separated from service.

On December 5, 2013, the Assistant Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A)) was directed to undertake a comprehensive review of all acquisition strategies for husbanding and similar service contracts worldwide. The SECNAV also directed an audit of husbanding and port services contracts to identify internal control weaknesses. The audit's objective was to identify opportunities to improve internal controls regarding the awarding of task orders/contracts, surveillance roles and responsibilities, and invoice review and payment process supporting the delivery of goods and services for husbanding and port services contracts.

On March 11, 2014, ASN (RD&A) submitted a report detailing vulnerabilities in the Navy's husbanding contracting processes and providing recommendations for improvement. On April 30, 2014, the SECNAV directed ASN (RD&A) and the Chief of Naval Operations (CNO), with support from the Naval Supply Systems Command (NAVSUP), to continue with the implementation of recommendations developed in the ASN (RD&A) report. On September 30, 2014, the SECNAV received the Naval Audit Service (NAVAUDSVC) report with recommendations for corrective action to improve husbanding services contracts.

The NAVAUDSVC report addressed internal controls in the following areas:

- Award of task orders/contracts
- Ship scheduling process for port visits
- Ship requirements and modification approval process for goods and services
- Oversight of the receipt and acceptance of husbanding goods and services
- Review of invoices and the payment process

The following actions to improve processes and reduce the potential for fraud and payment error, based on the recommendations from ASN (RD&A), supported by NAVSUP and the NAVAUDSVC, have and continue to be implemented:

- Implement standardized Indefinite Delivery/Indefinitely Quantity (IDIQ) multiple award contracts (MACs) for husbanding and port services (HSP) contracts;
- Establish a process that requires ASN (RD&A) approval to use other than IDIQ MACs for HSP contracts;
- Standardize Logistics Requirements Requests for all fleets as of April 28, 2014;
- Establish a standard fleet review process to validate requirements in advance of port visits as of May 30, 2014;
- Issue a new policy, effective August 1, 2014, that eliminated current ship orders for unpriced line items in HSP contracts without a fair and reasonable determination by a warranted contracting officer;
- Eliminate orders for unpriced contract line items (CLINS);
- Revoke a supply officer's afloat contracting authority to negotiate contract terms and conditions, establish contract line item pricing or place orders for any line item not specifically priced under existing contract vehicles as of November 24, 2014; o Establish a Financial Improvement Audit Readiness (FIAR) compliant Off Ship Bill Payment (OSBP) and ordering process as of October 1, 2015;
- Conduct training for Contracting Officers, and Contracting Officer Representatives (COR) on newly created OSBP policies and procedures;
- Develop COR instruction to specifically outline COR duties and responsibilities under OSBP;
- Establish standardized contract structure to facilitate electronic payments for Off Ship Bill Payment (OSBP) Process. The OSBP requires the following:
  - Ship submits unclassified logistics requirements (LOGREQ) message 30 days prior to port visit or as soon as operationally possible.

- Numbered Fleet COR assesses requirements to determine organic support with Navy Region, and submits reviewed and approved requirements to the supporting Fleet Logistics Center.
- The Contracting Officer determines fair and reasonable pricing through comparative analysis and develops a task order after forwarding the ship the port cost estimate.
- Upon receipt of goods and services, the ship's Receipt Inspectors validate the invoices and the Supply Officer submits the port visit checklist and DD250 to the COR.
- The HSP vendor loads invoices into Invoicing, Receipt, Acceptance, and Property Transfer (iRAPT), and the COR verifies submissions and reviews for discrepancies.
- The Type Commander (TYCOM) comptroller acts as the final review and initiates the Defense Finance and Accounting Services (DFAS) payment via electronic funds transfer.

ASN (RD&A) continues to work with the NAVAUDSVC in following up on the effectiveness of corrective actions to improve the HSP contracting process. Similarly, the Assistant Secretary of the Navy (Financial Management and Comptroller) is closely monitoring the implementation of OSBP.

The NAVAUDSVC announced another audit on December 19, 2017. The objectives are to verify that: 1) processes and internal controls over management, execution, and oversight of the Navy HSP Program are in place, functioning effectively, and in compliance with applicable Department of Defense and DON laws and regulations; and, 2) agreed-to corrective actions on closed recommendations in its previous NAVAUDSVC report, N2014-0048, "Navy Husbanding and Port Services Contracts," dated September 30, 2014, were properly implemented. A report of the audit results is expected this year.

The Acquisition Integrity Office (AIO) continues to maintain liaison with the affected commands, criminal investigative agencies, auditors, and the Department of Justice to ensure that all criminal, civil, contractual, and administrative remedies are considered and undertaken, as appropriate. AIO also continues to deliver acquisition fraud training to DON personnel.

