HEARING TO RECEIVE TESTIMONY ON THE HEALTH OF THE DEPARTMENT OF DEFENSE INDUSTRIAL BASE AND ITS ROLE IN PROVIDING READINESS TO THE WARFIGHTER

Wednesday, March 29, 2017

U.S. Senate
Subcommittee on Readiness and Management Support
Committee on Armed Services
Washington, D.C.

The subcommittee met, pursuant to notice, at 2:15 p.m., in Room SR-232A, Russell Senate Office Building, Hon. James Inhofe, chairman of the subcommittee, presiding.

Subcommittee Members Present: Senators Inhofe [presiding], Rounds, Ernst, Perdue, Kaine, and Hirono.
OPENING STATEMENT OF HON. JAMES INHOFE, U.S. SENATOR
FROM OKLAHOMA

Senator Inhofe: Senator Kaine and I have a policy where we start on time. If everybody does that, then everybody shows up. If they do not, they will not show up. So we are going to go ahead and do that.

I will have an opening statement, and you will have an opening statement, and then we will get ready to hear the presentations. This is going to be very, very significant, this hearing.

Today, we are joined this afternoon by Lieutenant General Larry Wyche -- I am sure that you been around to see most of these members; Vice Admiral Grosklags; Vice Admiral Thomas Moore; Lieutenant General Michael Dana; the Deputy Commander of the Marine Corps, Lieutenant General Lee Levy, who is out in my State of Oklahoma at Tinker Air Force Base.

I thank the witnesses for agreeing to testify today, and I also thank Ranking Member Senator Kaine for his leadership and partnership on this issue. We work very well together. We are old friends.

Just last month, the subcommittee received testimony from the service Vice Chiefs on the current readiness of Armed Forces. Now that is what we heard the last time in the first committee hearing that we had, and I remember one of the witnesses was reflecting back in the 1970s when we
had a hollow force.

And I think, even though it is not all that well-defined, I think we have a hollow force today. I am very much concerned about it.

I think this is a very significant hearing to hear from you folks, and I look forward to your testimony.

Senator Kaine?
STATEMENT OF HON. TIM KAINE, U.S. SENATOR FROM VIRGINIA

Senator Kaine: Thank you, Mr. Chairman.

Thanks to all the witnesses. I do appreciate your service and appreciate you being here today as we take testimony that will help us as we start to work on the fiscal year 2018 NDAA. We want to do it in such a way that we can restore full spectrum readiness as soon as we can.

As my chair mentioned, we do work well. We had a hearing last month, and the Vice Chiefs laid out how the DOD continues to suffer from unacceptable levels of full spectrum readiness, and we heard a mantra worth repeating today, that DOD needs more predictable and stable funding. Readiness is a function of many things. Predictability is one of the key ingredients.

The five witnesses today are going to help us understand the direct correlation between the readiness of maintenance facilities and the degraded operational readiness measured in terms of decreased training, flying, and steaming days.

Specifically, I am hoping to hear from witnesses about the impact that unpredictable funding has on workload planning and how the condition of a degraded shipyard or depot impacts the ability to retain skilled employees, engineers, and workers.
We have recruiting and retention bonuses for men and women in uniform, and for good reason. We need to make sure that we find ways to better retain and reward those serving at home and abroad.

We often hear about how military platforms need modernization, and yet so does the infrastructure that maintains those platforms. So the deferred maintenance backlogs at shipyards, ammunition plants, air logistics centers, arsenals, and depots continues to grow and has been left unaddressed for a very long time.

We have technology challenges as we hope to modernize our organic industrial base. I think we should pay more attention to key enablers, this important set of institutions, work force, and technology.

This subcommittee and the DOD should work together to explore new ways for the shipyards and depots to recruit and retain the highly skilled work force they need now and in the future.

Some of the models that we are using to support cybersecurity and laboratory R&D work force can be used here as well. For example, apprenticeships, internships, the scholarship for service program for civilian service in the DOD, and exchanges with private industry all have a place to play in getting us that work force.

We need to make better use of our innovative partners
like DOD labs, universities, industry, and even places like DARPA to develop the new technologies to improve efficiency. I had a great meeting, Mr. Chair, with General Dana yesterday. We talked about the growth of 3D printing as something that is really changing some of our functions in a good way.

One of the first directives that the new administration put out that has concerned me was the Federal hiring freeze, making a difficult problem worse, and I will ask about that today. There were some exemptions, yet even with exemptions, the hiring freeze impacts and even flies in the face of common sense, whether it is a child care worker in Germany, or a commissary worker stocking shelves in Virginia, or an engineer who does not have direct touch with platforms but nevertheless is critical to the development of platforms, some of this impact has been felt.

The hiring freeze, in my view, is an unnecessary layer of red tape at a time when we should be encouraging the next generation of Americans to weld holes at shipyards, manufacture gun tubes at an arsenal, write software code for the most advanced fighter aircraft on the planet.

So we have to put ourselves in the shoes of high school grads and college undergrads. The hiring freeze that was announced was 90 days with TBD to follow, but if you are a youngsters with a lot of talent and you are thinking about
what you want to do, when you look at a Federal work force
that is going to be dramatically affected by hiring freezes,
you would probably be smart to think about other lines of
work.

The bottom line is that the civilian work force is just
as dedicated to men and women in uniform. Many of them wore
combat helmets before they were part of the civilian work
force, and we rely on them, as many in the defense
industrial and production facilities, to help us succeed.

Finally, I would just suggest again what I have been
suggesting since I came to the Senate in January 2013. One
of the first votes I cast in February was to turn off the
sequester. It was originally a deal to force us to find a
budget deal, and it was sort of an interesting philosophy.
In order to force ourselves to do something smart, we will
agree, if we do not, to do something stupid.

I never really thought that was a good management
technique, and when I came into the Senate, I said, let's
turn it off and let's just make our budgets about advocating
for priorities. And then when we decide upon priorities, we
will do budgets based on priorities rather than priorities
based on budgets or, worse, priorities based on budgetary
uncertainty.

I think especially it is kind of an interesting time, a
new administration, all levers of power, executive and both
Houses, in the control of one party. We could get rid of the sequester caps on both defense and nondefense and then just make our case about what we think the Nation should spend in these areas. And I would hope that we might have that discussion in the full committee.

But for purposes of today, we are going to hear good testimony that will go into the record and help us as we get into the NDAA process.

And I am glad my chair has called this committee, and I look forward to your testimony.

Senator Inhofe: Good. Thank you, Senator Kaine, just so it will be in the record, when we first heard about the hiring freeze, of course, the exception being the military, we immediately got that corrected.

Just take our depot in Oklahoma that General Levy is very familiar with. They only have one uniformed officer in the whole place. They have a couple thousand employees. You cannot make ordnance. You cannot fight a war if you are not making ordnance.

So those areas had to be corrected immediately and were corrected immediately.

Now, we are going to hear from each one of you guys, and we will ask you to try to confine your statements to 5 minutes, and your entire statements will be made a part of the record.
So we will start with Lieutenant General Larry Wyche, a deputy commanding general of the United States Army Materiel Command.
STATEMENT OF LIEUTENANT GENERAL LARRY D. WYCHE, USA,
DEPUTY COMMANDING GENERAL, UNITED STATES ARMY MATERIEL COMMAND

General Wyche: Senator Inhofe, Ranking Member Kaine, and distinguished members of the subcommittee, thank you for the opportunity to testify on the readiness of the Army's organic industrial base. On behalf of our Acting Secretary, the Honorable Robert Speer, and our Chief of Staff, General Mark Milley, thank you for your support and demonstrated commitment to our soldiers, our Army civilians, families, and veterans.

It is an honor for me to appear today along with my distinguished colleagues from the Navy, Marine Corps, and Air Force.

Since the War of 1812, our Nation has reaped the rewards of the unique capabilities that reside in our organic industrial base. Today, 23 ammunition plants, depots, and arsenals produce combat readiness by manufacturing, repairing, and resetting our military's equipment.

Our organic industrial base directly employs a skilled work force of more than 22,000 people. Many of them are highly skilled artisans and craftsmen who deliver readiness while supporting operations impacting all 50 States.

The organic industrial base is often referred to as
America's national security insurance policy. As with all insurance policies, there must be sufficient coverage in advance of crises and the confidence that the policy will be delivered and honored.

The organic industrial base represents the very best protection, paying dividends in the form of readiness now while providing the capabilities to regenerate equipment and unit readiness at the offset of future crises.

The Army's organic industrial base serves to mitigate risks by providing strategic depth and scalable response during times of crises by producing materiel, which include ammunition, explosives, trucks, artillery tubes, tanks, helicopters, and much more. Our manufacturing base has always delivered state-of-the-art technology and equipment to our globally engaged forces.

The two greatest challenges that we face today in our organic industrial base are budget caps mandated by the Budget Control Act of 2011 and the lack of consistent and predictable funding, as evident by repeated continuing resolutions. The longer the Army operates under the budget cap in an unpredictable fiscal environment, the more difficult it is to sustain production and retain a skilled work force.

We recognize the commitment and steadfast support by the committee over the last 16 years. Without your support,
the organic industrial base could not have surged when called upon in support of Operations Iraqi Freedom and Enduring Freedom.

I would like to thank each distinguished member of this committee for allowing me to offer this testimony today. Your continued steadfast support enables us to maintain and modernize our organic industrial base while simultaneously preserving and developing the work force required to provide value to our Nation in the form of readiness.

General Milley states it so succinctly. The number one priority for the Army is readiness. The foundation of Army readiness is a responsive industrial base.

Thank you.

[The prepared statement of General Wyche follows:]
Senator Inhofe: Thank you, General Wyche.
We will now hear from Vice Admiral Grosklags,
Commander, United States Naval Air Systems Command.
STATEMENT OF VICE ADMIRAL PAUL A. GROSKLAGS, USN,
COMMANDER, UNITED STATES NAVAL AIR SYSTEMS COMMAND

Admiral Grosklags: Thank you, Mr. Chairman, Ranking Member Kaine, distinguished members of the subcommittee.

I appreciate the opportunity to be here with you today to discuss specifically, in my case, naval aviation and some of the readiness challenges that we face. I know those challenges, as you mentioned in your opening statement, are no surprise to this subcommittee, as both the Vice Chief and the Assistant Commandant testified to that effect about a month ago.

About our aviation depots specifically -- and we call them fleet readiness centers, so I might use those terms interchangeably. They are a critical element in our overall readiness recovery plan. They are continuing a steady recovery from fiscal year 2013 primarily and the impacts of furloughs and hiring freezes associated with sequestration, to your point, Senator Kaine. But also, they are recovering from years of limited and uncertain funding.

Today, they are also increasing their workload. The demand on them actually has never been higher. Sixteen years of wartime activity, the challenging material condition of the aircraft that are coming in the front door as well as the extension of our aircraft service lives well beyond what we had originally planned to utilize them to. A
case in point that I think most of you are familiar with are our F-18 A through D models.

While we will always remain challenged as long as we are flying with our F-18 A through D models in terms of keeping them ready, we have stabilized that particular depot production line. We have become predictable in our delivery of those assets back to the fleet. And by the end of this year, beginning of next calendar year, we will have met the fleet's requirement for in-service or in-reporting F-18s.

So while we are turning the corner there on F-18s, as I mentioned earlier, the overall workload continues to increase, as we see increasing demand signals for V-22s, H-1s, other type model series, as well as component repair VR supply system.

But it is also important that we all recognize that getting our depots back up on step really only addresses one piece of the readiness equation. We have to be equally focused on our supply support, our maintenance planning, our maintenance publications, our support equipment, the training and qualifications of our sailors and marines who maintain these aircraft, and I could go on.

But those things are just as important as our depot capability. And the funding for those efforts is through a variety of individual line items. We collectively tend to call those our enabler accounts. And as the department has
struggled to balance our competing requirements and limited resources for the last number of years, funding in these accounts has been severely constrained, and I can tell you that readiness has suffered as a direct result of that lack of funding.

In our fiscal year 2017 request, the department has taken a major step forward toward addressing the required funding for these enabler accounts. The request for additional appropriations further augments that request and our recovery efforts. Because of that, if we end up operating under a full-year continuing resolution, there will be a significant negative impact to our ability to continue our overall naval aviation readiness recovery efforts.

As you said, Senator Kaine, in your opening, stable, predictable, and sufficient funding is absolutely critical to our readiness recovery efforts. So I look forward to working with the subcommittee to that end, and I look forward to your questions.

Thank you.

[The prepared statement of Admiral Grosklags follows:]
Senator Inhofe: Thank you, Admiral Grosklags.

We will now hear from Vice Admiral Thomas Moore, United States Navy, Commander United States Naval Sea Systems Command.
STATEMENT OF VICE ADMIRAL THOMAS J. MOORE, USN,
COMMANDER, UNITED STATES NAVAL SEA SYSTEMS COMMAND

Admiral Moore: Thank you, Mr. Chairman. Mr. Chairman, ranking member, distinguished members of the subcommittee, on behalf of the 73,000 men and women in the Naval Sea Systems Command, I thank you for the opportunity to discuss the health of the industrial base and its critical role in maintaining the readiness of our fleet.

The Naval Sea System Command's number one priority is the on-time delivery of ships and submarines to the fleet. At any given time, about one-third of the Navy's fleet is undergoing either a major depot maintenance availability in one of our four naval shipyards and private sector surface ship repair shipyards or conducting pier-side intermediate maintenance.

Our naval shipyards and our private sector partners are the cornerstone of that effort to deliver our ships and submarines on time. And the 33,850 men and women who work in our naval shipyards and the workers in our private sector partners today are true national assets.

The high operational tempo in the post-9/11 era combined with reduced readiness funding and consistent uncertainty about when these reduced budgets would be approved have created a large mismatch between the capacity of our public shipyards today and their required work. This
mismatch has resulted in a large maintenance backlog which
has grown from 4.7 million man days to 5.3 million man days
between 2011 and 2017.

Today, despite hiring 16,500 new workers since 2012,
the naval shipyards are more than 2,000 people short of the
capacity required to execute the projected workload,
stabilize the growth and the maintenance backlog, and
eventually eliminate that backlog.

This man day shortfall coupled with reduced work force
experience levels -- and today, half of my work force has
been in naval shipyards for less than 5 years -- and
shipyard productivity issues have all impacted fleet
readiness through the late delivery of ships and submarines.

However, although we face many challenges, the
challenges are not insurmountable. Years of sustained
deployments and uncertain funding have created a readiness
debt that we must begin to address today.

In our naval shipyards and private sector, that begins
with defining the full maintenance requirement, matching the
budget to that requirement, ensuring the capacity to perform
work matches that workload, and improving the productivity
of our work force through improved training and
infrastructure investments that must be made to modernize
our naval shipyards.

We can and we must tackle each of these issues today
and sustain that focus into the future. Only then will our
industrial base be able to provide the readiness required of
our Navy today and into the future.

I look forward to your questions.

[The prepared statement of Admiral Moore follows:]

[SUBCOMMITTEE INSERT]
Senator Inhofe: Thank you, Admiral Moore.

We will now hear from Lieutenant General Michael Dana, U.S. Marine Corps and Deputy Commandant Installations and Logistics for the Marine Corps.
STATEMENT OF LIEUTENANT GENERAL MICHAEL G. DANA, USMC,
DEPUTY COMMANDANT, INSTALLATIONS AND LOGISTICS, UNITED
STATES MARINE CORPS

General Dana: Thank you, Chairman Inhofe, Ranking
Member Kaine, distinguished Senators.

The first thing I would like to start off with is a
thank you. I have Master Gunnery Sergeant Baughman here.
That is 25 years of Marine Corps experience. I have 36
years.

What I want to pass to you is, in this entire time I
have been in the Marine Corps, the American people and
Congress have taken care of us. Everything from Desert
Storm to Somalia, to Iraq and Afghanistan, we have gotten
everything we need, and we greatly appreciate the support.

So I wanted to preface my comments by saying that,
because we do have a few asks. We are combat ready to go.
We are the fight tonight force. But there are four things I
would like to cover quickly.

First, the accelerated aging of our equipment set. I
said to Senator Kaine yesterday, normally vehicles, MTVRs,
trucks that would go 1,200 to 1,500 miles in a peacetime
environment, we were racking up 15,000 to 18,000 miles per
vehicle, so that accelerated aging induces a cost.

Good news for the depot. Senator Perdue, sir, thanks
for the great support there. But it generates work.
Second is the complexity of today's systems. If you look at when I came in, in 1982, an M151 jeep, very simple, four cylinders, 16 to 18 miles a gallon. The problem was it was not very survivable, so we came up with the MRAP.

But the MRAP is a system of systems, and many of the combat platforms we have today are systems of systems, so you need more maintenance, more technicians, more money to keep those systems moving.

Next is the gradual decline in depot funding. And we appreciate, we greatly appreciate, the 80 percent that we get, in some cases 84 or 88. But we are very confident in our requirements. So when we generate 100 percent requirement for our equipment set, anything less than that leads to a gradual decline in readiness for that year.

And last is the decline of our facilities. We have 29,000 facilities in the Marine Corps; 4,300 of those are in poor or fair condition.

Like the Commandant, because he is the Commandant, he has a plan, and we are executing that plan. It is an installation reset strategy, which I talk to you more in detail more later, sir. But the bottom line is, he wants us to help ourselves before we ask you for help. So when we come to you for requirements, sir, it is a hard and fast, fact-based requirement.

So I look forward to the questions. Thanks for having
us here today.

[The prepared statement of General Dana follows:]
Senator Inhofe: Thank you, General Dana.

STATEMENT OF LIEUTENANT GENERAL LEE K. LEVY II, USAF, 
COMMANDER, AIR FORCE SUSTAINMENT CENTER, UNITED STATES AIR 
FORCE MATERIEL COMMAND

General Levy: Good afternoon, Chairman Inhofe, Ranking 
Member Kaine, distinguished members of the subcommittee.
Like General Dana and my colleagues to the right, thank you 
for allowing us this opportunity to testify before you on 
the readiness of our United States Air Force.

On behalf of our Acting Secretary, the Honorable Lisa 
Disbrow, and our Chief of Staff, Dave Goldfein, thanks for 
your support and demonstrated commitment to our airmen, our 
Air Force civilian families and veterans.

Without apology, your United States Air Force has 
delivered global vigilance, global reach, and global power 
for the Nation. We are always in demand, and we are always 
there. We supported joint and coalition forces throughout 
every operation, and we have secured the homeland through 
continuous surveillance and air defense.

And we have done all this with a force that is now 30 
percent smaller than at the outset of Desert Storm and 
aircraft and infrastructure that continues to age and 
present new challenges. Literally, we are finding ways to 
do more with less.

Your total force airmen, Active Duty, National Guard, 
Air Force Reserve, and our dedicated civil servants, are
amazing, and they continue to seek new and innovative ways
to get the job done.

Make no mistake, your United States Air Force is ready
to fight tonight. But I am concerned about our ability to
sustain our Air Force to fight tomorrow.

Threats to the Nation and our vital national interests
continue to evolve and adapt present formidable challenges
that threaten us and our allies. And as we develop advanced
airspace and cyber capability for tomorrow, we must continue
to adapt our readiness, sustainment, and logistics
enterprise as well.

As General Wyche said, the organic industrial base is
the Nation's insurance policy. It underpins our readiness
to fight not only tonight but be prepared to fight and
sustain into the future. The Air Force Sustainment Center
underwrites this for our Air Force joint partners and
allies.

Our command has responsibility for nuclear sustainment
and supply chain management for two-thirds of the Nation's
nuclear triad. Nuclear deterrent operations are the bedrock
of our national security.

Our command also has responsibility to set, open, and
sustain theaters in times of peace and conflict, and we are
doing this with weapons systems across our Air Force that
are on average age 27 years old.
The defense industrial base is brittle. We find an ever-diminishing vendor base for sustaining our platforms and increasing challenges recruiting the kind of talent our Air Force simply must have for the future. A fifth-generation Air Force must have a fifth-generation work force.

From the logistics sustainment portfolio perspective, all of the service destinies are interconnected. This is not a zero-sum game. Our Nation's warfighting capabilities rise and fall together. We all must be fully functioning teammates. And when we enter the battlespace, we rely on one another.

For example, at Tinker Air Force Base, headquarters of the Air Force Sustainment Center, we are home for and sustain the Navy E-6B Mercury fleet. We are a critical link in our Nation's nuclear command-and-control architecture. We ship munitions from McAlester Army Ammunition Plant, from Tinker Air Force Base.

You may be familiar with the boneyard at Davis-Monthan Air Force Base in Arizona. While some call it that, I prefer to think of it as a national reservoir of aerospace capability.

To that end, they are regenerating their F-18s from long-term desert storage to help with the Department of Navy's TAC Air challenges that you heard about a moment ago,
while our team at Warner Robins Air Logistics Complex just outside of Macon, Georgia, are working hard making wing spars for that hard-to-replace-part for the F-18 in a public-private partnership to help the Department of Navy readiness.

I could offer dozens more examples. While logistics and sustainment by itself will not win a war, it will absolutely lose you a war.

The airmen of the Air Force Sustainment Center are predominantly civilian. Our ability to hire takes months due to an antiquated hiring system. In an era when software engineers are becoming as essential to weapons systems sustainment as jet engine technicians, we simply must have a better system for recruiting and hiring our total force airmen for tomorrow.

We compete with industry for a scarce commodity, STEM graduates that the Nation already does not produce enough of. This competition for talent has readiness implications for today and for tomorrow.

Our Nation needs to increase its investment in force structure, readiness, and modernization. We find when we do that, we have a full-spectrum ready airspace and cyber force to meet today's challenges and tomorrow's.

Our citizens expect this from us. Our combatant commanders require it of us. And with your continued
support, our airmen and your United States Air Force will continue to deliver it.

    Thank you for having us today, and I very much look forward to your questions.

    [The prepared statement of General Levy follows:]
Senator Inhofe: Thank you, General Levy.

Let's start with you because I can remember, 30 years ago, we were talking about the core competencies and organic capability. At that time, I thought it was rather arbitrary to come up with a 50/50. Well, that was 30 years ago, and we still are 50/50, but it seems to have worked. And a lot of people have not stopped to think about why it is necessary to keep this core capability.

So, just briefly, anyone who wants to answer the question as to why it is significant that we have that core capability, feel free to respond.

General Wyche: Senator, I will start with talking about several one-of-a-kind capabilities within the organic industrial base that is unique to our organic industrial base, and that is Watervliet. Watervliet produces large caliber cannon tubes for the Navy, for the Marines. And at Fort Sill, Oklahoma, all of the houses there have these gun tubes. Those gun tubes are only made in this hemisphere.

So that is a very unique capability that you just cannot go and get out in industry, and that is why we need to reserve those unique core capabilities within the organic industrial base, Senator.

Senator Inhofe: That is good.

General Levy?

General Levy: Yes, sir. So we find 50/50 to be
extraordinarily useful, particularly when coupled with the
core statute, because we think about what General Wyche said
in his opening comments. The organic industrial base is the
Nation's insurance policy.

That logistics and sustainment infrastructure exists to
provide for the Nation in times of war, to behave as that
buffer and ability to surge. When we find there is a
healthy relationship between industry and the organic
industrial base, what we find is that both sides improve
their performance, drive down overall sustainment costs, and
deliver best-value capabilities for the warfighter while at
the same time preserving that critical insurance policy, if
you will, that ability to surge for the Nation.

It also drives -- and I mentioned in my remarks the
brittleness of the defense industrial base. It also drives
a certain level of what I like to sometimes refer to as
coopetition, the healthy relationship between commercial
firms and the government activities in parts of the
marketplace where there might only be one vendor.

Senator Inhofe: Yes. That is a huge point there,
because we went through a period of time when we experienced
such things. This has been a moving target.

So I do appreciate that. It is an insurance policy, I
think we will all agree.

For clarification, Admiral, when you were talking about
your F-18 program, you were talking about just the Navy and not the Marines. Is that correct?

Admiral Grosklags: Sir, actually, speaking of both.

Senator Inhofe: You were? Because our testimony that we heard when we had the other hearing, that I referred to in my opening statement, the Marines, 62 percent of their F-18s were down. What kind of percentage do you have, if you exclude those, out of the rest of the Navy?

Admiral Grosklags: I can tell you that I agree with that number for the Marine Corps. For the Navy, it is comparable.

What I was referring to specific on the comment I made about the depots and kind of reaching the peak of our depots throughput requirement was a difference between outer reporting aircraft, which are in our depots or long-term storage, versus those on the flight line, which is the number that you are referring to.

Of the flight-line aircraft, there are approximately 60 percent of those today that are not --

Senator Inhofe: Yes, I think that is right.

You know, General Levy, Congress was skeptical about the creation of the Air Force Sustainment Center. I think the concerns that were expressed at that time are pretty much answered by this time, but you are the one who was in a good position to respond as to why it is necessary and its
success.

General Levy: Yes, sir. Thank you for the opportunity to address that.

So I will tell you that, from our view, the Air Force Sustainment Center creation has been a tremendous success.

Let's just talk money, for example. In the 4 years since the Air Force Sustainment Center was created and we have begun to operate Air Force logistics as one common enterprise, we been able to return $2.4 billion back to our United States Air Force. That is validated by the Air Force audit agency. That is money that goes back to addressing readiness and critical modernization challenges that our Air Force has.

From a performance perspective, we have managed to cut flow days and improve safety and quality on all of our platforms. We now have B-1s at the shortest amount of flow days ever. We have now taken over the ability to do things, for example, when businesses go out of existence at Robins. There was a vendor that went out of business that makes critical parts for the C-5. The Air Force Sustainment Center team at the Warner Robins Air Logistics Complex was able to rapidly internalize that and keep the C-5 readiness at the level we need it to be at.

We were able to, for example, with the KC-135, the KC-135 MRO, go from three sources of repair, two commercial and
one organic, to one source of repair, organic. Now every
KC-135 in the United States Air Force, about 76 a year,
receive their program depot maintenance at the Air Force
Sustainment Center at Tinker Air Force Base.

All three of those locations, at Hill Air Force Base,
Tinker Air Force Base, and Robins Air Force Base, operate as
an enterprise. So if an F-15 comes into Robins for repair,
the engine comes to Tinker and the landing gear goes Hill.

By operating as an enterprise, we find efficiencies.
We find synergies. We drive our performance. And as
importantly, we drive down costs to our Air Force.

Senator Inhofe: Yes. It was different. I remember
back when they had five ALCs and then we made the step down
to three, so I think that is very significant. That is an
excellent answer.

Senator Kaine?

Senator Kaine: Thank you, Mr. Chair.

A question for Admiral Moore about shipyard challenges.
Shipyards are critical to maintaining fleet readiness and
also supporting forward presence. And while there have been
a number of success stories at our shipyards, there are also
a lot of challenges that we have heard about: loss of
experienced workers, lengthy periods required to rebuild,
lost experience, aging infrastructure, and IT systems. So I
have two questions.
First, what actions is the Navy taking to address long-term challenges at the shipyards that could affect our ability to complete maintenance on schedule? And second, how do we determine and measure the health of shipyard infrastructure? I have heard some of you guys use the term fester factor when describing how a ship is doing, but how do you measure how a shipyard is doing, in terms of being able to perform its maintenance tasks?

Admiral Moore: Yes, sir. Thank you for the question.

So to the first question, I think following the sequester in 2013, we have had a significant challenge, as you discussed, in getting our ships and submarines out on time.

And it is a combination of things. We certainly have run the ships hard since 9/11. We have had an inexperienced work force. To your second question, which I will get to, the infrastructure is really not a 21st century shipyard infrastructure.

And then, frankly, we just did not have enough people in the shipyards to do the work that was required to get done.

We have taken some significant action over the course of last year. There is more work to be done, and I think we are starting to see the loss days go down a little bit. So, first and foremost, we have to understand what work has to
be accomplished on our ships and submarines, so we really have worked hard to go back and look at our class maintenance plans, look at the work that is required, and define what that requirement is, and then go back to the Pentagon and explain to them what work needs to get done.

Then we have to be able to recognize that we just do not have enough work force in the naval shipyards. So it is not necessarily -- it is not just a matter of them working harder. They are great national assets to us, but if you do not have enough workers to get the work done, you are inevitably going to get the ships late.

So we have started to hire. We have hired 16,500 new workers over the last 5 years. We are still about 2,000 people short, and I am working very hard with the CNO to get to that number, and we need to get there.

Along with that is a recognition, as you hire all these people, a young work force, that you have to get them trained. In the past, it would typically take 4 to 5 years to take a new shipyard worker and get them to kind of a journeyman level where you could trust them to go work on a nuclear submarine or carrier. Today, we have invested a lot of money in our training system so that a young worker coming in today, it takes them about 1 to 2 years, to the point that they can actually provide real wrench-turning on the ship. I think that is something that is really, really
important to us. So improved training and the hiring processes we have.

To your second question on the health of the infrastructure, across-the-board, we have a long list of things that need to get accomplished in the shipyards today. I have to be able to figure out how to go make the case to make the investments in the naval shipyards.

If I am at Newport News Shipbuilding, Newport News Shipbuilding, I incentivize them and they can incentivize themselves to go buy new welding equipment, new cranes, et cetera, because it helps them on the bottom line. It improves their cost performance.

In the naval shipyards, we do not have the same mechanisms. So if you were to go look at the shops and things, you know, I need new welding equipment. I need workflow processes that are better. I need improvements to the dry docks across-the-board.

And those investments in the naval shipyards are going to be an important component to our ability to get the work force to be more productive. It is pretty hard to demand a worker to get more productive when he is working with tooling that is 15 to 20 years old where his counterpart in the private sector is using something that is a lot more state-of-the-art.

So it is a holistic plan that we have to work across-
the-board on. And you have raised an important issue with
the infrastructure piece. It is something that we have
tended to ignore and just focus on getting the right number
of people in naval shipyards. But I would argue just
getting the right number of people in naval shipyards by
itself is not enough. You have to give the workers the
tools necessary to get the work done.

Senator Kaine: I just have a minute left. But others,
could you weigh in on the work force challenge?

In other subcommittee hearings, we have heard about
losing pilots to commercial aviation. In terms of hiring
your own maintenance workers across your various portfolios,
do you face increased competition from the private sector?
Talk a little bit about the work force challenges that
Admiral Morris just described.

General Dana: Sir, I would say for the Marine Corps,
in our depots, we are blessed with a great work force.

You mentioned this in your opening statement. To keep
them, what we are trying to do, and we are actually working
on it, is in terms of giving them additional skillsets -- we
talked a little bit about innovation in the workplace and at
the depots with added manufacturing and 3D printing, being
able to do CAD diagrams. We are partnering with local
colleges in the Albany, Georgia, area -- we are going to do
the same in Southern California, also at some of our bases
on coastal Carolina -- to provide these workers skillsets that they can use elsewhere.

I know that sounds somewhat counterintuitive, but we feel that if we are showing that we are taking care of that work force, giving them those additional skillsets to excel in the 21st century environment, then they will stay with us out of loyalty.

Admiral Grosklags: Sir, if I may really quickly, of our major three fleet readiness centers in North Carolina, Florida, and San Diego, San Diego is really the only one we have a challenge with in terms of hiring people. We have underexecuted our hiring plan there for several years in a row, and it is largely due to competition for the work force as well as the high cost-of-living out there.

So we have turned to basically hiring bonuses, which has had a significant impact, positive impact, over the last 6 months.

The NDAA language this year in 2017 that is going to give us some direct hiring authority we believe will be very helpful once we fully implemented that.

And the other thing we are actually looking at trying to implement with OPM is some increase in locality pay.

So we are making progress. But in that type of high-cost environment where just up the road in the Los Angeles area you have a very competitive aerospace industry, that is
a challenge for us.

General Levy: Senator, I would also offer that it is the entire team. So we tend to talk about the depot artisans, the jet engine mechanics, or the shipyard workers. But, frankly, it is the entire team. It is the engineers. It is the firemen. It is the entire ecosystem. The quarterback without the rest of his or her team is simply not going to be effective.

So the challenge is hiring across the variety of skillsets. But I will tell you, while we talk about things such as pilot shortages and other critical skillsets, I mentioned in my opening remarks, we simply do not produce enough engineers in the Nation. We have a challenge hiring them and keeping them.

I have 3,600 engineers in the Air Force Sustainment Center. That is more than the Air Force Research Laboratory. And so we are in a close-in battle with industry to recruit and retain that kind of work force, and they are absolutely essential.

So it is really about the entire ecosystem for us.

We also find that much like we talk about pilot shortages, we see shortages in some of the aircraft skills -- avionics, electricians, jet engine mechanics -- because many of those men and women come to us from military service. With the military services being smaller,
producing fewer and fewer American youth going into those
to begin with when they come out of high
lines of work when they come out of high
school or going through vo-tech, that presents some
school or going through vo-tech, that presents some
additional challenges for us.

But we partner very closely with all the colleges and
universities and the vo-techs in the neighborhood of our
primary installations. And actually, from an engineering
perspective, we recruit nationwide to try to find the very
best talent because in a software-driven Air Force, as we
move to that Information Age Air Force from that Iron Age
Air Force, we have to have that kind of talent.

Senator Kaine: Mr. Chairman, I am over my time, but
could General Wyche just answer the question too?

Senator Inhofe: Sure.

Senator Kaine: Thank you.

General Wyche: Senator, in regards to the hiring
freeze, it does create some challenges for us.

Now we are able to meet our mission requirements. If
that hiring freeze is extended beyond 90 days, it will have
an impact on us recruiting a work force, getting them in
place, so they can continue to deliver those weapons

Senator, you can recall back in 2013 when I was at Fort
Lee when we went through sequestration. That was not a good
time for our employees at Fort Lee and our Army.
With regards to the industrial base, we lost 7,000 employees. And at McAlester alone, they lost 167 employees that never returned to McAlester because they went to other industries such as the oil industry. And we are at that point where we are just beginning to recover from that. So we are working through those, but the hiring freeze does have some challenges that we are working through.

Senator Inhofe: Thank you, Senator Kaine.

Senator Ernst?

Senator Ernst: Thank you, Mr. Chair.

And thank you, gentlemen, for being here and testifying today on our industrial base and the critical role that it plays in our military readiness. I recently visited Iowa Army Ammunition Plant, which is a government-owned, contractor-operated facility in my home State, and their ability to rapidly increase workload and provide a stable supply of ammunition is a key part to our national security.

However, due to their dependence on the Army to modernize the facility, their techniques, the manufacturing techniques, are behind. This is not something I blame the contractor for. They have put forth a proposal for the Iowa ammunition plant that could save the Army and taxpayers $18 million per year, paying for itself in less than 5 years.

The cost-saving decisions currently sit with the Army, so, General Wyche, this is for you. What is the Army doing
to modernize its GOCOs in order to help drive down production costs and cut overhead?

General Wyche: Senator, we are doing a couple things. First, we have identified the requirements, and we know that, to maintain the facilities, just to keep them from being degraded, it would cost us approximately $100,000 a year and to get them at an acceptable level with the modernized capabilities, it would cost us another $300 million for the next 10 years.

Senator Ernst: Okay.

General Dana: Ma'am, if I could help out my Army brother on this, because they help us with ammo.

Senator Ernst: Yes, sir.

General Dana: I made a trip to Lake City, which is one of the large ammunition plants in the Midwest. What is just fascinating about that facility is half the facility had equipment from 1942. I own a lot of weapons, not in D.C., by the way, but I blow up my own ammo.

Senator Ernst: Do not admit that now. Right.

General Dana: But if you look at how they work in the plant, it is just like they did in 1942 with the primers and the primer powder. It is very dangerous work.

But then the other half, because the Army's great initiative is they went to automated in the plant, so they retrained that work force to go for the guys and gals doing
it for 30 years one way to where they are doing automated machinery, and they are doubling the output.

One of the questions was, how can the industrial base meet that requirement for ammunition? Well, I think the Army is doing a great job at that.

Senator Ernst: Yes. And hopefully we can modernize and get to that point where we are not losing that work force but we are stabilizing the supply as well as growing that supply with demand as necessary. So I appreciate that.

In 2015, the GAO came forward with three recommendations to ensure we sustain the critical capabilities found at our arsenals. The first issue is implementing guidance for make-or-buy analysis when it comes to DOD procurement. The second was to identify fundamental elements of a strategic plan for the arsenals. And the third is to develop and implement a process for identifying critical capabilities at arsenals and the workload needed to sustain those capabilities.

The department has concurred with all of those recommendations, but as of this morning, they have not followed through with any of those recommendations or produced the reports necessary.

So I have been through the Rock Island Arsenal, and I really witnessed what the men and women are doing at that arsenal to contribute to our national security. This is
taking a long time.

And, General Wyche, again, when will we see the reports that have been required, specifically the critical capabilities assessment and the guidance on make or buy?

General Wyche: Senator, that particular area of make or buy, I would have to come back to you on the record with that particular answer, because I am not prepared to answer that question.

Senator Ernst: Okay. I would appreciate that, because that is very concerning, especially to the folks at the arsenals.

General Wyche: Yes.

Senator Ernst: They would like to see those reports as soon as possible.

Thank you.

Thank you, gentlemen.

Senator Inhofe: Thank you, Senator Ernst.

Senator Hirono?

Senator Hirono: Thank you, Mr. Chairman.

Thank you very much for testifying. I feel as though, with the sequester and with the budget caps, et cetera, that we are just doing a lot of catch-up, so I thank you for what you are doing with what we have provided to you.

Many of you have mentioned how hard it is to recruit or retain our work force, that is a critical part of our
industrial base, and at the same time how important it is that the men and women who do the work have modern equipment.

So, of course, at Pearl Harbor Naval Shipyard, I am always concerned about whether or not they have the tools with which to do the job. So I am just thankful that you continue to emphasize those aspects.

General Levy, you were one of the people who mentioned about recruiting and retaining. I am just wondering, the people with STEM backgrounds, are you doing anything special to recruit women?

You can start, and then any of the rest of you, because women drop out of the STEM fields at every point of the continuum, and unless we do something very specific targeting women and girls and minorities in these areas, it is just not going to change very much.

So are you doing anything in particular recruiting women?

General Levy: Yes, ma'am. Thank you for asking that question.

So I often tell people, how long does it take to grow a STEM worker for an air logistics complex? About 21 years, from about here all the way until he or she graduates from university and is ready to come be one of our civilian airmen.
So we have a variety of programs where we do outreach to females and to minority or disadvantaged areas. In fact, last year alone, my engineering community did 60,000 hours' worth of community outreach to try to develop interest in STEM curriculum throughout different parts of the communities where our bases are located. Obviously, it tends to be in the area where our facilities are located.

Senator Hirono: Did you say you are starting at an early age as in middle school, elementary school?

General Levy: No, ma'am, as in elementary school.

Senator Hirono: That is great.

General Levy: Because if you do not imbue them with that desire for STEM early, and if you do not give them the passion for learning and the intellectual curiosity, and, also, if the state educational systems do not have the ecosystem that delivers things like high school physics and calculus and that sort of thing, then they are certainly never going to go to university and be an engineering graduate.

We also financially support as well as support with volunteer time the STARBASE program at all three of our primary installations, which is another science and technology -- I would sort of refer to it as a learning camp for young boys and girls, to get them interested in STEM career fields and hopefully spark that interest.
Senator Hirono: Are you doing similar kinds of outreach for the Army and the Navy?

Admiral Grosklags: Senator, if I could, our program with NAVIAR is very similar to what General Levy just described. The other thing I would add is, through our Executive Diversity Council at NAVAIR, we have separate advisory groups, one for women, one for Hispanics, one for African-Americans, one for Asian-Pacific islanders, and on. Part of those advisory groups' major focus is exactly on recruiting within either those ethnic or gender groups. And we have had very good success in doing that.

As somebody alluded to earlier, then we have to keep them. One of our challenges is keeping them because it is a very competitive marketplace.

Senator Hirono: Yes. I realize that.

Anybody else?

General Wyche: Yes, Senator. We have several outreach programs at each one of our 23 arsenals where the commanders are personally engaged. They are visiting colleges, identifying those potential students who would like to come work at our arsenal.

One program that we are really excited about is the AMC 1,000 program. That is a program where we set a goal to hire 1,000 summer interns, 1,000 per year for the next 5 years. In the last 2 years, we have been able to reach that
goal, so we are very excited about that program.

Senator Hirono: So your summer intern program, are they targeted to minorities and women?

General Wyche: Yes, they are. Yes, they are.

Senator Hirono: I congratulate you for your efforts. And because I know this is such a needed area not just of course for our military but across the country, we have a need for hundreds of thousands of people with STEM backgrounds, so I do have a couple of bills that I have introduced. I will send you copies. The focus is on supporting more minority and women in these fields.

In the few seconds that I have left, Mr. Chairman, the President has called for a significant increase in the number of ships, so I wanted to ask, this is for Admiral Moore, how would a Navy of 355 ships impact the current capacity of our public shipyards?

Admiral Moore: Thank you, Senator, for the question. We have already started to look at what that would take. The plan to get to 355 that we have laid out in our force structure assessment gets us there in the mid-2030s, and so we will need to grow the size of our naval shipyards. We will have to grow the size of our private sector that is building the equipment today.

And we are also going to have to remember, up at the headquarters level, where we are providing technical support
and oversight and technical manuals, et cetera, we are going to have to grow all those. So the time frame between now and 2035, as long as there is a stable and predictable budget that goes along with that, we can manage to grow the work force.

The Navy has been at that size before, and we were able to maintain the force back then. If it is done in a sustained way, we can certainly grow the work force to get there. We have already taken the steps to make those plans as we start to grow the force.

Senator Hirono: So if you already have these kinds of plans and what it would take to get to this number, could you share those with our committee?

Admiral Moore: Sure. Yes, ma'am.

Senator Hirono: Thank you, Mr. Chairman.

Senator Inhofe: Senator Rounds?

Senator Rounds: Thank you, Mr. Chairman.

Gentlemen, thank you for your service to our country. I think sometimes we get in the middle of a discussion on everything else and we forget that it is gentlemen like you that make this whole thing work, and we appreciate what you do and we appreciate what your teams do.

One of our challenges is that we need to be in a position to supply you with the materials and equipment that you need. When you make reports back to us indicating that
there are times in which you need equipment that you have
right now that you are not able to maintain appropriately
because the funding is not there, it is something that we
have to highlight.

I would like to begin with talking about the USS Boise.

I know that in your opening statements for the record,
Admiral Moore, you had based the fact that you had to make a
determination as to whether or not a nuclear-powered
submarine would basically remain at dock because we did not
have the dollars available to get it in and to get it up to
speed to actually be able to dive again.

Can you share with us just exactly what is going on
with that, why would we have that kind of problem with a
nuclear submarine? And how in the world would we ever
justify having an asset of that value sitting at dock and
not having the resources available to maintain it in a
seaworthy condition?

Admiral Moore: Yes, sir. Thanks for the question,
Senator.

So, in the Boise situation, what happened is -- and
this issue is with the naval shipyards. It is we did not
have enough work force to go to get the work done. Our
typical behavior in the past -- and there are a couple
submarines in the yards right now, USS Asheville, USS
Hawaii, and USS Albany, who is also in Norfolk.
An availability that would have typically taken 22 months, we inducted them into the shipyards anyway knowing that we did not really have the work force to work on the availability. So the net result was that the submarine would stay in the shipyard for 48, 49 months. 

And so, if you are the crew of the Asheville or the Albany and you have been told, hey, this is 22-month availability, and you are in that naval shipyard for 4 years plus, you can imagine what it does to morale and retention. 

So in the case of the USS Boise, we were faced with a similar situation. We did not have the capacity at Norfolk Naval Shipyard to do the work.

And when I came in as the Naval Sea Systems Commander, one of the things that I talked with Navy leadership about was, hey, look, we have to be realistic that we do not have the capacity to get the work done. And when we face something like Boise, we have to recognize that sticking it in and just letting it sit there pier-side for 4 to 5 years is really not the way to do it.

And so in the Boise case, we made a decision to not put it in the shipyard because I did not want it to sit there for 4 to 5 years. The downside of that is nuclear submarines have very specific maintenance that has to be done on them in order for me to certify that the ship is safe to submerge.
So you are exactly right. We have taken a submarine, even though it is an Active Duty submarine, to essentially it is not available for the Nation's use.

We have to be able to get out in front of this. We have to be more predictive about the --

Senator Rounds: Admiral, I appreciate your comment, but what I am curious about is why did we find ourselves in that position? Is it a matter that we did not have the money to pay the bills to get it done?

Admiral Moore: Yes, it is --

Senator Rounds: Or is it a matter that we did not have the capabilities, and we just did not see it far enough in advance?

Admiral Moore: We did not have the capacities, so there are two things.

One, we should have been more forward-looking and anticipate -- we know when these submarines are going to come in -- and be able to say, hey, I do not have the work force necessary to get that work done, because it takes me 2 years -- from the time you give me a dollar to go hire a worker, it takes me 2 years to get that person --

Senator Rounds: So does that mean we did not get the money to you in time?

Admiral Moore: No, I think it is not a matter of you not getting the money to us in time. It is a matter of
competing resources within the Navy and the Navy's decision on what was going to be in the budget at the time.

So, in particular, when we submitted the budget for fiscal year 2014, that is probably when we would have needed the resources, the money, in order for me to go hire up to where I needed to be at Norfolk Naval Shipyard in 2016.

So it is a terrible situation on Boise, and we need to make sure that, going forward, we get the capacity in the shipyards right and we work with our private sector partners at Electric Boat and Newport News Shipbuilding in a one-shipyard concept so that if we know we are not going to have the capacity to get it done, we work with them so that, in fact, if they have the capacity, they can do the work.

In this particular case, Electric Boat is going to do the work probably on the boat, but it is going to be in 2019. So we are going to take a submarine and set it pier-side for about 3 years.

Senator Rounds: So that means then that the captain who was perhaps on his way through a process in which he spends time someplace besides at sea, it impacts not only his ability to move forward with his career but everybody on that ship is now delayed as well. Is that a fair assessment?

Admiral Moore: Yes, sir. Absolutely.

You know, going beyond just to the personnel level of
the ship and crew itself, we are going to take a submarine,
if you are assigned to that submarine for the next 3 years,
you are not going to go out to do what we have trained you
and what you love to go do. So that is something we have to
go work on, and we cannot let the Boise example happen
again.

Senator Rounds: Thank you, Mr. Chairman. My time has expired.

Senator Inhofe: Thank you, Senator Rounds.

Senator Perdue, you are now recognized.

And Senator Kaine is now presiding.

Senator Perdue: Thank you, Mr. Chairman.

Gentlemen, I want to echo what Senator Rounds has said.

A lot of times we get to the problem without thanking you
guys. I would like, just as importantly, for you to take it
back to your teams as well, that it is not lost on us that
we have lived in utter peace here in the homeland for quite
a number of years, even though we have been deploying. We
know what is involved in that.

So we thank you all for that.

I have two concerns. I am an old supply chain guy, so
I have sat in your seat. I understand what you are up
against. This did not just start in the last couple years.
I mean, we have had three periods of disinvestment in the
military in the last 50 years, the 1970s, the 1990s, and the
last decade. But this time, it is really serious because it comes on the back of the recaps that happened before then, each of those times. It actually started from a higher point.

So the disinvestment in the military this time actually started from a depleted point to start with. We burned up a lot of our equipment. Deployments were longer. And we ended up in a weaker position before this disinvestment started.

So I have two concerns. One is our organic work force, what I call your depot and your shipyard work forces. And two is the supply chain.

The supply chain is two things, I think. One is your ability and your shipyards and depots to turn around maintenance. But the bigger one, in my mind, is, as our platforms -- and this is true across-the-board, whether it is air, sea, or whatever. I mean, the assets that we have, the major platforms are all maturing at very similar times. And the startups have been delayed such that, if I look at it honestly, we do not talk about this much, but we have a gap in capacity that is anywhere from 1 to 2 years in some platforms to as much as 10 years in other platforms.

It is a major problem. The optempo that we were experiencing in the last decade contributes to that.

So I have two quick questions.
General Levy, I know you have talked about this last year in committee and in private about your work force. And because of those conversations, I think in the NDAA last year, there was a direct hire authority put in place. So how long does it take you to hire a systems engineer or mechanic, a scientist, today?

General Levy: That is a great question. Thank you, Senator.

So, first, I would like to say thanks for the direct hire authority that was signed into law in the NDAA.

Senator Perdue: And where are we in implementing that?

General Levy: So the OSD draft policy or draft guidance was submitted to the services on the 20th of March, required back to them on the 3rd of April. Then once they approve that, then the services will begin implementing the direct hire authority. As you recall, there was a 2-year authorization.

And so we look forward to coming back to you all in the future, telling you how the direct hire piece of this is working. So we are not there yet, because that is recently enacted legislation.

Senator Perdue: These are policies inside the service, correct?

General Levy: Yes, sir. So enacted in the NDAA, signed in December.
Senator Perdue: Right.

General Levy: That is a new authority for all of us.

Senator Perdue: Right.

General Levy: So OPM had to write some guidance. They distributed it to OSD, who then has now created some guidance. They have asked the services to comment, with the comments being due on the 3rd of April. So I expect that we will be able to have the guidance to do the direct hire in the weeks ahead.

Senator Perdue: So how long does it take you to hire those guys today?

General Levy: So, today, it takes, on average, 148 days to hire somebody. In fact, I pulled the numbers this morning because this is important to me, right? This is very much central. The human beings that work on these platforms, whether they are engineers or jet engine mechanics or firemen or somebody who works at a daycare center, they are all equally --

Senator Perdue: When you identify retaining somebody, and this is true in business as well as military, finding somebody and retaining them are two different things. You find somebody. If it takes 148 to onboard them, you lose a lot of candidates during that process.

General Levy: Yes, sir.

Senator Perdue: You have to. So you are perpetually
finding new candidates to start another clock of 148 days.

    General Levy: Yes, sir.

    Senator Perdue: That is a disaster waiting to happen.

    General Levy: It is very difficult to close that circle.

    Senator Perdue: So I will tell you, in business, to hire these people today is 30 to 45 days tops -- tops -- 90 days for a CEO. Someone at your level in business today, if I started a search as a board member, it would be 90 days. If I did not have an answer in 90 days, I would be after somebody's job.

    This is how far out we are in terms of being competitive. So tell us what we need to do. As you onboard that procedure, please keep us involved, because this is one where you have a great standard to look at, because these are the very places you are competing.

    I am going to be out of time, but, Admiral Moore, I want to get it to one other question, and that is the supply chain. As these big platforms -- the reason I want to ask you, you have the aircraft carriers, you have the SSBNs, these are major, major platforms over long periods of time.

    The Federal Government does not have a capital budget. We just do not. I do not know how we actually commit industries to build these huge platforms without a long-term plan.
So the inconsistent start-stop of these budget conversations that we have in Congress, tell us the impact that that is having on this domestic supply chain for these major platforms. You can talk about the air platforms too, the F-35, the F-22, and the follow-on maintenance that is required to keep those things going.

General Dana: Yes, thanks, Senator, for the question.

A lot of times, we focus most of our effort on when we have budget unpredictability at the tier 1 yards, the people who are actually building the ships and the submarines or who are doing the maintaining. And I would tell you, if you are a Northrop Grumman or an Electric Boat, then you have the cash reserves to kind of absorb a little bit of that.

But where it has the bigger impact is at the tier 2, at the supply chain, the people providing the cabling, the pumps, the valves.

So the unpredictability in the budgets absolutely has significant challenges for us in terms of being able to maintain somebody that is providing a pump or a valve or you name it to a ship or a submarine. And they do not wait around long. If it is unpredictable, they will go do something else, because they are running in a cash flow environment that does not allow them to absorb losses for very long.

So it is certainly a major concern to us, and it is
something I would like to focus on when we talk about the
budget unpredictability, is that these are the people that
really get impacted.

And then when they drop out of the business, it just
means less competition, which it is kind of a vicious cycle.
It drives our costs up in the end.

Senator Rounds: I thank all of you.

Thank you, Mr. Chairman.

Senator Kaine: [Presiding.] And I do have one second
round question.

Do you have any other questions you wanted to ask?

Senator Perdue: We would be here all day, sir.

Senator Kaine: If you want to keep going, you can. I
have one quick one that is kind of a wrap-up, but feel free,
since I have to stay here.

[Laughter.]

Senator Perdue: Senator Kaine and I have closed plenty
of these committee meetings together. He has a marine that
is in harm's way today, and I know how serious he takes
this.

I grew up at Robins Air Force Base, and I have been to
Albany many times. I still have the mud from the Columbus
area under my nails. So I know where you guys have had
footprints.

I am very concerned about -- we have now moved into, it
looks to me like, a military position posture where deployment is going to be sort of the watchword of the day. We closed 15 bases in Europe in 2015. I think that number is correct. We have not had a major BRAC here, in terms of our facilities matching the requirement.

In your opinions, and I would welcome anybody to onboard this question, and that is, with regard to our footprint here in physical plants, General Dana, you said, and you summed it up best. You said, here are the problems: aging equipment, complexity of today's systems, decline in depot funding, and decline in our facilities.

So the question I have is, are our facilities in the United States and abroad matching this 4-plus-1 mission requirement it looks like you guys are geared up to try to deal with today that is so different than the 1-1 mission requirement we had over the last 50 years.

General Dana: Yes, sir. Thanks for that question. We have 33,000 marines forward-deployed right now, 22,500 west of the dateline and --

Senator Perdue: He has one of them.

General Dana: Yes, sir. We had that very discussion yesterday.

As you look at our infrastructure, I cannot speak for the other services, but in terms of the Marine Corps, we think we are in a good place in terms of the number of
facilities we have, especially if we go to an above 185
force, to be determined by funding, of course.

But in terms of the infrastructure itself, I mentioned
that we had many facilities that were in poor and failing
condition. I just quickly want to talk about this, as we
are looking very hard, sir, at the entire portfolio. We
have one command, Marine Installation Command, that looks at
all of our facilities and develops a consolidation,
demolition, refurbishment, and new build plan that the
Commandant makes a decision on how that goes.

So in the past, it was somewhat stovepiped. You talked
about your command and your command. Same thing with us on
the installation side. So we are making those dollars go
the furthest when we create literally a master plan for the
entire Marine Corps and how it beds down.

Senator Perdue: Do you guys outsource to each other?

General Dana: Yes, sir, at Fort Leonard Wood, and
other places. Yes, sir.

Senator Perdue: What I am asking, if you have depot
limitations in certain places, certain depots, I mean, I
look at the F-18s, for example. We have a lot waiting on
major depot maintenance. But there are other depots that
might have excess capacity.

I know you look at this all the time in terms of the
cost of making that depot apply to another need, but is that
ongoing? Are those things you guys are always --

General Dana: Yes, sir. We do our tanks at Anniston.

They do a great job.

General Levy: Our helicopters are done at Corpus 

Christi Army Depot. We do Marine F-35 and Navy F-35 work at 

Hill Air Force Base in Utah.

We talked earlier about the F-18 work that we are doing 

for the Navy not only at Davis-Monthan, at the boneyard, but 

also asked Robins Air Logistics Complex.

We do the Navy E-6 work at Tinker Air Force Base. We 

do Navy and Marine F-35 engines at Tinker Air Force Base.

So, yes, sir, there is a lot of crosspollination that 

occurs.

General Dana: Not only the physical part but we do a 

lot of sharing ideas. Lee invited me out to Tinker, and 

that is an absolutely 21st century depot, great processes, 

reduction in cycle time. We got a lot of lessons from that 

for Albany and Barstow.

Senator Perdue: Well, General Wyche and General Levy 

owe you two beers after today. You have been bragging on 

all these guys today.

Thank you, Senator Kaine.

Senator Kaine: Thank you, Senator Perdue.

Just really one last question, and it is a good closer.

So in your current lane, what is it that most keeps you
up at night? In any particular order, we would love to hear from you.

General Wyche: Senator Kaine, I will start with the lack of predictable, consistent funding, because when we do not get that, we not cannot plan our workload. We cannot plan our production schedules. And so that is very important to us. And equally as important, it creates concerns among our employees, because they want stability in their lives.

And, Senator, back to your comment on the supply chain, there is concern also in the supply chain. We monitor approximately 4,000 suppliers that we build with. In our analysis, we have identified 1,000 of those suppliers at medium- to high-risk to going bankrupt. That is a very important as we continue to provide the readiness for our Army.

Senator Kaine: Admiral Grosklags?

Admiral Grosklags: We will just go down the row here, sir. Two things, if I might, one on-topic and one perhaps slightly off-topic.

The readiness of the naval aviation forces is number one. We alluded to some numbers earlier --

Senator Kaine: We had some powerful testimony about that at the last hearing.

Admiral Grosklags: Yes, sir. So I will not go into a
lot of detail on that. You are well aware of it.

The challenge I mentioned in my opening statement and
that General Wyche just mentioned is about stable funding
and getting the funding up to the level we need. We have
clear data that shows, as funding started to decline back in
the 2009-2010 time frame, our readiness on the flight line,
mission-capable aircraft, full mission-capable aircraft,
dropped in exact correlation with that reduction in funding
for those NAVAIR accounts that I mentioned earlier. So that
is one.

The other one is also related to the other part of my
business, which is the buying of new stuff, the acquisition
piece. There, we are just too slow. And it continues to
bother me that we cannot collectively accelerate that
process. There are a number of initiatives that we are
working on that I would be happy to share with you at
another time.

Senator Kaine: Great. Thank you.

Admiral Moore?

Admiral Moore: Yes, Senator. I think the thing that
keeps me up at night is not having another Boise. We have
the smallest fleet we have had in a long time. Getting
these ships and submarines back out to the fleet, out there
in the operating force, is critical to the Navy's readiness,
to the Nation's readiness.
And when we have something like Boise or we deliver
George W. Bush late, 5 months late out of availability, the
impact of that is that the young men and women out there
wearing the uniform are having to deploy longer and stay on
station longer.

So it is not lost on me that, at the end day, it is my
job to get these things out on time. It really impacts our
ability to keep these young men and women safe and get them
back on deployed turnaround times that make sense.

Senator Kaine: Thank you.

General Dana?

General Dana: Sir, two quick things.

First, we track 19 platforms in the Marine Corps,
shoot, move, and communicate. Only one of those, an assault
amphibian vehicle, is being replaced. Where I am going with
this is deferred modernization, because we need new systems
in the future because, as I talked about accelerated aging,
these systems are going to wear out at some point.

The second one, not exactly my lane, the gentlemen to
my right have this lane, but as you look at the capability
development system in the military, which is a Robert S.
McNamara, very Ford Motor Company type system, it is not
keeping up.

I went to Singularity for a week, to the executive
course. You look at those folks out there, they are turning
product in weeks and months and maybe 18 months. I
mentioned yesterday Local Motors, a company here locally
that literally, from idea to design to fielding of the
equipment, they are doing it in anywhere from 3 to 13
months.

That is the future, because the enemy in the future, we
are coming out of an Industrial Age where it is all big
iron. Now we are going into space and cyber five-dimension
fight instead of a three-dimension fight. We are going to
need to be able to manufacture capabilities a lot faster.

Thanks for the opportunity to comment.

Senator Kaine: Thank you.

General Levy?

General Levy: Thank you, Senator.

To General Dana's point, our adversaries also iterate
that fast, in terms modernization. Our adversaries can go
from concept to hardware on the ramp in 18 to 24 months. So
from a modernization perspective, we all have a pretty
considerable need for modernization, but it is not just the
new platforms. It is the speed at which we field them.

To your direct question, Senator, about what keeps me
awake at night, it is stable and predictable funding. Since
I manage the supply chain for the United States Air Force,
when I do not know when I am going to get my money, I cannot
tell suppliers when I am going to spend that money.
And to General Wyche's point, we drive businesses out of business. That is not what we are here for. But when the average fleet age of the United States' platforms is 27 years old, and 21 of 39 fleets could qualify for antique plates in your State, sir, that tells me that the supply chain and the ability to have that available to us to sustain those older platforms is absolutely essential. The funding that drives the human beings, the infrastructure, the milcon, all of the components that it takes to generate that readiness, that all stems from a stable and predictable funding stream.

So that coupled with the modernization challenges for our Air Force are the two things that really give me pause.

Senator Kaine: Senator Perdue has heard me give this lecture in Budget, and he and I are kind of on the same page about this. On budgets, I am a real certainty -- having been a mayor and governor, I learned that anybody can adjust to a number more than they can adjust to a question mark. And even if they do not like the number, they can adjust to a number. But a question mark is tough, especially if the question mark is not only a question mark about the amount but about when I may know when the question mark is going to be filled in with an amount.

I continue to believe we made an enormous mistake at the end of the last calendar year. We were very close to
having an omnibus bill done that would have been, essentially, a 10-year full appropriation not only in the defense category but in everything else.

The incoming administration -- I can understand why they did this, they are about to take the helm, and they want their thumbprint on it rather than somebody else's. But they said do not do it, go ahead and adjourn on the 10th of December even though you have the time to do an omnibus, and do a CR through April 27.

Well, what that did is it put them in a box where, when they came in, they had to then turn around and do a budget for the rest of fiscal year 2017 and work on a 2018 budget. A new administration working on just a fiscal year 2018 budget is plenty to take on their shoulders, but they complicated the work by telling us to recess and go home on the 10th of December when we could have gotten an omnibus bill done and still had plenty of a fine Christmas vacation.

So we made a big mistake, and what we ended up doing was not giving you certainty. So we have this CR that goes through the 27th, and we are sitting here, Senator, I do not really know exactly what is going to happen come the 27th of April. And we are in the middle of the discussion about the fiscal year 2018 budget too.

So we ought to be giving you and giving everybody more certainty. And even if you do not like it, even if you wish
the number was different than the number we give you, at
least we can give you something that you can plan and adjust
around.

That really has been on us. This is something that I
know Senator Perdue shares my views about this, being both
on Budget and Armed Services. We owe you better than what
we are giving you on the predictability score. And hearings
like this kind of have a way of reminding us that we have to
step up our game a little bit.

So thank you so much for what you do, for your
testimony, and we will look forward to taking this into
account as we are working on the NDAA.

The hearing is adjourned.

[Whereupon, at 3:31 p.m., the hearing was adjourned.]