Remarks by Under Secretary John C. Rood

Discussion

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Audience Q&A

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TRANSCRIPT

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REBECCAH HEINRICHS: Well, good morning, and welcome to Hudson Institute. My name is Rebeccah Heinrichs. I'm a senior fellow here, and it is my great privilege to have my friend here, Undersecretary John Rood, to talk with us about the much anticipated missile defense review. It has been in able hands, I think, with him over in the building. And so we're looking forward to hearing what he has to say about it. Many of you know about him. You have the bio, I think, in front of you. He has over 30 years of private sector and public servant work under his belt, including at the CIA and the NSC, DOD, State Department. And so he is the right person for this job, and so - very happy to have him here. And then the - what we'd like to do today is - the undersecretary is going to talk about what's in the missile defense review, highlight some of the things that he thinks we should really be paying attention to, hopefully maybe some things that - where there's great continuity with the previous administrations on our missile defense architecture and then where there are new things that we have that we're going to seek to implement because we're adapting the architecture to the dynamic threat environment. And with that, I am going to turn it over to you, John.

JOHN C. ROOD: OK. Well, first of all, it's great to be here at Hudson and amongst friends. I saw Scooter Libby when I came in. And Rebecca - I've known both of you for years. And it's just fabulous to be here. So thanks for giving me the chance to talk to all of you. I thought I would just give a little bit of background on the Missile Defense Review and then, obviously, go into questions. It was a long time coming to get to this point where we released the missile defense review. As you can expect, in the government, there are many hands and many participants in these processes. But I'm pleased with where we ended up in the review. And you start off with - if I was here talking about any other topic, the great power competition in which we find ourselves or the situation in the Middle East or what we see in Asia developing, I think you'd hear a familiar theme, which is really the backdrop against which the missile threat continues to grow.

If you look at our National Defense Strategy, it talked about the fact that the specter of great power conflict has re-emerged, that we see China and Russia pursuing capabilities but also pursuing activities that are meant to change the global structure, meant to change the common set of rules and practices that have been applied for free movement of ideas, for goods, for trade that have emerged in the post-World War II period. We also talk in the National Defense Strategy about countries like North Korea and Iran and their pursuit of their advanced weapons capabilities - ballistic missiles, nuclear weapons - and also support for things like terrorism in the case of Iran causing a great concern. And so those are a focus for us. And then we continue to be involved in conflicts where we're countering terrorism, countering violent extremism. So that's kind of the international security environment. And when we focus in then on the missile threat - today, there's over 20 countries that are pursuing ballistic missiles or other forms of missiles that have the potential to threaten the United States and our adversaries. The other thing they're doing - if you break those things down into categories, there's both a larger scale of that missile threat, as - that is to say much greater numbers. But the new and sophisticated types of missiles are also of concern to us - ballistic missiles becoming more capable and having greater features. But in addition to ballistic missiles, hypersonic missiles being pursued, cruise missile inventories growing, and then integrating - we see potential adversaries integrating these offensive capabilities with other parts of their military plans and their military capabilities. So for example, in the case of Iran, we see Iran extending the range of their ballistic missile systems, pursuing larger numbers of them. And what we really think is Iran has a desire to have a strategic counter to the United States with a long-range ICBM. And we worry about their nuclear ambitions and the ability to equip a long-range missile with a nuclear weapon someday in the future.

We also see North Korea, in addition to a vigorous nuclear program, pursuing long-range missile development. North Korea has had a lot of long-range missile capabilities. We continue to see
them advance those programs. Others, like Russia and China, are integrating their respective ballistic missile and, in some cases, things like hypersonic development into an anti-access area denial strategy that they have. And despite frequently criticizing the United States or our allies for pursuing missile defenses, of course, we see both China and Russia pursuing their own missile defense capabilities. In the case of Russia, it's a very long-standing capability that continues to be improved. In China's case, its new development of ballistic missile defense capabilities. And then, of course, we see modernization of strategic offensive forces continuing in both countries.

So the 2019 Missile Defense Review - and that's the first one that's been released since 2010. So we went through quite some period since the Obama administration released that document until now. But in terms of what are the roles for missile defenses, first, it's to contribute to the deterrence of adversary missile attack. After all, having a defensive capability makes it less likely that an adversary will launch a ballistic missile at you because you have the ability to defeat that attack. So one - missile defense is strength and deterrence. Two - they provide the means to defend the U.S. homeland or our forces or allies around the world. They assure allies that you can meet your defense commitments to them and not be deterred from coming to their assistance or being involved in a conflict prevention - in other words, from being coerced by states that possess these weapons. They preserve our freedom of action around the world, that we have a capability to defend the homeland, to defend our forces, to defend our allies. And they give you a position of strength. And they are stabilizing to allow more time for diplomacy and other activities to address threats that exist now. And, of course, they're a hedge against unanticipated developments around the world.

So the 2019 MDR sets out a few key policy priorities that will shape that. One that's a significant force-planning goal is that we will maintain the size and capabilities of the U.S. missile defense system that is sufficient to stay ahead of the threat that we face from countries like North Korea and Iran. The forthcoming budget that will be submitted to the Congress will implement the Missile Defense Review. But as we go forward year after year, this will be our guide in the Defense Department. And one of the functions of reviews like this in the far-flung enterprise with thousands of people involved throughout the defense enterprise - setting clear goals and priorities and having a sizing construct like that is crucially important. The other thing is, of course - stated in the document - the United States will not accept any particular limits through arms control agreements or other activities on our ability to defend ourselves. Some of us are veterans of the previous regime when the United States was a party to the 1972 ABM Treaty and withdraw from that. And the policy of the United States is that we will accept no limits on our ability to defend ourselves. We will continue to rely on nuclear deterrence to deter countries like Russia and China from attack on the United States or our allies. And we're also going to continue to emphasize the fact that offenses and defenses will work together as part of contemporary deterrence to deter any attacker from viewing that as a possibility. So we'll have a comprehensive missile defense system, flexible and adaptive missile defense capabilities as part of our plans for the future. And then we're going to enhance, as described in the Missile Defense Review, offense defense integration because after all, when we look forward and we do war games and we look at postulated scenarios in which we may be involved, the offense and defense are going to be very active together. And we're going to need to improve our ability to bring that capability at the combat and command level together within DOD. So we - in addition to staying ahead of the rogue state threat, some of the specific programmatic activities that are part of that - we're in the process of deploying 20 additional ground-based interceptors, which will bring to 64 the number that are deployed in Alaska and California to defend the United States against long-range missile attack.

There is a new kill vehicle - or the seeker - that sits atop those systems, which continues to be under development - called the redesigned kill vehicle - to improve the performance, reliability
and producibility of that system. You'll see new sensors deployed in places like Alaska, Hawaii and the Pacific region - ground-based sensors - to improve our detection and tracking and discrimination capabilities. We are in the process of fielding a space-based kill assessment capability, that is to say give you the information to know whether your first interceptor that you fired at target succeeded in striking the target. And did it do the expected damage? And then we're going to pursue new generations of technology. So I guess the - one of the shorthand ways I'd describe it is the current generation of technology, which we are in the process of feeling in incremental improvements, we're going to, essentially, sustain that base. We're going to expand the number of units in the field. And the Missile Defense Review shows some of the progression in the Army, Navy systems that will be fielded in larger numbers over the coming years. And we'll sustain the investment profile required to support that force structure and to sustain it over time and the upgrades and the - and to preserve the viability of it. But then we're going to begin to apply ourselves to some new generations of technology, things like a new space-based tracking layer.

We're going to perform studies for the first time in over 25 years on space-based interceptors to really evaluate the feasibility and desirability of pursuing that much more robustly. And then you'll also see some new things like boost-phase intercept being pursued from aircraft, looking at our ability first to employ the F-35 as a sensor to aid the overall system, improved command and control and networking of that full system and then over time, exploring options for - and pursuing them for boost-phase defenses, which after all, after a missile is shortly taking off is when it is, in many ways, most vulnerable - and having the ability to trip that offensive force to reduce the attack, and as part of a layered defense - very important to us. So that's a new element that the Missile Defense Review talks about. After all, the F-35 is our largest program in the Defense Department. And so we want to take full advantage of that capability that we've already purchased to be a part of the architecture. Some other things that you'll see us doing is putting renewed emphasis on directed energy. That also holds a lot of promise. You'll see some investments to that regard. And then in some other areas where we are going to adapt some of our current systems, things like the Standard Missile-3 Block IIA, using it also for defense against long-range missiles. That was fielded aboard - and is being fielded, rather, I should say, aboard Navy ships for regional defense. But it also has a capability, we think, against long-range missile attack against the United States homeland. So the Missile Defense Agency will demonstrate that in a test coming up next year, where we'll validate that that capability is as predicted. We're also going to look at some other things like we have an Aegis test site in Hawaii. Can we operationalize that site for the protection of Hawaii when needed, in addition to preserving its test capability? So that's another area we're going to look to adapt existing systems to try to be more cost effective. If you will, Hawaii is one of the more difficult challenges for protection just because of, geographically, where it lies as compared to the rest of the United States. So this is one of the ways we're looking at beefing up protection of that state. And then we'll have some surge capability that we will always have to maintain the ability, depending on, as we assess the situation, how might we increase the production or the deployment of our present system? So we'll maintain the ability to do that.

With attack operations, again, that's another area where things like airborne platforms provide an advantage. If you can imagine it, being able not only to detect and track a rising missile, if you will, coming towards U.S. forces or towards the United States but then having the ability for aircraft with air-to-ground weapons to attrit those targets and prosecute the campaign in that closer integration between attack operations and defensive capabilities. Now, I haven't talked much yet, and I want to focus, at this point, on the work we're going to do with allies. The second line of effort in the national defense strategy is maintaining our alliances and building new partnerships with new allies. The missile defense review talks pretty extensively about all of the work that we're
going to do with our allies, whether that be in Asia where we've had a terrific partnership with Japan in the development of the Standard Missile-3, Block IIA but also in things like Aegis Ashore. That is to say, what we typically have aboard ships being placed on land for their protection in Japan. There are two of those assets that are - that the Japanese government is in the process of procuring. Japan has played host to U.S. radar deployments. That cooperation is really very strong, and we're very pleased about it.

And if I kind of walk around the map in Asia, we've had strong partnerships, like I said, in places such as Japan. (Coughing) excuse me. In Europe - at NATO, the alliance at 29 has made a decision to pursue protection of alliance territory in population centers, as well as our deployed forces. There are alliance systems to do that - a command and control system, an office to plan for the capability and the integration of different allies’ capabilities - so the alliance can operate as one - the deployment of the European Phased Adaptive Approach, Aegis Ashore sites in Romania and in Poland, as well as deployment of sea-based assets in Rota, Spain, along with radars in places like the Danish territory of Greenland and in England, in the U.K., at Fylingdales. All of those things coming together, along with command and control elements, to allow the alliance to proceed with missile defense protection for its territory, as well as separate programs to allow the alliance to operate out of area. That is to say, in some conflict where the alliance is operating together and defend its forces. So the work in Europe - very strong across NATO, a number of defense capabilities. And then in the Middle East, of course, the United States cooperating very closely with countries like Saudi Arabia, the United Arab Emirates, Qatar - and then where we've probably had the longest and deepest cooperation, in Israel, with several cooperative programs between the U.S. Missile Defense Agency and their Israeli counterparts. So we really will feature that kind of work with friends and allies going forward in the missile defense review. And that's probably a good place to stop and take questions, unless there's more you...

HEINRICHS: Well, if I could just ask a few questions, and then I will - I do want to leave time to just have a few questions from the audience. So do be thinking about that. My first question - let's just start with the homeland, since homeland is still a priority for this administration - homeland defense. I noticed that doesn’t - in the previous administration, that it did look that Congress has explicitly said that they wanted the Pentagon to take a look at a third interceptor site in the United States to hedge against - one, to just beef up our defense against the North Korean threat, but in particular, it’s the Iranian ICBM threat that we’re concerned about. The Pentagon has done the environmental impact studies to look at where we might go if we want to go that direction. But this "MDR" didn’t say that we’re going to deploy that. Is that - two on that. One, is that because we're not as concerned about the progress of the Iranian ICBM threat? And then two, how quickly can we deploy that third site should we decide to pursue that avenue?

ROOD: What Rebecca's talking about is, there was a requirement from the Congress a couple years ago to examine the potential for construction of a third site, the first two being in Fort Greely, Alaska, and the second one at Vandenberg Air Force Base in California. And, to look at, would there be a site in the Eastern United States or Midwestern United States that would improve your ability to defend against a long-range missile attack from Iran, the others were optimized more for but certainly have the capability to protect all 50 states from Iranian missile attack. The main issue was Alaska and California, if you will, are further from the East Coast, than an East Coast side or a Midwestern side. So the Missile Defense Agency has completed the environmental impact studies. They have assessed the relative merits of competing sites in states like New York and Ohio, Michigan, places that there could be potential sites. That work typically takes several years, and it did. I think roughly over the last three years, that has been done. So we're at the stage now where we've maintained that as an option for the future, but at this time, we haven't chosen to move forward with that. And it is in part various assessments of the progress of the threat, but
also, you know, competing assessments of alternate approaches. So at this stage, we're keeping that as an option, but we haven't chosen to pursue it further than the present planning.

HEINRICHS: And then - just to be clear, you talked about how because where Hawaii is, that we're looking at other options to just beef up that defense from the North Korean threat. But the current system that we have in place does provide coverage...

ROOD: Yes.

HEINRICHS: ...Of all 50 states. So our Hawaiian fellow Americans aren't going to get nervous here after this (laughter).

ROOD: No. No. And that is - that was the planning design. That's the architecture requirement. And in fact, that's what we drill for and plan for. So we have those capabilities. This is really about looking over the horizon, about how could we further improve that defensive capability.

HEINRICHS: And then another one - just sticking on homeland for another question - we - we're actually trying to stay ahead of the rogue threat for protection of the homeland. And we're still relying on deterrence to deter homeland threats from our peer competitors. But we're also trying - the law requires that we also provide coverage from unauthorized or accidental launches.

ROOD: Right.

HEINRICHS: So is the current - are you comfortable with the current homeland architecture that could provide sufficient coverage, should there be an unauthorized or accidental launch from a peer competitor?

ROOD: Well, certainly, that'd be a tough day, when you stop and think about the circumstances that led to an accidental or unauthorized launch of a nuclear-tipped ICBM at the United States. So presumably, there's some context in which this event occurs that has led to the tensions or led to concerns about what's going on in that country. We do have that requirement. We do have the system that would be used in such an event. But obviously, you know, a lot would depend on the circumstances that were going on at that moment about what - in addition to executing a defense of the United States against a missile attack using our missile defense system, what else we would do. Because obviously, it wouldn't be the sort of event that, just in isolation, you'd say, oh, golly, they tried to incinerate New York but, there, that's over. Phew. You know (laughter)? We conducted a missile defense event to address that. There'd have to be - I mean, clearly, more to the story than that in other realms.

HEINRICHS: Then let's move to the regional context. The report, I thought, was - one of the things that's interesting about this "MDR" versus the 2010 "EMDR" is that it does outline in some, I think, very useful detail, some of the threats that we are seeing from Russia and China in the regional context. Can you talk about - and previously in the "BMDR," those regional defensive systems that we are deploying with our allies, we've said that they are to handle the rogue state threats, even in the short or the medium-range threats. But we're not saying that we're not going to defend against whatever missiles now threaten our assets. Can you give us a little bit more detail about what sorts of programs we're talking about, systems we're talking about, that would do that? And then how, as we've talked previously to, how this space sensor layer would just help our overall missile defense architecture to be more reliable and capable?

ROOD: Right. You start with the foundation, a core, if you will, that really, our approach in the missile defense review was looking at. If we start with our installed base and we describe its capabilities, what makes sense from that core capability then in terms of, if you will, the next
progressions, the next generations of technology and the next generations of waves, if you will, of deployment to add to the force structure? Because you've got, besides the continental United States, obviously, quite a few regions where the missile threat has grown in sophistication or numbers. And we're going to need a larger force structure to deal with that. And so the "Missile Defense Review" lays some of those progressions that are planned in the force structure out. But in addition to that, you start with a core capability with a command and control system, which, when you stop and think about it, when I was involved in this at the outset, the complexity of it is enormous - to receive near-instantaneously tippers on missile launches anywhere in the world, to process that information, route that information to each and every time zone in the world where U.S. forces are at, and to be able to simultaneously execute a defense of both shorter-range defenses but also longer-range defenses and to coordinate how all those various systems interface. So one, we're going to continue to improve that command and control system. If that backbone, if that network doesn't continue to improve, we will have really sub-optimized the whole system. So we're focused on that.

Then you also have a legacy layer in space to allow for space warning and some tracking. Our intention is to improve that capability substantially, and not just for ballistic missile attack. This is the "Missile Defense Review." There's no word ballistic in it - because in addition to ballistic missiles, the scope includes hypersonic weapons and cruise missiles. So to improve our capability to track from space, yes, we're going to do some terrestrial sensor improvements, building on both the current systems and some expansion, with additional radars. But if our head of research and engineering Mike Griffin was here, he'd say, at some point, proliferating ground-based or Earth-based sensors just won't close the gap with what you need to do in going to space in a cost-effective way and taking advantage of - there's really an amazing situation going on in terms of development and deployment of new space capabilities, both commercially and militarily. And taking advantage of that wave to have a space-based sensor layer so that, as a first step, being able to see it - 'cause you can't shoot what you can't see. And that will - we'll start with that as an initial improvement. And then, of course, we've got all the various sea and ground-based interceptor capabilities, both in the United States, as well as deployed aboard ships - in some cases, fixed assets like in Europe at the Aegis Ashore sites - that we will link into that capability. And then this airborne layer - starting now to get the Air Force much more involved. This has been a very heavily focused program for the Army and the Navy - the Air Force really just operating long-range radars and space-based detection assets - but having the Air Force force structure be applied much more robustly to this problem set, if you will, through airborne sensors and then, we hope, later, boost phase defenses from aircraft. And those can affect, really, from any particular source such that offensive system are coming from.

HEINRICHS: And I think that the point that you made, too, about - Dr. Griffin talks about this a lot. General Hayden talks about it a lot. But we can't - if we're trying to get - we want that birth-to-death tracking, especially if there's more sophisticated missiles. And we can't populate these areas of responsibility and - with sufficient ground-based and sea-based radar that - to provide us that sufficient - that coverage. And so even though a lot of people get concerned about the price tag for a space layer, it's actually more cost-effective if you're really looking at the capability that you're trying to achieve, rather than populating the area with the ground - and it simply just isn't feasible from an operational standpoint. And then this brings me to my next question, which is - I thought it was noteworthy in the report. It emphasized the stabilizing impact of missile defense, and that's something - I agree with that. I think, you know, the alternative is to allow the things that we value - our allies and our forward deployed forces, et cetera - to be - to remain vulnerable with the weapon - with the missiles that are being developed by our adversaries. And so we're trying to kind - to close that gap. But can you talk about the stabilizing effect that missile defense - missile defenses have as we understand it and we see it?
ROOD: This is a critically important part of our doctrine - that having a defensive capability is stabilizing and stabilizing so many situations in the sense that if you have the ability to defend your homeland, your leadership, to defend your deployed assets, some of the things that you would ordinarily be driven to contemplate if in a crisis - options for preemption; staging your forces in ways that are distributed, such that you can mount an effective counterattack if attacked - all of those things are read by your potential adversaries as potentially escalatory, of course - not potentially - as escalatory. One of the things that a missile defense system allows you to do is to help stabilize that situation, to allow time for diplomacy, to allow time for the situation to develop. And even if the potential adversary is spoiling for a crisis - and this is one of the things we've sometimes seen in the recent history - knowing that you can securely live behind your defensive capabilities helps you avoid that situation. And it's also stabilizing, which deters attack in the first place.

Deterrence is - contemporary deterrence has both offenses and defenses as part of it. If you want to prevent another country - an adversary - from considering such an attack, having a very effective defense is very valuable there to prevent the attack in the first place because after all, if you postulate a situation that your adversary launches a missile at the United States and we successfully intercept that and - on its way to an American city or something, it's not as though the story would end there. And you'd say, well, now that that's over, we've successfully defeated an attack that would've killed millions of Americans. Hey, let's go back to work. You know, we've got other things to do around here. Or gosh, hey, you want to get lunch? No, no, no. That certainly wouldn't be the situation, and any attacker would know that and would face, you know, the consequences of those actions. And so it's just another way to provide some reassurance and stabilization, and also to reassure your allies and the American people that you have the ability to provide for that protection in a crisis.

HEINRICHS: One last question from me, and then I'll take a couple from the audience - boost phase defense and directed energy and how that might apply. Depending on who you talk to, you know, the joke is just - we're always five or 10 years away from having a feasible directed energy program. And it's always five or 10 years away, never closer. But can you give us a little bit of insight into some things that we're doing to progress that technology?

ROOD: Well, that is one of the things that the missile defense review talks about - is giving greater emphasis to directed energy systems as part of our defensive capabilities. And they're really very attractive when you think about the cost-effectiveness and the capability about being able to deal with offensive missiles from - cruise missiles, hypersonics missiles, other things - with a weapon that works at the speed of light to affect that system. You're right. There are lots of jokes about the time it's taken to develop lasers. I have to say my personal experiences in my lifetime - I think it's the only technology since - that I can recall that has happened slower than I expected as a boy and now as an adult. Everything else happened faster than I expected, all these incredible things you saw on television and so on. And how many science fiction movies have we seen over the course of our lifetime where they had these incredible laser technology? But it - you know, it hasn't come to pass. We all have phones that operate like the systems we saw on "Star Trek" and so on so many years ago that you can talk to and give voice commands like Captain Kirk. But unfortunately, with directed energy, it hasn't materialized at that speed.

That being said, there are some really interesting things in development programs which are producing real results in the Pentagon - not in the building itself, but obviously being sponsored by the Defense Department - that have had tremendous results. And so there is a - you know, I think the technology is starting to mature to the stage that we do feel much more comfortable applying it. And it's really - while it can all be demonstrated now, it's applying it at scale and in a
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way that takes it from a test capability to more of an operational capability is really the pivot point that we're on.

HEINRICHS: And related, another characteristic that I think that marks this MDR is the emphasis on trying to go faster overall. That's a - that's been challenging because now that we're in this era of great power competition, you have - it's much more difficult to compete with an authoritarian regime like China when they don't have the bureaucracy for their acquisition programs that we do. And so we tend - we - they can go faster, and so we need to go faster. And you hear that from Dr. Griffin a lot too and from you and from General Hyten as well. And so we're going to be doing some things, I presume, to try to change that - the culture within the Pentagon or maybe even do some actual restructuring with the acquisition process, I hope, to try to get these things online a little bit faster.

ROOD: Yes. And there are things that Mike Griffin and others have talked about to speed the pace at which we go from idea to development to fielding. And that rapid capability development is very important. Of course, we have good reasons that we have the acquisition system we do to promote competition, to promote fairness. And those are part of the goodness. But it's the ability to apply those same principles in a way that is more rapid and better government in terms of the output. And I - you're right in the sense that some countries like China, with a command economy-type system there, have the ability to apply things. But I don't actually think that's a superior model. We faced that in the Soviet Union period and other times. And the reality is what's amazing about the free market system and the system of innovation in the United States is actually no one knows where that's going to go.

But we know we have the incentive structure that will beat that command economy system 10 times out of 10 times in terms of technology and innovation development and lots of historical examples where that will occur. And the government needs to take the approach as - of much more rapidly applying that, spinning in those capabilities that we see in the private sector being developed and fostering the way where - when we set the requirements, and we get those things right, that the gestation period from getting that right to going through what is a good and measured system is not applied in such a way that it's too heavy-handed. It just doesn't achieve the purpose. But in terms of technology, innovation and development, I mean, I like what I'm seeing in the United States. We've just got to figure out a way to take better advantage of that in the government.

HEINRICHS: I totally agree with you and just want to foot-stomp that point too that it's - we've done this before too. When we need to, Americans can produce what we need to fight and win. It's just a matter of getting everybody on board and making it happen. And so it might be more of a - just a cultural thing that needs to - we need to switch over to a sense of urgency that perhaps we haven't been feeling for the last couple of decades. With that, we'll go [to] the first question here. And please, if you could just state your name and where you're from - not like where you grew up, but...

AUDIENCE MEMBER: I appreciate that. Boston - Patriots win again.

HEINRICHS: (Laughter).

AUDIENCE MEMBER: Just want to point that out. Thanks, Rebeccah. Secretary, the INF situation has changed a little bit since the Missile Defense Review was rolled out. So I wanted to ask kind of two questions related to that. First is, over the weekend, Russia said, OK, if the U.S. is leaving INF, we're going to start developing some new capabilities. They said two potential new weapons they're working on, and they want to extend the range of the INF-busting system they
already had. Does that change any of the urgency for any of the MDR systems or kind of put more of an onus on you guys to push some of this technology forward perhaps more quickly? And then second question - not necessarily missile defense-related but does fall under you, I believe - when do you expect the U.S. to be able to field a system that previously would have been banned under the INF? We know there's been some R&D work going on, but we don't have a timetable yet.

ROOD: [...] And what [he’s] referring to, to those that don't know, is of course the United States announced that we were making our formal indication of withdrawal from the INF treaty, which, under its terms under Article 15, would take effect in six months as well as suspending our obligations. And the reason we did that is Russia, in violation of the INF treaty, has pursued and fielded INF-range missiles in quite some number. Five years ago - over five years ago, the Obama administration formally declared Russia in violation of the treaty. But frankly, they were in violation for longer than that. That's just when a true formal - and it's a kind of quasi-legal process that the U.S. government will follow before reaching those formal determinations. So we've had these concerns about Russia's violation of the INF treaty for some time. [...] I saw your - like you did, the comments from the Russians that this might cause them to pursue intermediate-range missiles. My first reaction was, well, of course, in addition to those that you've deployed in significant number in violation of the treaty, I mean, it's not that big of a change in behavior that they're hinting at, unfortunately. And so really, the concern we've had all along is, how do you deal with that situation? And during both the Obama administration and the Trump administration, we've tried it at every level, really, of government, to include the president's level, to persuade the Russians to come into compliance.

We had NATO as an alliance. We try to work to make clear with the Russians that we'd like them to come into compliance with the treaty. We could have a whole seminar like this on all the various things we did to try to persuade them. But suffice to say, it didn't - it wasn't successful. The Russians have not come into compliance with the treaty, and if they don't before the six months is over, obviously, that will be the end of the treaty. And for us, where we faced a dilemma is, while we would have preferred to maintain the INF treaty, at some point, if the other party is simply not adhering to the agreement - and not in a minor way; in a very central way. The treaty says, don't have intermediate-range missiles. They have intermediate-range missiles. This is the sort of thing that you can't continue year, after year, after year. At some point, these kinds of international agreements cease to have meaning if the other party doesn't live up to them and if you simply don't, you know, accept that. I forget who it was that described treaties as contracts among nations. And that's really what this was. And so for us, the situation just simply has become untenable to stay in a treaty that the other party is not remaining truly a party in good standing to.

So we're on a path, and that's been very well-supported by our allies in Europe, and Asia and around the world expressing a lot of understanding. Now, the United States has been in full compliance with the treaty, and so we don't have a intermediate-range system, or something like that, that we would - that we're talking about deploying at this time. So we're going to have to - we're going to look at our options in this regard, and the world will - the landscape that we have before us, we're going to have to adapt to. Not only us in the United States, but this is the discussion we'll have with allies at the NATO defense ministerial here in the middle of this month about now we as an alliance face this geopolitical reality, this landscape, if you will. We're going to have to see how we adapt our defense posture in response to that new reality.

AUDIENCE MEMBER: (Inaudible).

ROOD: No. It doesn't require changes to the "Missile Defense Review." I think the "Missile Defense Review," of course, takes into account that landscape that existed. And the change since
the "Missile Defense Review" was being drafted to now is really more the formal decisions the United States has announced about our adherence to the INF treaty.

HEINRICHS: And the ground-launch missiles that we are looking at now - because they were - the Congress mandated that we begin looking at research and development. Like you said, we were not - and we've been in good standing with the treaty ourselves, but we did begin research and development. But these are still - we're still looking at conventional ground-launch cruise missiles. There's no - I think this keeps popping up. I keep seeing in some foreign media that perhaps the United States is thinking about putting, you know, nuclear, you know, ground-launch cruise missiles again in Europe. And that's not something that we're looking at.

ROOD: We don't have any plans right now and aren't contemplating deployment of nuclear missiles in Europe or anything of that nature. That's not what we're thinking about right now.

HEINRICHS: Josh? And then we'll come here.

AUDIENCE MEMBER: Thank you so much. Thank you for your time and for your service. A two-part question - the parts aren't related to each other. There have been some reports about Pentagon discussions with your Indian counterparts about strategic missile defense cooperation between the United States and India. Can you give us an update on the status of those talks? And is it true that the Indians are considering buying the FAD system? And the second, unrelated part of the question is, we've seen many reports that North Korea's missile - ballistic missile program has made advances, despite new testing - no testing since the June summit in Singapore last year. Would you say that North Korea's ballistic missile capability has gone up, gone down, stayed the same, or you don't know, since June? Thank you.

ROOD: On your first question there, with regard to India, we've had a very positive relationship with the Indian government. And we're building what we hope is a much deeper and broader relationship with them, all the way from the presidential level with Prime Minister Modi on down. And we've had excellent meetings, and we're expanding our agenda. There's more meat to it, if you will. And so I'm really feeling very good about the overall trajectory of that relationship. Now, for some of us, like myself, that have been involved through successive administrations in building it, that relationship, really in both the Bush administration, the Obama administration and now in the present Trump administration, we have talked to the Indians about missile defense as potentially an area, as well, to collaborate on. It's early days to determine how far that will go. The Indians are - have substantial capabilities domestically of their own. And you may be aware, they've done some development of missile defenses. So the degree to which they're interested in acquiring or working collaboratively with us in the United States remains to be seen.

We're certainly open to that kind of collaboration on our part. And if it - that isn't one of the areas they choose to go in, there's quite a bit of other, you know, meaty areas that we can pursue. Maybe I should have chosen a term rather than meaty. Quite a few Indians are vegetarians, as you know (laughter). But you get the point (laughter). Now, with regard to North Korea, their, you know, threat is really composed of both capability and intentions. And North Korea retains significant missile capabilities. And we talk about those in the Missile Defense Review in some detail, the progression of those programs, the advancement of North Korea's capabilities. And that's why we're improving our missile defense capabilities also to keep pace with that or, indeed, stay ahead of that threat. So certainly, the North Korean missile engineers are bright people. We monitor what they're doing. But we feel pretty comfortable with our defensive capability even as it evolves what - in terms of what the North Koreans are doing.

HEINRICHS: Want to get a lady here because we haven't - did you - OK, go ahead.
AUDIENCE MEMBER: Thank you very much. On the hypersonic missile defense - or missile threat, how much of a priority is that? And will it - will defense against it require new infrastructure, or will it rely on existing infrastructure? Thank you.

ROOD: Well, it is a priority for us, as you see in the Missile Defense Review. Of course, first that it - one of the reasons that it is called the Missile Defense Review instead of ballistic missile defense review is that very point, where we've taken note of the programs that are underway around the world to develop hypersonic capabilities. We need to, we think, have a defense capability to address those things. Now, in a number of cases, the level of maturity of those hypersonic systems is still some years away. So we're starting our efforts here on the defensive side. As I mentioned, the first priority will be in terms of tracking and detection, monitoring them. First step in having a capability to deal with - a defensive capability against that type of threat would be able to see it and track it and then later, of course, have the ability to deal with it. As in any one of these endeavors, you're going to have a mixture of taking advantage of legacy systems as well as some new technology development. And in - the new technology development’s really focused, as I say, principally on the sensor side of the - of that part of the mission right now.

HEINRICHS: Here and then here. Go ahead. Wait till your microphone...

AUDIENCE MEMBER: Thank you. I have two questions. First, in - a few hours ago, Russia just announced that it's going to exit the INF treaty. And also, China announced that it's going to have its fourth nuclear carrier. So my question is, are you worried that there will be an armed race? Second question is, which poses a greater threat to the United States, China or Russia? Thank you.

ROOD: In terms of the first part of your question, Russia's announcement - again, Russia's been in direct violation of the central purpose of the INF treaty for years. And so, you know, I'm not sure there's that - going to be that much of a change in behavior. After all, while Russia was a party to the INF treaty, what did they do? Produce and field intermediate-range missiles. What they're saying is they won't be constrained by the treaty, which its only prohibition is you cannot produce and field intermediate-range missiles. The difference between Part A and Part B is not really much of a difference here if the treaty has not actually constrained their behavior and moderated their behavior. It's regrettable. We would have liked, and we would still like, for Russia to adhere to the Intermediate-Range Nuclear Forces treaty. But we haven't figured out how to persuade them to do so. So, I mean, I'm not - I don't think that's a noteworthy concern for us, the Russian statements that have emerged here in the last 24 hours.

In terms of China's continued progression and how does that rate in the progression, the National Defense Strategy talks about both of those countries being a significant concern. And it is the progression of their capabilities and what are the intentions behind those capabilities, but it's also an unwillingness or a way of challenging and trying to revise the international systems and order that has existed - for example, on free navigation, free movement through the air, through the global commons, movement of ideas, respect for others' sovereignty - that poses a concern. And so we're concerned. And they're very different challenges, what we see from Russia than what we see from China. But both merit, I mean, substantial concern for us and occupy a large part of all of our days in the national security functions in the U.S. government.

HEINRICHS: Think it's important to note too that, you know, the INF treaty, as John said, we were the only ones that were being constrained by the treaty. No other country on the planet was being constrained by the INF treaty. In fact, China's - has the most diverse, largest missile force on the planet. And more - I've heard more than 90 percent of its missile forces would violate the INF treaty, had it been party to the treaty. So this is - (laughter) - I noted that the Chinese government
had lamented that the United States was withdrawing. And I thought that was very interesting. So we'll go here. And then I think this might be the last one, unless you can go really quick. We might be able to squeeze one more in before 11.

AUDIENCE MEMBER: Thank you. It's a sort of general question. I have been wondering what took it one year to be released. If you can specify the reasons, what is the biggest concern or what is the biggest issue? And what is the biggest change between one year - between last year and this year. Thank you.

ROOD: My experience in the U.S. government is that there are - there are many different - and I've worked at different agencies - the Defense Department, where I am now, the State Department, the National Security Council, intelligence agencies, the Congress. We have a large, complex government. (Laughter) And working together as a large team to produce very detailed studies to have competing views aired, to look at alternatives and have a debate about those takes some time in our system. And my view, as the person kind of shepherding this missile defense review through that process, was there was always time to get it right. And if it took a little longer to do that, we were going to take that time in order to get to the right destination. And so it's really nothing more than allowing time for those various discussions, approvals, activities to take place that required some additional time.

HEINRICHS: One last one - going to be really super quick.

AUDIENCE MEMBER: Hi. I was one of the system engineers on the SDIO architecture starting - starting in 1985. And I'm glad that the report referenced the fact that you're going to leverage the prior R&D work because that prior R&D work really laid out a detailed scientific approach to dealing with all these problems. But we had an advantage at that time in that the leadership gave us two things that made it possible to reach a conclusion. One was clear metrics on how you measure success. And the other were unconstrained war games so that we could always look well into the future. And in both cases, we could work our way back to what the solution was. And that turned out to be important because when we started testing, the critics always said every test was not realistic. OK. And I can tell you now, having spent 20 years on the congressional staff, every test you're planning to do - we are planning to do - will be labeled unrealistic. And the only counter to that is to say, wait a minute. Here's how we're going to get to the end game. And here's how we measure the end game. So my only concerned about the excellent work that you've done is there's no metric in there, the kind of metric that President Reagan and Paul Nitze and all the people when we started SDIO laid out so we could say, here's what happens at the end. Here's how we're going to get here. Here's what they're going to do. Here's how we're going to anticipate that. Give a plan, eventually, to lay out how we're going to measure. And then, using realistic simulation, show the critics that every test is not unrealistic. Thank you.

ROOD: Well, I share your frustration at times about the some of the press commentary or, frankly, commentary from some others about testing and realism. I keep thinking - I'm not sure how many dozens of intercepts of real targets, including in combat, it will take to kind of finally put to bed some of those - those - that criticism that the testing was somehow unrealistic. But it's producing systems that are being fielded and used in combat situations which are successfully intercepting missiles and saving lives. And some of the test scenarios, I'm very impressed with the complexity and the realism of them. So I share your concern about that. In terms of progression forward, the main thing that we put forward as a metric in the missile defense review was the sizing construct of saying - because it'll have to be dynamic. And I think in some ways, it's harder to do that force-on-force planning than during the Soviet period in the sense that while they were always improving and increasing, we had a more I guess predictable understanding of the year-on-year force improvements and the force and counter-force requirements we had. But we put forward this
sizing metric to stay ahead of the threat from North Korea and Iran and their missile programs. So as those grow, as they mature, as new technologies are incorporated, that we will have, therefore, the requirement and the guidance to the Defense Department organs to be able to address that response. As we go further forward, I think you've - you've given us something to work with here - is can we further define in metrics some of the improvement on things like hypersonic capabilities? So I take your point.

HEINRICHS: Thank you so much. Please join me in thanking Undersecretary Rood.

(APPLAUSE)

ROOD: All right. Thanks.