

061815 Air Force Association, Reserve Officers Association and National Defense Industrial Association Capitol Hill Forum with Brigadier General Kenneth Todorov, Deputy Director of the Missile Defense Agency, on “Consolidating Our Gains, Looking to the Future.” (For additional information on NDIA/AFA/ROA seminars contact Peter Huessy at [phuessy@afa.org](mailto:phuessy@afa.org)).

[Note: This is an official, edited transcript provided by National Security Reports]

GEN. KENNETH TODOROV: Peter, thank you very much. Good morning, everybody. It's truly very good to be here. I see so many familiar faces. I've been obviously doing this kind of thing for way too long. It's probably almost time to retire, so I'm going to have to consider that in the near future.

I've got to call out my buddy Sledge, back there. He's a fellow airman and class mate of mine from the Air War College. Weren't we there together, Sledge? It seems like so long ago. It's great to see you. You've had a fine career in your own right and it's great to see you back here. Thanks for showing up to heckle me, I'm sure, knowing you, fighter pilot extraordinaire.

A lot of other really close friends in the audience, and it's good to be here. I really want to give you just kind of a one over the world update on what's going on at the Missile Defense Agency and maybe hopefully update you on a few things, and then take some questions at the end.

Regardless of what role you play in this, I also -- I often do this, if you've heard me talk hopefully you'll indulge me and allow me to give you some credit. I don't think you get enough of it, the collective you. You're all part of the process. I still go to Home Depot and with my ID card I get 10 percent off. People thank me for my service everywhere I go, and it's great. It's humbling.

But I don't think we give enough credit to our industry folks, to our folks in the press, to our folks in academia and think tank world, and it's really all part of a collective process. So thanks for what you do, regardless of what you do, even if you don't necessarily agree with our policies and the things that we're doing at MDA. You play an important role and we appreciate you, we really do.

Speaking of the people, I wanted to -- you know, a lot of times we just get so focused on the things that we do and the stuff that we're procuring and developing and the programs that we have and the policies, we forget about the people behind the scenes. I'll tell you, I'm really privileged to work with thousands of really great Americans that have their heart in the right place. They're dedicated to this mission. They come to work every day with an enthusiasm and a passion for this mission.

It's a real privilege and honor to work with them. So I ask you to just remember it's not just the stuff we read in the press, it's not just the big ticket item, it's not just

missile defense policy, it's a lot of great people behind the scenes that make it happen. We're grateful to them at the Missile Defense Agency.

I'm also privileged to work for a great boss. A lot of you know him and have heard him speak. He is an amazing intellectual guy, Vice Admiral Jim Syring. I really have enjoyed my time working for him. He's got the ability to get really deep into the technical aspects of our business, which I don't, frankly. I'm a kind of big picture guy and an operator guy. He can dive deep into the technical, but he also is a brilliant strategist. And I think all of us benefit from his sort of strategic vision and what the plan he is laying out for missile defense, at least for the Missile Defense Agency. It's a real privilege to work for him.

So I sort of come in at the middle layer of all that, so technical tactics, and he's the strategy guy. I help him a lot with the operational piece. I come at it from an operational perspective, having an operational background. I'm not an engineer. I'm not an acquisition officer. So I try to look at the work we do from the war fighter perspective.

Peter mentioned I spent some time at United States Northern Command where I served three four-star general officers, also the commander of NORAD. He's dual-hatted. And that officer is in charge, really, for the homeland of, metaphorically, finger on the trigger of the ground-based interceptor to make sure that if the nation is under attack from a rogue nation that we've got the ability to do something about it. So it was a privilege to work for those generals -- one admiral and two generals -- and to help them think through this mission and achieve it from the operational lens.

So what I want to do today is just kind of give you the one over the world of what we've been doing, what we're thinking about, try to update you on a couple of things and hopefully be instructive for you. I know this will shock you. I'm a military guy and I'm not going to use any PowerPoint slides. I know that's unheard of for a military guy, but I personally am trying to abolish PowerPoint wherever I go.

Hopefully you won't be disappointed. I see some claps in the audience. Thank you, Rebecca, for that.

Keeping us up at night -- alright, that's a question that we always ask sort of at the end of the show. What's keeping you up at night? So I thought I'd kind of tackle it up front.

Every day at 6:30 a.m., 7 o'clock, I start my day on my SIPRNET or on my JWICS and I look at my intelligence. We've got great folks out there compiling this stuff overnight. Stuff happens and the intelligence analysts are looking at it and watch the threat every day. All of us do. Admiral Syring does the same thing. It really informs the work we do.

And I can tell you, that keeps me up at night. I can tell you that we're seeing

advances in technologies from folks all over the world that are getting better at trying to harm us. And so it kind of energizes me each and every morning to come to work ready to roll up my sleeves and do the work that we do because the threat is increasing, both in quantity and quality, and it certainly drives the work we do.

Keeping me up at night is going to make the system better. There has been a lot written in the press recently about Ground Based Midcourse Defense, particularly. And I can tell you, again putting my warfighter hat on from my days at NORTHCOM, the war fighter in that seat at the NORAD-NORTHCOM command center, the National Military Command Center, we have full confidence particularly in the system -- in all the systems -- but particularly in GMD to do its job.

So I see things in the press and things called out. I certainly don't discount those things and we take them to heart and we consider them. But I will tell you that we do, as a war fighter, have confidence in the system.

And we have a shot doctrine, I can't get into it obviously, that takes into account some of the issues that we've had with the system over the years. So if the system was perfect, we would shoot one interceptor at one threat, but we don't do that. We shoot something larger than that for a good reason. But I think it takes into account some of those vagaries, some of the things that the system that does need to be improved on.

But it's a good system, make no mistake, and the war fighter does have confidence in it. I can tell you from experience, the war fighter does have confidence in the system. But we're trying to make the system better and we need to make the system better based on the first thing that I started with, which is the threat continues to evolve in complexity and quantity and quality.

The other thing I'm worried about is sequestration. All of you in this room have your own stories, your own thoughts, on what that might do to missile defense and a lot of other things in our nation. Clearly my boss has said in testimony that if sequestration gets to the full level, our system will be overmatched by 2020. That's his words. He said that before multiple hearings this testimony season.

I agree with him wholeheartedly. We're very concerned about what that might do. We've got a good plan, a good strategy right now, we think to outpace the threats. But with full sequester, we're worried that may not come to fruition and we will take cuts in key areas that will be damaging to be sure.

I worry about the pace of our advanced technological efforts. It's an area that we need to pay more attention to. We need to think about, you know, not right here in front of our face. And we've been thinking about that for a while because we've had to, where we're making progress in the here and now.

We need to think a lot further out, frankly. And so we're thinking a lot more at MDA about our advanced technology efforts. It's an easy area, frankly, to be cut, too.

A lot of times people will say, it's down the road, we can take money from that pot, if you will. That's our seed corn. We have to have the fortitude to stay with those programs that will lead to a lot of great things in the future, but we've got to stick with it.

I'm also worried about our path to space. I'm a firm believer that missile defense -- and I'm not talking interceptors in space, let me be clear -- I'm talking tracking, I'm talking discrimination from space-based sensors. We've got to find a way to do that.

I'm a firm believer in that. We've got to find a way. And it's expensive stuff, as you all know. So how do we leverage our industry partners, how do we leverage other systems to get to space with a robust enough system to track and discriminate from that space?

And I'm worried about the participation of our allies and friends around the world. We've got some in the room today. Thank you for your contributions to this mission. I'll talk more about that in a little bit.

But I'm worried that we're not doing enough to take our friends and allies and partners around the world and bring them in under the tent, if you will, and have them participate in this mission. We cannot continue to do this mission alone, because as a nation we simply can't afford it. We need to continue to build those ties around the world.

So that's what we kind of worry about. And from that spins imperatives. So because of all that, as I said, what are we doing about it?

Well, we're improving reliability of GMD because that threat continues to evolve. If you look at our budget this year, there's several programs I'll talk about in a moment, that really speak to that. We can't just talk about GM by the way, there's a lot of other things going on in missile defense: Aegis BMD, THAAD, C2BMC, sensors. It's not just about GM.

We've got to continue to procure interceptors to keep our commitments to the services. The COCOMS, combatant commanders, continue to ask for this stuff. They continue to see the goodness and the value of it, and so we continue our commitments to them to procure interceptors. I'll say more about procurement also in a moment.

We've got to continue to press for allied contributions, accelerate and streamline our advanced technology efforts, develop that path to space for tracking and discrimination, continue our regular, robust battle rhythm on testing. We've got a huge year in testing coming up at the Missile Defense Agency. It's already underway. We've had some recent successes. We've got to continue that. Testing has to be at the forefront of what we do.

We need to drive cost down to the extent we can. I know this business will never

be cheap, but we have to know where every single dollar is going. And my boss, I don't know how many times every week I hear him say that to our team, we've got to know where every single dollar goes.

It's that vital. It's that precious. We can't waste resources.

We've got to make good choices and good investments. That's at the forefront of Admiral Syring's mind and all of us at MDA. And we've got to deliver on our commitments, not only to our friends and partners around the world, but also to the nation.

So from those imperatives, we come to our priorities. In PB '16, they're simple. The administration has told us -- and we're maintaining -- our steadfast commitment to 44 GBIs by end of calendar year 2017. We've got a plan to do that. We've got a plan to deliver on our promise to deliver capability to the European Phased Adaptive Approach, both Phase II and Phase III, respectively.

But there's a lot of other things going on. Let me just kind of click through some of our priorities in our budget. Sustain deployment of the systems. I mentioned THAAD, TPY-2, C2BMC and Aegis, ground-based interceptor reliability improvements, the RKV, the Redesigned Kill Vehicle, the SM-3 IB, the 2A radar spares and THAAD missiles. The Long Range Discriminating Radar, near- and mid-term discrimination efforts, THAAD engage on remote capability, C2BMC spiral development, increased advanced technological efforts, and the SBX. Yes, the SBX.

In the spring, there was another article you read in the press kind of questioning the SBX. I can tell you -- those of you who I saw at CSIS, I said this. I sat in the command center and any time there was a North Korean balloon going up, we had pretty good intel going on.

The first question out of the war fighter's mouth -- the four-star's mouth -- was, where is the SBX? When can we get her underway? How soon can we get out here? It was the first question, every time, because he knew the capability that that radar provided.

And it's not only in operations, it has participated in numerous tests. It participates -- we help the Air Force track their ICBM glory trips, as we call them, as they test their ICBM equipment and inventory. It's an amazing asset and we're big fans of it, frankly, at the Missile Defense Agency. Because the war fighter is a big fan of it, we'll continue our commitment to it.

So that's a lot to do, right? I just clicked off a whole bunch of stuff. It's really a big challenge and it consumes us every day in the work we do, and it's an honor to do it.

But if you think about our budget writ large, if you think from 2007 to where we are today, if I were to show you a chart of that I'd be a stair-step down, right? That's no

surprise. The whole department has gone under that kind of stair-step and we're not thinking that we should be different from that. We've got our share of it.

But the interesting thing about our budget is that if you were to subdivide each of those years into what we do in RDT&E, which in my mind is our bread and butter, our seed corn, and what we do for procurement; the procurement number continues to get larger and larger within each of those years, and the RDT&E number kind of suffers a little bit for that. So there's an opportunity cost to continue to procure interceptors, weapons systems for the war fighter that are very highly sought out. But there is a cost.

So I think we've got to be mindful of that and somehow we've got to get away from more and more procurement and we've got to get back to more and more RDT&E, our "raison d'être" if you will, the work that we should be doing, thinking about the BMD after next. I just kind of throw that out there as a point for your consideration. I'm happy to talk more about that in the Q&A.

We've received widespread support from the Hill for our mission. Frankly, I think that's a credit. I've got to give my boss credit for that, the department credit for that. The Hill understands our mission. They support us, on both sides of the aisle largely, and we're very, very fortunate to have those relationships that we do and we're thankful for that as well.

So let me dive into some of the specifics and some of those programs I talked about when I talked about our priorities. Ground Based Midcourse Defense, the program manager there is a guy by the name of Scott Vickers, retired Army infantry guy, he's kind of gruff. He's a perfect program manager for me. He's an SES.

He's doing great work down in Huntsville. He kind of orchestrates what I call this very intricate ballet with interceptors right now. We've got to keep enough interceptors in the ground to satisfy the requirement for the war fighter. I'm talking about GM, of course. But we've also got to replace, put new CIIs in the ground.

We've got to modify the CIIs that are already out there, upgrading them with some of the things we've discovered in the last couple of years. And we've also got to repair and get ready for new CE-II block 1 interceptors that will go in, all before 2017. So every day we're sort of looking at a plan of, we're going to take this interceptor out of the hole, put the upgraded one in there, keeping the quantity sort of at a static level for the war fighter.

It's a very intricate dance, if you will. They're doing a great job managing that program in GM, and I give Scott Vickers a lot of credit for that. I want to shout him out.

But it's not about -- you know, a lot of times the interceptor, the EKV, the RKV, gets all the airtime in the press. Think about the ground systems. Think about the connectivity, the fiber, the silos, the buildings, the infrastructure that goes to kind of house these things. Think about the environments they're in, and think about the fact that

we haven't necessarily been paying enough attention to that over the last couple of years.

We've changed that, particularly in '16. We've got money set aside to do that, to upgrade those systems to make sure that they're robust and reliable for years to come. The ground system doesn't get enough sort of airtime, if you will, and I wanted to make sure you heard about it.

The other thing we're doing with GM is -- and we're very serious about it, it's in our budget and we're committed to it -- is the RKV, the Redesigned Kill Vehicle. It's all about four things: reliability, affordability, produce-ability and performance. So the kill vehicle, I think, will be a step, sort of the next generation of EKV will be the RKV. We're committed to it, again. Industry is helping with us and we'll see more on that in the near future.

We are concerned, I'll be candid with you. We've seen the marks from some of the committees on the Hill on RKV specifically. We're watching them carefully. Some of them concern us and we sure hope that we get some of this stuff worked out in conference because the RKV is really at the forefront of the future of GM, in our mind, and we need to get that settled and get our plan underway.

Let me talk a little bit about THAAD. It's a phenomenal system. I wish you could all -- virtually take you out to Guam right now and meet and talk to the soldiers that are on Guam 24/7 manning the system that is defending our territory there. It's 11 for 11 in flight tests. The Army loves it.

We're delivering seven. We've got seven THAAD batteries programmed for them. They want more. We're looking for ways to do that. It's a great system.

It's very viable for the FMS world. A lot of nations, particularly in the Middle East, are looking at it, other nations as well. And so THAAD is definitely not to be lost in our cross check

We're thinking about it. We're working at it. We're exploring the possibilities of an advanced THAAD capability.

Aegis Ashore and EPAA, we're very, very proud and on track to deliver EPAA Phase II capability in Romania this calendar year. It is something that my boss looks at every day. Every Friday he has a conference call with the Corps of Engineers and with our folks in Romania, and he travels there extensively, feet on the ground, to make sure that stays on track.

It will be on track. We will deliver that capability in this fiscal year. We're excited about it and we think it delivers a great capability to our friends and partners in Europe against a Southwest Asia threat which is, again, increasing in quantity and quality as well.

And right behind it is Redzikowo, Poland. We'll put a shovel in the ground in April of 2016 and start our work there. We learned a lot about construction of Aegis Ashore in the Romanian case, a lot of great lessons learned.

We're going to apply those to Poland and that will stay on track. We'll deliver that capability in 2018. So they remain on track and remain a promise that we're going to deliver to our nation and to our friends around the world.

The unsung hero of the BMDS is the C2BMC. You probably have heard of it, the command, control, battle management and communications systems. Again, it's one of those things that doesn't get enough credit, doesn't get enough airtime. A lot of time in our budgets people look and say, do you really need to spend all that money on that? Yes, we absolutely do.

It is the sort of interconnectivity, it's the web, it's what holds everything together in the BMDS. It's a remarkable system that we continue to spiral develop and improve and make better and integrate sensors and the shooters, and also a picture for the war fighters so that they know what's going on in their battle space. C2BMC is vitally important. It's part of the global integration of the BMDS.

The Long Range Discriminating Radar is very much in the forefront of our cross check. We're excited about it. The war fighter is excited about this. They have chosen, they have down-selected a location, pending our environmental work. But Clear, Alaska is where we think that the LRDR will go. That's what the war fighter has told us.

We are on track to award that contract this year. The bids are in, as you say, and we're going through them. I'm not part of that selection process, but I know that our team is looking very, very closely at LRDR, some great proposals from industry. We're going through those right now with an intent to award this thing this year and turn the lights on, if you will, at least start the operational testing of it, in the year 2020. It's very much a big cog in the BMDS of the future, in our minds. It's going to be a great sensor.

Let me say a little bit about technology. I'm not going to get into specifics about what we're thinking and what we're doing. I can't in this forum. But rest assured that technology -- in the '16 budget Admiral Syring has said that in this budget technology has sort of risen to the forefront where it never was before.

I can tell you that we're doing the work right now for POM '17, for PB '17. We're thinking about how we're going to spend those precious dollars, and technology is even more at the forefront of what we're doing. So again, increasingly we're thinking more about technological efforts.

What is the seed corn of the future? Again, an easy place to cut sometimes, we can't afford to do that. There are a lot of great ideas we're sharing with industry, also with the labs, the nation's treasures really, to figure out what are the technological efforts that we're going to undertake in the out-years to continue to defend our nation and our

interests around the world? Technology will continue to be an increasing part of MDA's program going forward.

I mentioned testing. I've gone back and looked back at sort of the history of what we've done. This calendar year is the most challenging, busy test year we've ever had. I think 13, maybe more, individual tests in all the different realms: Aegis Ashore test coming up, short-range operational tests for the war fighter; a THAAD engagement, an IRBM test.

And, of course, at the end of the calendar year, something we're calling CTV0-2+, our GM test for this year. And by the way, we've told the war-fighter -- the war fighter had asked us -- for one test in GM every year and we've got a plan to do that. So this year's test, I've got to tell you, is not going to be an intercept test. The primary objective is not going to be an intercept.

But we're going to wring out some advanced discrimination algorithms. We're going to wring out the alternate divert thrusters, part of the new upgrades to the CE-IIs. CTV0-2+ later this year is going to be a very challenging test, more-so than we've ever done before.

But you need to know an intercept is not really an objective of the test. We've got enough other work to do that we think this test is going to be very, very fruitful for the future. So a busy year in flight tests, to be sure.

On flight tests, talk about the unsung heroes, we do a lot of work on the ground test regime. We're doing that better and better all the time, figuring out ways to test this thing in a control environment. It doesn't take the place of a flight test, to be sure, but again we're looking to reduce the monies we spend on tests every year. One of the ways we're looking to do that is to do some of our tests via ground test, and it's going very well.

Let me talk a little bit about international. We've got some partners in the room. I thank you for your efforts and your interest in partnering with us on this. It has been a really good year. It's a really good time for international efforts.

As you know, we've got FMS cases in the Middle East with UAE. The Kingdom of Saudi Arabia is interested. And by the way, you all know what happened only a couple of weeks ago in Saudi Arabia. That speaks to, I think -- we've been cooperating with the Saudis for a long time on missile defense and certainly congratulate them for that shoot-down. I think it also -- I think it sparked even more interest in the region about the capabilities that missile defense brings. So in some sense, we think that's a good news story. Qatar has expressed interest as well.

I've got to talk about our friends in Japan. We just two weeks ago or so, a little less than that, completed the first ever controlled flight test vehicle, the SM-3 Block 2A, which we have co-developed with our partners in Japan, a huge accomplishment.

There's more to come this year for the SM-3 2A.

I was in our headquarters that evening. I think it was a Saturday evening. It's a great place to spend a Saturday night. The Belmont Stakes were on and we were watching that. We then went in and watched the flight test with our partners from the Japanese Ministry of Defense. I'll tell you, there was a lot of pride in that room, both on our side and our partner's side, for the success of that very successful flight test. More to follow.

Also, speaking of Japan, the KCS radar, the Kyogamisaki radar, TPY-2 radar, the lights are on there. We've already fed that feed into the Pacific Command AOC. As well, NORTHCOM is about ready to take on those feeds. So again, a huge victory, if you will, for cooperation with our partners in the East.

And I'd be remiss if I didn't congratulate our friends in Israel. They are building and developing an amazing integrated air and missile defense, ballistic missile defense, capability. We're helping them with that. They're helping us. We continue to get ideas from them and vice versa.

It's a very, very important part of our portfolio. In our budget going forward, clearly the Israeli portfolio is front and center. We're working hand-in-hand with them, by the way, each and every year, and 12 month out of the year, on our budget and their request. We see it as a very, very important part of what we do and we congratulate them for the successes. They'll continue to be partners with us for the long-term, obviously.

So that's kind of one over the world, right, a lot on our plate. And I know I went through that really fast. You can ask me some specific questions about it if you'd like.

I often step back from the day-to-day and kind of ask myself, what is it that we're trying to do writ large? It's still about the war fighter. If you go around the Missile Defense Agency, there are posters on the wall that outline our goals. The number one goal, year after year, is we provide support to the war fighter. We can't lose sight of that. That's who it's really about, and the war fighter provides support to the nation, obviously. That's ultimately who it's about.

But increasing our confidence and our reliability and keeping our promises to the war-fighter is 1(a) to that 1. So we've got to continue to prove to the war fighter that our capabilities are sound, they can count on them, war winning capabilities. So we're trying to do that, increase war-fighter confidence. But at the same time, we're trying to decrease the number of these very expensive assets that we hope, heaven forbid, we don't have to use but are part of our nation's arsenal, part of the continuum of war-fighter capabilities to defend our interests and assets and our nation.

Trying to decrease the salvo numbers across the board is what we have to do because it's expensive stuff. So if we can -- hypothetically, if we have to shoot X, if we could have X minus something, some number based on confidence, based on reliability,

based on performance, that I think is the ultimate goal. So trying to increase war fighter confidence and at the same time drive down the number of shots we have to take per threat, I think is the ultimate sort of gold star in the future, if you will, of what we're working for. And I think everything that we do does work toward that end and that goal. It's a complex world, a complex problem. It gets tougher every time, so it's challenging. But that's really what we're all about at MDA.

So I'll kind of sum and then I'll take some questions. The priorities going forward: 44 by '17, on track to do that. Delivering EPAA capability both in Romania and Poland, we're on track to do that. All those other things that I talked about, making the BMDS better, working with our friends, partners and allies around the world to make sure that they have the systems they need to defend and defend our interests. And as well, taking care of the great people. I come back to them every time because it's really about our great people, not only at MDA but in this nation and our friends and allies around the world, taking care of all of us to make sure that we're safe from these threats.

So that's the work we do. That's a little bit of an update for you. I'm happy to take whatever questions you may have at this time.

Thanks.

(Applause).

MR. : (Off mic) -- in Saudi Arabia. (Off mic) -- coming from Iran. So my question is, can (that work ?) for India.

GEN. TODOROV: We're the material developers at MDA and I'm going to defer that question to policy experts in sort of the larger department. I will tell you that shoot down -- and I'm sure you know the details as well as I do -- the Saudi Arabians were very effective in that shoot down. The systems that they have worked very, very well. Whether or not you want to characterize it some other way, I'm going to leave that to the larger policy folks. Keep in mind that we develop the systems and help field them for the war fighter, but that's a larger question.

MR. SYDNEY FREEDBERG: Sydney Freedberg with BreakingDefense.

GEN. TODOROV: Hi, Sydney, how are you?

MR. FREEDBERG: Very well, sir. Aegis Ashore for Romania and Poland, is there any conceptual work even on additional sites, not just in Europe but perhaps in other theaters? Certainly the Navy Aegis BMD ships are in very high demand and they'd love to have more ashore sites taking the pressure off the fleet.

GEN. TODOROV: That's a great question. If the CNO were here I bet he'd give you a lot better answer than I could. Clearly how you outline it perhaps has some merit. We're working with the Navy on future capabilities both ashore and at sea. Again, I

bridge back to really being the material developer here making sure that as we field Aegis Ashore that's in our budget right now, we do that on time and deliver that capability. So really probably a better question for the Navy, but I think your question has merit.

MR. : You said threats keep you awake at night. Obviously evolving quickly is the Chinese testing another hypersonic vehicle and other advanced stuff. Would you say we are pacing the threat, we are falling behind the threat at this point, or are we staying ahead of the threat? How would you characterize that?

GEN. TODOROV: That threat you mentioned is concerning, I think, to all of us. Given the sort of -- I probably will defer that question just based on the classification, some of those difficulties here. But here's what I can tell you. We take it very seriously. We're watching it very closely. It's on the list of things keeping us up at night to be sure.

MS. AMY BUTLER: Amy Butler with Aviation Space Week and Space Technology.

GEN. TODOROV: Hi, Amy.

MS. BUTLER: Could you talk a little bit about the results of the 2A test now that you've had a chance to go through it?

GEN. TODOROV: What we learned is that it performed exactly how we anticipated. We haven't been through all the data yet. Clearly the quick look indicates it was a complete success, flawless really. We'll continue to go through that data and look at it. The admiral hasn't received his final report, but I know everyone is very excited about the preliminary results from it.

From all accounts, it has been a great test. There's more to follow this year. I'll let him talk about specifics and the way forward on the next test with the 2A, but we do have more planned for this calendar year.

MS. BUTLER: More (flight tests )?

GEN. TODOROV: Correct.

MR. HUESSY: I have a number of questions. First, there are those who say that you don't have to have Phase III of EPAA if the Iranians don't have nuclear warheads to put on their missiles. That's number one.

The second one is, people say we should not deploy THAAD in Korea because it will, quote-unquote, "interfere" with China's deterrent. Could you address, to the extent that you can, each of those issues?

GEN. TODOROV: On the first one, to us at MDA, I don't think it matters. We're charged with delivering that capability. That's our guidance and we're people of

the military so we're saluting smartly on that one.

I will say that in Iran they've got, in the region, the highest number of short- and medium-range ballistic missiles in that region. We think, regardless of what happens, what may develop with anything that you sort of indicated, those threats aren't going away. And so we think Phase III is still appropriate.

With regard to your second question, I know that's an area of -- again, a war fighter question. I know it's being studied. Secretary Carter has made some comments on his recent visit, and I guess I would refer you back to those for the department's position.

We continue to work with the Army to deliver the THAAD that they've asked for. And as I mentioned, it's a very, very good system. We're pleased with its progress and we're looking at advanced THAAD capabilities for wherever they might be deployed in theater. But I would defer the specific deployment locations to PACOM or USFK or the department more largely.

MR. : A lot of the discussion, your comments, focus on (the certainty of the threat ?). Can you be sort of more (precise ?) about Scuds coming out or that kind of thing? Who knows what the North Koreans will sell (to anybody with the money ?). The Russians have talked about doing things in Europe. We talk about doing things (in their sphere of interest ?). So if a president -- (off mic) -- we've got the double, we've got the triple, we've got -- (off mic) -- from your vantage point looking at MDA but also the industrial base -- (off mic) -- deployment, the integration, all that kind of stuff?

GEN. TODOROV: I'll take your question another way. If you were telling me I had one more dollar to spend in my budget, what would I spend it on, and how quickly could I deliver capability?

MR. : That's actually the better question. (Off mic) -- not only your organizational capabilities but also the industrial capabilities, to double it, two years to five years, or would it be something where it's sort of like we're maxed out now and -- (off mic).

GEN. TODOROV: The industrial capability is not a question for me, probably. Here's what I would say. We would look at a plan to deliver more capabilities sooner. But the cautionary tale in all of that is that part of the -- I'm not going to deny that there have been some performance issues with GM. I think it's because of how we built it, so rapidly, so quickly. We didn't have the time to do the rigorous engineering kind of analysis and we were tasked to build that system quickly.

Good people doing good work fielded a capable system. We've got to make it better. So my only caution would be, we don't want to speed to doubling down on our efforts without sort of doing the rigorous work that we would think necessary to do that.

Could we increase capacity to produce and deliver -- I think there's more room there. We'd have to work with our industry, to be sure. I mentioned the people at MDA and the people in the department and the people in this nation. Frankly, given a challenge, a task and a call to arms, if you will, I think the nation would find a way, and we'd be part of that.

Tom?

MR. : I wanted to ask -- you talked about the -- (off mic) -- among the services. But then you spent a good bit of time talking about the relative proportion between RDT&E and procurement. (Off mic) -- so long as -- (off mic) -- eating your seed corn, as you said, how can that be sustainable? How can -- (off mic) -- be sustainable when the demand from the combatant commanders keeps going up, but the budget for MDA just goes down?

GEN. TODOROV: It's a great question and we really spend a lot of time talking about it, really outside of MDA too, within the department, not that I have any inside baseball knowledge of it. But you're familiar with the so-called Eight Star memo to the service chiefs -- Army and Navy -- sent to the secretary months ago saying that basically it acknowledged the cocoms want more and more and more. We, the services, try to provide -- are having a hard time doing that and we don't see a growth curve that's sustainable, as you say.

So we need to get at this problem a different way. And so it ties back into, I think, the importance of the RDT&E because the different way is probably some different ways of thinking about the problem. You had Admiral Winnefeld a couple of weeks ago at CSIS, and I know he spoke about this.

A lot is said about the wrong side of the cost curve. A lot is said about left of launch and the non-kinetic means to get at that. So if we don't start thinking about the technological piece to get at those other means, we can't continue to buy these interceptors in the quantities we're buying them.

That's not to say that we need to reduce quantities. In the near-term we've got to continue to produce quantities of interceptors, and then we've got to sustain those interceptors for years to come. But we've also got to double down on that technological piece because of the things you're saying, because it's not sustainable, because we've got to find different ways to get at the problem. And that's what that technology piece is really all about.

So there's a lot of efforts in directed energy. We've done some of that in the past, but we're really thinking about it in a different way. I think if you come back in a year there will be somebody else speaking from MDA, as the deputy, but you will start, in the next couple of years -- the conversation is going to shift from what it has been for the last couple of years to new ideas, new technologies and how to get at this problem in a different way.

So you hit, I think, the nail on the head with yes, you're right, it's not sustainable the way we're doing it today. How do we think about it differently? And it goes back to my point about seed corn. We've got to have the fortitude and the courage to explore those possibilities because we can't continue to do it the way we've been doing it. It was a great question, Tom, thank you.

MR. : (Off mic) -- General, could I ask you to talk a little bit more about where the agency's (directed energy program is headed )?)

GEN. TODOROV: There is a strategy. I can't get too far out in front of my boss, because he hasn't been out in public talking about it yet, and he asked that I not do that. But know that, as I mentioned, '16 is even more on technology, '17 is even going to be more so. That's front and center in the work that we're thinking about and doing.

Again, I can't get into specifics how we're doing it, for a number of reasons. But there's a big call for that, I think not only within the department and MDA but outside as well. It's challenging work, to be sure. The technology is there.

I think scalability, as you from Bechtel probably know, is the real challenge. How do we get it to a scale and get it to a platform that might be effective? That's the work that's going to go on for the next 10 years probably, five to 10, before we get capabilities out there.

MR. : (Off mic) -- non-kinetic, does that include for MDA's R&D portfolio electronic cyber warfare? Is that also discussed in this context of left of launch? I know you can't (give out secrets ?), but are you working in those areas and are you working towards (that capacity )?)

GEN. TODOROV: Nothing is off the table in those other regimes that you mentioned. There's an effort going on -- a larger effort -- within the department to kind of coordinate, because it's not just MDA work. So I would say there's a larger coordinated effort that's being led at the deputy secretary level that's looking at all that and that's very much a part of that effort. We're part of it, if you will. So I don't -- I mean, the point I wanted to make is yes, it's happening within MDA but it's also happening in a larger context, if that makes sense.

MR. HUESSY: I'd like to follow up. You mentioned the mark. Could you tell us, if you can, to what extent the mark ups have given you some problems, or you would like to see conference work things out?

GEN. TODOROV: I think at the front and center of that is the RKV mark that we saw. I know that we're having dialogues with friends on the Hill and trying to give some sort of counter argument or rebuttal to some of the marks. That one, particularly, is the one that I hope that in conference we can get sort of resolved because the RKV is so much a part of our strategy.

It's sort of a near-term strategy, near- to mid-term, going forward and we think it's time to take the kill vehicle to sort of the next level. Things that we're doing like the LRDR that we're committed to -- I mean, the discrimination power there is sort of going to outmatch the current EKV. So if we don't sort of take the kill vehicle to the next level, the investment we're making in sort of other areas isn't sort of maximized. Does that make sense?

So there's some -- I hate to use the synergy buzz word bingo word -- but there is some synergy in our thought process with not just the stand alone sensors, but how it works with sort of the next generation of things. So it's part of a larger -- and C2BMC folds in there as well, and that's why cuts to it are critical. Without the infrastructure to knit it all together and give the war fighter sort of a clear picture, he's sort of got to make investments in it all to maximize its capability. So that one in particular, Peter, is the one that I would call out.

Amy?

MS. AMY BUTLER: On RKV, is there a change in strategy? Are you basically arguing we need it all, or is there some sort of half-way mark that you guys could make some progress, be successful, but maybe not need the full present budget?

GEN. TODOROV: I guess I would defer that to Admiral Syring. He's really the acquisition strategist in chief. I will tell you, Amy, that we have very good cooperation from industry. And I think he has talked to you about the way that we're trying to do RKV, which is maybe a little different.

Industry has come forth in recognizing the need to do it and recognizing the need to work together to do it. And so as we sort of move toward awarding RKV, I think there are a number of different sort of proposals on the table and hopefully we can maximize it.

MR. PAT HOST: Pat Host from Defense Daily. What exactly is the -- (off mic)?

GEN. TODOROV: Well, the problem was we took a mark on the budget. Emily, do we want to --

MS. : \$60 million in one of the committees to RKV.

GEN. TODOROV: I wanted to defer to my expert on the number.

MR. HUESSY: General, thank you so much.

GEN. TODOROV: Okay, thank you, everybody.

(Applause).

MR. HUESSY: For those of you with the press who would like to meet with the General, we're going to just put you folks over here in the corner. He'll be here for five to seven minutes and take some questions from you. Again, General, thank you and MDA. Rick, thank you for your help on this. We look forward to having you come back next year as well. Thank you.