

Defending the U.S. Homeland from Alaska

Mr. Riki Ellison:

Good morning, ladies and gentlemen from a nice wintery Fall here in Alexandria, Virginia. I'm Riki Ellison. I'm the Founder/CEO of the Missile Defense Advocacy Alliance. It was created in 2002. We came in, in alignment with our country's move to defend all 50 states from ballistic missiles.

Today we're going to have our 12th congressional virtual round table this year on defending the United States homeland from Alaska. Alaska has been at the core of our national security for the US homeland all the way back in 1957, when we put forth the first ever DEW line sensor chaining. We put the first Nike Hercules in play to defend this country from a major threat. Here, that has been dismantled as that war, the Cold War, was complete. Now we have moved into a situation where our homeland defense on ballistic missiles was driven by North Korea, and driven by a couple big movements in the late '90s, in '95, when President Clinton stated in an intelligence report that the threat would not be on the United States until 2010, but he omitted Alaska and Hawaii.

That drive there, from two great senators, one from Hawaii, Senator Inouye and one from Alaska, Senator Stevens, drove, along with the Missile Defense Act in 1999, drove a policy. President Clinton put that also in alliance in the first, as soon as we are technically able to have a system to defeat ballistic missiles, we can deploy it. But that drove the movement to get a full deployment decision, break out of the ABM Treaty and move forward with a first ever deployment of a ground based missile defense system operational in 2006. Today, we face a North Korea that, in just three months, since August, has fired a volume of 48 ballistic missiles. Each one of those ballistic missile tests are helping them on their ICBMs, on everything, on their reliability and their future capabilities to be able to strike not only regionally but strategically.

We've also seen, even today, we've seen Russia close to over 4600 ballistic, cruise, and hypersonic missiles in the Ukraine War. They've struck, today, at Kiev. We've seen the same up in Alaska in NORTHCOM, where Russian Bears continue to infringe upon our airspace on a regular basis, to do that. It's a critical mission right now at a critical time.

I've just come back, our organization was in Alaska last week, minus 10 degrees below. It was very, very harsh weather conditions. But we were very honored to honor our best missile defenders in Alaska last Saturday. There were 23 of them. This is the first time we brought together the whole group, but we didn't segregate or separate BMD guys from our air guys. We did honor the F-22s, the AWACs, we honored Cobra-Dane, we honored Clear.

We are concerned that there are good things coming for the defense of the United States homeland. We have E-7s that are being purchased that are able to do some overhead persistent cruise missile defense capabilities, sensing. We have a couple over horizon radars that are coming forward. We have a brand new interceptor called the NGI, Next Generation Interceptor. These are not coming for a couple years.

If you look back at the NGI, the NGI is supposed to go by '28, but as we've known in testing and development, testings of these kinds of complex systems take a while. We are a little naked

between now and then in terms of our current GBI inventory of 44, which is made up of three different generations, that is deteriorating. That is a question, how do we best prepare ourselves, best create more reliability, give us more capability between now and when these new systems come in, because the threat is accelerating. We're seeing that.

I do want to shout out to President Biden for that great meeting that happened yesterday. Anytime you get two leaders, the Chinese President and our President being able to discuss, it's a good thing. Hopefully, North Korea was part of that discussion. That's important to have as well.

Today, we've got a great panel that is going to give you the top, I think in the world, that can talk to the public freely. I'm really excited about that. We're going to give you perspective from our four different viewpoints, the team here.

I'd like to introduce our first speaker, Major General. Kevin Huyck, retired, "Fumez" is his code name. He was the head of operations for NORTHCOM, but I would like to always say that his 295 hours of combat and over 3000 hours in M15 and 22, so he can walk his talk. I'm very excited to hear from you. Fumez, the floor is yours.

Maj Gen (Ret) Kevin Huyck:

Hey Riki, and everyone. It's great to be here with my esteemed colleagues and talking about missile defense. It's something that I have spent three decades thinking through, executing, leading, and employing from the air.

But before I start with some open remarks, I just wanted to add my kudos and congrats to the team up in Alaska, Alaskan Missile Defender of the Year. Great to see MDAA recognizing all of those professionals. I think one of the things that you posted on there was that they're truly in the midst of air and missile defense. We'll get into some of those nuances because that is definitely not something that is easily done.

As we think about Alaska, I have family members up there, very close friends way up north. I've flown Eagle Jets on the range, invaluable training, but the environment is something that cannot be overlooked. I'll talk a little about the geography of Alaska. You mentioned some of the history there. When you think about Alaska, where it fits in homeland defense, defending North America, the US homeland and where Alaska fits when we talk about homeland defense design, some of the capabilities, systems, personnel and the different services that have a presence and posture is just significant. There needs to be some credible posture up in Alaska, and we are well on our way to having that.

But as we talk about missile defense, we need to be mindful of ballistic missiles, short range, intermediate, medium range, intercontinental, as you mentioned from North Korea, cruise missile defense, and then we can't forget the hypersonics.

In just a few minutes here, I'll quickly cover three areas and then in the Q&A, I know we can dive into them. We talk about designing our defense, our homeland defense design as point one. Number two, I'll just quickly hit on what the posture and the training emphasis that we should never lose sight of, and then finally, there's a lot of nuances when you talk about command and control and integration. Wrapping that together, I'll go into homeland defense design and really why Alaska?

When you put Alaska in context up in the northern tier, in that northwest corner, we like to say the 10:00 position, if you're looking at a clock, and why is that 10:00 so important? It's just over

50 miles from Russia. A lot of folks forget that. When you think about trajectory of ballistic missiles coming from North Korea, they fly pretty much right along the axis, the great circle right along Alaska. Fostering our ballistic missile defenses up there, fostering our air defense from a fifth generation capability or other fighters is extremely important.

Then another area we need to think through is that shorter range, based on what Russia does in the Eastern military district. If you look at Russia and our homeland defense design and then you parlay that to China and think North Korea, you get a lot of different problem sets. In a design for the defense, Alaska is that US anchor point at that 10:00 position for the homeland. When you think about Russian capabilities, and then we'll walk it out, I know you mentioned China, but if we start with Russia, the closest to North America, the closest to the United States up there in Alaska, the Kalibr cruise missile can be launched from the ground, it can be launched from the air, whether it's a Russian aircraft that are challenging the airspace or even from ships, whether that's military ships or other from there.

I really support a positive look at, we need to present a credible deterrent, which is capability that is exercised. I believe in the last one for everyone, please go back and watch Mark and Ty's discussion on deterrents and what that really means showing that credible capability.

But up in Alaska being unique, it also enables force and power projection. Alaska sits up in a strategic area in our globe because not every aircraft has enough gas to go from the continental United States over to a forward base over in the Pacific region. They stop for gas in Alaska or the tankers launch out of Alaska and do air refueling.

The trajectory, as I mentioned, for most threats coming to North America, clearly comes in and along Alaska. We spend a lot of time thinking through the ballistic threat. But from a cruise missile standpoint, aircraft also fly on gas, or ships take the shortest route or submarines. If we were to see an attack in North America, really Alaska provides a very strategic geographic context to be along that route.

From a defense design, it's nice to see the emphasis that our department has put on the Arctic and the services. Ms. Iris Ferguson is the DASD for Arctic and Global Resilience. I think that's a great step forward, but probably in the Q&A, we should highlight, it's great to have focus on Arctic and Global Resilience. It's another thing to get commitment from services and priority from the department. That's something that I think we're continuing working towards. Riki, that's why you opened up this topic of defending from the Alaskan context.

In training, you mentioned cold arctic environment, the summer's pretty great as well, but we definitely see from Ukraine, all the training and the discussions that are going on, we can't lose sight of the training, whether it's from those that train on the ground based interceptor, those that train in the fighters, or if you move a THAAD, a Patriot or other short range air defense up into Alaska.

I'm an advocate for positioning forces where they need to be and exercising them. If they can't be stationed in a location to have some type of presence to add to that credible deterrent, they need to rotate through and exercise.

Visual and shield is a great example that we see across the services, across the combatant commands, NORTHCOM with some NORAD play in INDOPACOM, and then the different services providing those forces and capabilities to defend up in Alaska.

But if you don't train and continually bring the hardware, the personnel, the support equipment into an environment like Alaska, you end up with a force that may not be as ready to exercise those defenses.

Then finally, what are we training against or what are we training for? When we talk about that Arctic environment, when we talk about Alaska, we look at long range discriminating radar, our ground based interceptor fields, clear early warning, the other early warning capabilities and posture for NORAD from the E7 that you mentioned, and the F22s on alert for NORAD, that Arctic environment also needs other service commitment to exercise with those air and ground missile defense forces to really be as credible.

I've been a big proponent for three decades of my time in the Air Force for organized training and equipped; train like you fight and fight like you train. That's an area where that integrated deterrence really needs to guide us and guide the services to provide additional focus and capability up in the Alaska region. Then finally, integration and command and control, and then I'll hand off the mic to Greg, I believe, who is next. For command and control, there's such a nuance when you look at the way our unified command plan has the lines drawn with INDOPACOM, with NORTHCOM, with forces in support of NORAD, North American Aerospace Defense to Command with Canada for the air defense of North America. Then you can't forget, just look right over to the North Pole and you see EUCOM.

Those three combatant commands with NORAD have a unique perspective on how that collaboration, coordination, and integration needs to take place. A lot don't know, the forces in Alaska are in the preponderance under INDOPACOM. You can see already with two different combat commands, a commander charged with the defense of the US Homeland General VanHerck at NORAD and NORTHCOM, and Admiral Aquilino at INDOPACOM. Clearly his staff and his team needs to be in lockstep in coordination at the most senior levels to make that as smooth as possible.

Then finally, when we talk about the services, the Air Force and the Army both have arctic strategies. When we talk about the future of a truly integrated air and missile defense, having the services, through money and commitment in personnel, in support infrastructure and then in equipment up into Alaska is an area that definitely will provide the future of defense. Everyone's tracking the advances in the threats. In order to counter all those advances and threats, whether it's North Korea, China, Russia, and that trajectory that I talked about coming in over Alaska, is really an area that we need to lean forward into. I'm a huge proponent, as I've been when I was at NORTHCOM, of having the services commit resources and personnel to at least habitually train in the environment and practice working together.

Then that enables all the combatant commands to be even more effective. We saw that in early spring with the ability to move some short range defenses up into Alaska. We just need to keep exercising there.

Let me pause, I'm sure in the Q&A, I can get into more specifics, but Riki, I'll hand the mic back to you for any immediate questions.

Mr. Riki Ellison:

Sure. Fumez, when we look at the command and control of these two separate missions, they've been separated, where NORAD has the air defense mission of North America, and NORTHCOM has the ballistic missile defense part of it. How do we merge that? Or is that unmerge-able? Are we going to continue being separate with that?

We did notice the DepSec assigned to the US Air Force, the cruise missile defense architecture to build off of that. If we go back to the '50s and the '60s, not only were the bases up there with the Nike Hercules and the sensors to defend the lower 48, but they were also there to defend the projection power forces in Alaska that goes out on the offensive for deterrence. Today we see the same thing. We got F35s and F22s and you have Eielson and J-BER that are undefended today.

This is where we have to address this, this is not over the past where we're just focused on North Korea. This is now going into a near peer adversary, whether it's China or Russia, and how best to do it in an antiquated, old Command and Control that doesn't seem to be able to fit in this type of fight. I've thrown a lot at you there.

Maj Gen (Ret) Kevin Huyck:

Yeah, Riki, there's a lot there. That's probably a whole nother webcast in itself. But let me say this, the foundation is there, so that's a really good start with two commands and a common purpose with NORAD and NORTHCOM under one commander and the command structure. That foundation is there.

You've seen a bit of a restructure within the commands as we look at bringing strategies, or as they look now, look at strategies coming together, operations coming together. But the key point that you mentioned is the command and control across the domains.

If you back up Command and Control one step slightly earlier, I haven't mentioned space command right next to NORAD and NORTHCOM. As you look at the space layer and as the commander of NORAD and NORTHCOM, General VanHerck said, his number one priority is domain awareness because if you can't see it, you really can't take any action and then you're reacting with a tennis racket over the top of the critical asset or whatever you're trying to defend, trying to whack it out of the sky.

We need to move that further and further back. I think as we see long range discriminating radar, the future of what airborne early warning and ground early warning or early warning overall for indications to set that posture within the theater starting up in Alaska, is extremely important.

But I think there's something to be looked at when you look at Alaska command and currently Lieutenant General Mahome as the commander of Alaska command, under NORTHCOM and he's also dual hatted as the commander of the Alaska NORAD region as well as 11th Air Force and INDOPACOM. I think that's an area that he would definitely require more personnel resources and maybe additional authority.

I know with the Army's focus on multi-domain and the multi-domain two-star headquarters that they continue to grow in those capabilities. We have a great opportunity with all the pieces and parts and elements that are in Alaska to continually look at what the best way to shape and restructure the Command and Control relationship to defend North America from Alaska with the clear understanding that some force also needs to be power projected forward because Homeland Defense does start forward.

I didn't give you a circular answer. I told you there's a couple of areas, Command and Control is extremely difficult. For those online that have worked in Command and Control or have a question mark, there's a lot of discussion there. It needs to be beyond just relationships of how folks get along. It needs to be codified and very clear with roles, responsibilities, and authorities for who is responsible for defending what and with what hardware that's out there.

A little longer answer than I wanted Riki, but the foundation is definitely there that the commander of NORAD and NORTHCOM is really leaning into.

Mr. Riki Ellison:

Just one more question, Fumez, our dependency on Canada to be part of the solution, which is a dependency on Canada to be part of the solution, which is in NORAD, but we don't let them be part of the solution in BMD. How do we, I mean, we've got to fix that, correct? Or we got to be able to bring both ballistic missile defense and possibly hypersonic defense and space defense in with our partnership with NORAD or do we just keep it separate and try to do this without them?

Maj Gen (Ret) Kevin Huyck:

Yeah, so I'll take the first part of the answer as clearly Canada is a sovereign nation in a partnership, very close partnership with our closest partner and ally just to the north for the air defense. I know there's a lot of discussion or there has been a lot of discussion for the ballistic missile defense, but I've always been a proponent of there's opportunities. There's opportunities for early warning, there's opportunities to think about what the space layer or other Command and Control contributions could be to the overall integration of those assets. And we do rely on Canada to be a good partner because just like Alaska, as you look at where Canada is attached to the continental United States and Alaska, it's a significant geostrategic position for all of North America based on proximity, power projection and the ability to have sensors for early warning. You mentioned some over the horizon forward look into whether it's Russia or out over to the west or to the east to cover all the clock positions in a 360.

Canada definitely plays a key part of that. And I'll put on my NORAD hat from years past as deputy director of operations. And we definitely are like-minded in the need to have solid Command and Control in the defense of North America. And that continental defense is rooted in from the early fifties where we put the DEW line, the north warning system. And as we look at the future opportunities and upgrades, I know Canada is definitely in the discussion when we look to those modernization activities, but Riki, I think your point is yes, they need to. Canada and the United States need to be in wholehearted full forward discussion. That's really why NORAD and the leadership at NORAD and NORTHCOM are pushing hard to bring closer and closer some of those activities. It would be great if Canada was a part of ballistic missile defense. I said that, and I think there's opportunities to maybe not be a part of the shooting chain, but maybe part of the Command and Control or investment in as we look to the future.

Mr. Riki Ellison:

Okay, thanks Kevin. That was great. Appreciate it. Ladies and Gentlemen, we got a real honor, but there's only very few men, men or women, that have commanded the very first ever ground based missile defense system for the United States. Not only is Greg the 49th, but he was also the brigade commander at the hundredth and then went on to be one of our first Army space generals working for STRATCOM over the mission.

He's a rarity and he's seen it from the very scratch of when we opened or shoveled the first piece of dirt from those holes. I got a chance to meet him right out 2004 when we came over to look at that first missile in that first silo. That's still there today. So it's an honor, ladies and gentlemen, to have someone of this magnitude, of this historic pioneer that led the charge for

our nation, creating a capability that has defended this nation for 20 years. Greg has defended it, we have negated it, we have deterred it and it's in place today. So what you did is remarkable under your command and your leadership of what you celebrated last Saturday as well. Ladies and gentlemen, Greg Bowen.

BG (Ret) Greg Bowen:

Well thanks Riki. Excuse me. Appreciate the invite today and the kind words, but I will correct you. It was a team effort. I just happened to be there at the time. I maybe helped a little bit, but there was a whole slew of people between the missile defense agency and everybody else. That's a team sport not unlike football, which maybe you would understand. I want to go back just a little bit to what you said at the front end about your recognition event that you just did. I cannot emphasize enough how important that is to the troops from a morale perspective because most of those young people that are pulling watch up there at Fort Greeley or guarding the missile field or doing whatever else they're doing, they do it outside of the public eye and they don't usually get recognized for what they do and it's really, really important. So I really give a hats off to you for doing those over the years and I've been able to participate in a number of them. It makes a huge difference. So thank you to you and MDAA for what you do. So I'm going to take a little bit of a historical perspective first, as I got to thinking about what I wanted to talk about and I can see I'm already over time because no plan survives first contact with an Air Force pilot. So thanks. Thanks Fumez. You blew Faulk in me.

So in 2000 I arrived, I signed into the G three at Army Space Command, which is the predecessor command to what is now SMDC. And there was a small team of us that were tasked to develop the concept of operations for NMD, National Missile Defense. And some of my colleagues would joke, we were working so hard trying to get this CONOPS built and they told me we were wasting our time because that system would never see the light of day, as they put it. Well fast forward a couple of years and President Bush makes the decision to deploy the GMD test bed up at Fort Greeley. Then I was fortunate enough to be in the right place at the right time and was selected to stand up the 49th Missile Defense Battalion. Well then those same colleagues were joking with me about doing this one off job because the system had no future and as soon as George Bush was out of office it was going to get canceled because back then, if you recall, missile defense was a very partisan, divisive issue, unfortunately. That disappoints me in our system of government, our national defense should really be bipartisan. But at that time missile defense was quite partisan and they were all convinced that as soon as the White House turned over it was going to be gone and we'd all be out of work. Well fast forward again. That didn't happen, and today we have a system that is still going strong and we have bipartisan support now.

I think over the years, the messaging and no small part to your efforts Riki, on going one v. one with a lot of these folks up on the hill, making them understand the problem set. I think we enjoy pretty good bipartisan support now for missile defense. So that is an outstanding thing. And I think back to when I showed up at Fort Greeley, it was a huge construction site and three years later when I left we had six GBIs in the ground and we had limited defensive operations that commenced about six weeks after I left command. That's when the North Koreans started launching TD 2s. So it's been a lot of fun to watch it grow into what it has become now. So as you mentioned, my last job was at US strategic command. So I have to talk a little bit about deterrents because that's what that command does. And I've been reading recently in the NDS and the other documents that are out now on this concept of integrated deterrence...

Launch missile defense. There was a number of concepts over the years, but it was never really encapsulated into the overall deterrence discussion, and it is now. And that is good, because we need to have that discussion. As the problem set has got a lot more complex than it used to be, deterrents used to be a bipolar thing with us and the Russians. And then on the outside we had the China threat, which was very limited. The North Korea threat, which is growing. Well, what's changed now, as Admiral Richard recently put it is a breathtaking breakout, strategic breakout by the Chinese on the nuclear side.

So we've got to start thinking of deterrence as kind of a three body equation and then you still have the North Koreans because as you've mentioned, they're doing lots of testing and they've demonstrated that they've got nuclear weapons, so they cannot be ignored. So when we start talking about all these defensive capabilities, one of the things that we need to think about is how do we effectively defend and integrate our defense into our overall deterrence posture, but avoid creating a security dilemma for our adversaries. And what I mean by that is we don't want to have such a strong defense that it causes our adversaries to want to build more missiles to overcome it or other capabilities. There's an operational sweet spot somewhere that we can have effective missile defense that plays into our deterrence but doesn't create the security dilemma for our adversaries. And that's one of the things that I've been kind of mulling over in my head.

And then to add another layer of complexity, you've got to be thinking about the hypersonic threat now and cruise missile defense and how do you integrate all that together. So GMD is just one part of a very large complex puzzle that is going to require a lot of heavy thinking. Lastly, as we kind of think about this from an IAMD perspective, and Fumez touched on this a little bit earlier, we've also got to think about the implications on force structure and off tempo for the services that have to provide these capabilities. So one of my jobs at STRATCOM... STRATCOM was the global integrator for missile defense. So we had to adjudicate all of the combatant command demand signals out there for IAMD forces. And the combatant command's requirements far exceeded what the services could provide. The Army's only got so many patriot battalions and THAAD batteries.

The Navy's only got so many Aegis BMD ships, there's not enough to go around. So the old adage, he who defends everywhere, defends nowhere. So how do you take that force structure that we have and effectively place it where it needs to be to get the most bang for the buck without burning everybody out? And the forward stationing idea I think is really a valid one as from an army perspective, being a former soldier, I can just tell you we nearly crushed the Army Air defense forces with patriot rotations in the last decade. And if you do that, you burn them out before you really need them. So we got to find the right mix of forward stationing, but you got to take the families into account. So there's a lot of issues that surround that. I know Dan Karbler and the guys at SMDC are working through a lot of those things from an army perspective and I'm sure that the Navy is doing the same. So that was my opening set of thoughts. Riki, back over to you.

Mr. Riki Ellison:

Yeah, thanks Greg. You look back at when we had that integrated deterrent with offense and defense in the fifties. We know that the Nike sites, I think were 80 of them or 60 of them in the lower 48 were all controlled by the US Army. But it's very interesting that the two or three sites in Alaska were given over to the Air Force to command that aspect of it. I would also push a little

bit that you're right, that mix of offense defense and whether deterrent mix, what is that? We're seeing that being funded and put in Guam as a forward positioning of US territory. And you can argue at what Fumez that Alaska is also at the very regional tip that needs that same sort of architecture. Now what we take from that, because that's going to be fully integrated cruise and ballistic and hyper, that we've got to start doing this here.

And then the question I wanted to ask you Greg, was we know we got a system, an old system, and it's not going to be replaced until the NGI. So we've got to make it better. We're making it better with the LRDR, we're making it better with the SLEP, it's got to go faster. But in case of emergency, would you, I mean we've talked about it, supplement it with current capabilities out there that have ICBM capability, whether you do THAAD, whether you do what they're doing in Guam with VLS on land, what are those things to supplement since you can't buy another GBI until NGI to help the situation get better than it is.

BG (Ret) Greg Bowen:

Yeah, well the answer is an expensive one. I think that as you look at the current GBI fleet and my direct knowledge of that is a couple of years stale now, but as I recall, NORTHCOM accounted for those GBIs by tail number because it was like having 44 different baselines. They were all a little bit different. Some of them had some mods, some of them were old and the MDA was trying to do kind of a stockpile stewardship program for lack of a better term, it was modeled after how the Air Force looks after the Minuteman, which are finally being replaced. But what is the impact of a GBI that's been sitting in the silo since 2004? Do we know how those components have aged? Ah, I don't know. So I mean, ideally, in a perfect world, we would do what the Air Force does with Minuteman, we would just pick one, pull it out and that becomes your test article, take it out to Vandenburg and shoot it and see what happens in a test. But one of the problems with GMD is live fire testing is horrendously expensive and we don't have a lot of inventory to just pull from. So how do you get there from here? I don't know. So to answer your question, the SLEP needs to definitely happen until NGI comes on board. At some point we're going to have a mixed fleet of GBI and NGI. So that's going to have to be managed. We need to improve or increase the testing regime on the older ones. I know they're going to be pretty robust for NGI. The whole fly before you buy concept makes sense to me, but all of this stuff is going to cost money. Then, as Fumez has also mentioned, there's the sensor piece. As a missile defender, I want cradle-to-grave tracking. I want a quick alert off of OPIR when that thing launches and I want to be able to see it all the way across to include being able to do a hit assessment when we intercept it.

We can't do that currently for all of the trajectories that are possible. I think there's some things coming, particularly in the space domain, that are going to help us with that. So the sensor piece is huge also. And then the C2 system as it is today is, I think, pretty effective. You can get into a lot of discussions on how that might work. And you talked a little bit about the NORAD and the Canada connection and how we do that and that you had Nike, you mentioned Nike sites that were under the Air Force.

Well, as an Army air defender, the area Air Defense Commander doctrinally is always an Air Force person in charge. And then the Army is usually a deputy for the ground based side of it. So we know how to do that right now. Back in the fifties and sixties, the Army had the ARADCOM that did that function and they worked for NORAD, essentially. But I think there's some tweaking we could do on the Command and Control side and with some of the TTPs that I don't want to get into in this forum. But there's a lot of things that we can do to optimize the

system a little bit more. That's a long winded answer, but hope I got to what you were looking for.

Mr. Riki Ellison:

Absolutely, Greg. And these missiles are 80 to a hundred million probably. Yeah, that's a lot. The tests for one of these things are two to 300, maybe 500 million. So whether we like it or not, you've done a great job of being able to have minimal tests to get what we needed to have reliability on this. But as the future goes and we're seeing the proliferation of North Korea just building, outnumbering this, the overmatch looks like the cost curve is going to be on their side. That's coming on top of that. And now like you said, how do we deal with that, with this? Do we go to space, do we have other effectors in future development of this stuff or how? We got to hold it.

And I know it was a little bit easier for you when it was just North Korea, but if you start pulling these other big boys in here, it's going to be very difficult to be able to do it. And we haven't made that policy position yet, but that looks to be very close because of what Russia is doing and possibly what would happen in Taiwan. So this is where again, this is an urgency kind of thing, and what can we do to help this? I'm just giving a kind of big picture of where you think we should be going, or can we stay the course as we are now, not being able to test like you want to test.

BG (Ret) Greg Bowen:

Yeah. So part of the problem, Riki, with the testing in my view is we've got a cultural problem that we don't tolerate failure. We learn more from failures in testing than we do from successes. But for whatever reason, if we have a GBI flight test and it doesn't intercept, that flight test probably had 250 objectives and we met 249 of them and learned a bunch and got a bunch of data, but because we didn't hit, all the press is going to go off on the Department of Defense about how they're wasting all this money, which is crap.

But back in, I go back to the early days of the space business, when we were trying to launch our first ISR satellites, 12 of the first 13 attempts failed. They kept going. They kept testing and the 13th one went into orbit and gave us this great capability. We were willing to accept risk back then because we knew we had to. Nowadays, they don't want to take any risk. So the tests are a bit more scripted than I'd like, but I really feel strongly that we need to pull an old GBI out of the hole and see what happens. My view.

Mr. Riki Ellison:

And Greg, you're absolutely right. Because the political destabilization of that missile defense was part of that debate that you were part of. We were part of that fight, politically it was. But it's no longer a partisan fight anymore. That's done. It is done. People understand that that is the threat that's coming and that we are in agreement that we have to defeat that or have some capability to defeat that threat. That's happening now on that.

So again, I go back to cost curve on where we're going with this thing because it does seem like the cheapest way to do this in the long term is in space for 80% of this, that flight's going through there or left of launch on that aspect of it. But we're not there. We have to wait that out. The patience, I don't think that the, now commander of the brigade or the battalion is not in the position that you were in that was so partisan on top of that. Just one quick one before I go to Mark. They made a decision to move the main training quip of GBIs from STRATCOM to

NORTHCOM. What are the effect, and that's something that the NORTHCOM commander now has his own missile defense where he didn't before. Just if you can really sum up with that decision, if that was a good decision or not a good decision on...

BG (Ret) Greg Bowen:

Yeah. Well, it landed at STRATCOM because STRATCOM became a bucket for every mission that nobody else wanted for a while. So at one point, STRATCOM had 12 different missions. Now they're really down to strategic deterrents, which is where they started, and that is probably appropriate. STRATCOM was viewed as kind of the impartial third party to adjudicate all these missile defense requirements from the combatant commands and then dole out the forces or make recommendations to the joint staff on how to dole out the forces.

So we viewed ourselves as kind of the referee basically. When you've got more requests than you have resources, how do you spread the peanut butter? So, that's kind of what we did. It makes sense for that business to go over to NORTHCOM because NORTHCOM is the war fighter. NORTHCOM is the end user of the system. There's some nuances and that's what slowed this down for so many years is NORTHCOM and their Army component ARNORTH lacked the capability and the expertise to do all the Title 10 organized training equipment functions that Army Space and Missile Defense Command had been doing for 50 years. So, that level of expertise didn't reside in ARNORTH where it did an SMDC, which was the Army component to STRATCOM. So, that part of it made sense. I don't know what they ... I think SMDC is now a second ASCC, Army Service Component Command, to NORTHCOM, I believe So yeah, Karbler has a lot of hats, but he can sing and dance. So it's all good. So I think it's good. There's continuity of effort now and I think it gives the NORTHCOM commander a little bit bigger say, not that he didn't have a say before, but will have a bigger say in the future. So I think it's a good thing.

Mr. Riki Ellison:

Okay. Thanks Greg. All right. We'll get turned over to Mark. Mark is on our board and he is head of cyber for the Senate. He's a great expert on missile defense. Mark, all yours.

RADM (Ret) Mark Montgomery:

Hey, thanks. So I think a lot's been discussed about ballistic missile defense. I'll just add one. I know it was referred to earlier, but we are finally completing the long range discrimination radar, bringing an S-Band radar. 1.5 billion, it better be really good at detecting ballistic missile test to homeland. And then I think the beauty, and I guess it's now. I used to always notice Clear Air Base is now Clear Space Force Station. That's important because I think it has a secondary mission for space domain awareness. So I think this is really an important event.

And look, we tend to forget things. We fought that battle five years ago and seven years ago and then things take time and you do a little bit of appropriations battle three years ago and now we're there. And we got to remember there are some successes in this and that's an important thing. I remember when we first were building that. We really were thinking about discrimination capability from North Korea. So there was North Korea, I think we can now publicly say we're trying to figure out how to put decoys in their systems. So it's important for us to be able to really get the right target.

What I wanted to talk about a little bit was the hypersonic and cruise missile defense aspects of this. And first in hypersonics, I can't tell you enough, I worry that DOD and particularly the political side of DOD tends to say, well that was an idea of the previous administration where we're going to rethink this. We don't have this option in hypersonic. I'm going to tell you right now the deterrent aspect of hypersonics, and I mentioned deterrence last time we were talking, but I'll put it in a hypersonic context.

If the adversary gets significant offensive hypersonic capabilities and capacity, it will not matter whether or not we have offensive. You can create a deterrent defeating effect if your adversary has no defense against your system. We're not going to be able to fall back on mutual assured destruction in hypersonics as our defense here. If the Chinese can aggressively destroy our capability and capacity throughout the Pacific with a prompt strike and we have no defenses, they're going to begin to understand there is no actual deterrent.

If they can hold us at risk because they have first mover status, because they're the authoritarian regime, we're in significant trouble. So we absolutely have ... We're not trying to catch up with our own offense with our hypersonic defense. We're trying to catch up with Chinese and Russian offensive capabilities. So we absolutely have to commit ourselves to the glide phase interceptor. We have very limited hypersonic capabilities right now, the Missile Defense Agency says, with an existing system. But the reality is we need to get it, the hypersonic glide bodies that you see in like DF17 and 21 missiles from China.

And by the way, the DF21, from what I can tell, they're going to launch it from anything. They've got it on air. They're advertising it on an aircraft carrier, its destroyers, its aircraft. If it wouldn't sink the fishing boat, they'd have it on grandpa's fishing boat. They are going to be launching this from everything. They're going to have a lot of capacity. We absolutely have to have an ability to shoot it down. And right now, I think that's going to be based on something that gets launched from a Mark 41 Vertical Launch System cell, a cell associated with that system, doesn't mean it has to be in a Mark 41 VLS launcher.

But from that, and we need to absolutely commit ourselves to that. We can't suddenly have a come to Jesus six months or 12 months from now where we go, we're going to stop that and move to something else. We absolutely need to continue to be pressed on this. If you have another good idea, I'd fund it and have two good ideas going. Because the one thing I can guarantee you is the only thing less likely than two good ideas working is one good idea working. So let's get this moving. Our adversaries are betting a significant amount of their farm on hypersonics as an asymmetric advantage over us.

And so in that regard, we've got to push the glide phase interceptor. One piece of good news, Riki, is I really think we're getting to the place where the department has figured out they actually do need a Mark 41 VLS in Guam. So when we do get a glide phase interceptor, we'll have a place to park it and help defend Guam against that because I know Guam's going to need a lot more than one 32 cell launcher spread throughout that country. In the end, we may have the number of launchers that they were thinking about when they had trucks doing this mission just they'll be 32 cell launchers because I mean this is a tough adversary.

All right. So, that's the first thing, hypersonics. The second is on cruise missile offense. And here, our good friend Ty Thomas, if he was on, he would remind us that the Air Force, they're like a dog that caught a car with this cruise missile offense in the Homeland mission. It's a \$30 billion car, maybe, and I might be low balling it there. And obviously they got no money with it. So we've got to figure this out. First, they need to get it, someone needs to actually push them

funding for this. But on top of it, to tackle this, they've got to start, I think they start by fielding the things we have that work now.

The idea that we'll go down, into a strategic review, come up with an idea that we begin to procure in 2032 and field in 2040 is probably not the answer that the US population is looking for with an \$840 billion defense budget. They expect us to be building something now. Do I think we need to envision the future and what kind of weapon systems, what kind of effectors we're using 10, 15 years from now? You bet. But in the short term, begin to understand what are the systems we have that we can start doing basic defense of whatever the NORTHCOM commander decides is his dow and his cow.

His cow and then from that his dow. The very limited number of assets that we will defend. In that regard, I'll give you two thoughts. One, I couldn't agree more and it was Greg that said it. If we start using Army units in this mission, much like if we start to put them out in Guam, we need to use them in a forward stationed condition, which is to say permanently stationed in that area. Guam's a great example where all the other services have figured out people like living in Guam. And it's a high quality of life. We have commissaries, exchanges, MAG flights, schools. It's good and people enjoy it. And I think we should do that and take the pressure and the burden off the army, air defense, artillery forces and their families with its just insane rotational deployments, which made perfect sense in the Middle East where you didn't have the commissaries, exchanges, the schools, you did have the MAG flights, but you just couldn't do that. So, that's the first is commit ourselves to getting stuff out there. Use forward station forces. And I just want to make one more pitch, you've heard me say it before, but we've really got to take a hard look at dirigibles.

We have to take a hard look at persistent air surveillance, and here's what I'll tell you. Look, I love the E-7. I advocated for it for the last six or seven years. It wasn't called the E-7 then. It was a Royal Australian Air Force aircraft that we were advocating for. We love the E2D. Services are not going to assign either of those to a persistent homeland 24/7 mission plus that's just too limited. That one plane you'll start to really burn its readiness out. A dirigible, you're not burning its readiness out when you put up in the air. We know how to operate dirigibles.

I know we embarrass ourselves for a few hours with the JLENS. But let's be clear, that was a 20 year mission or a 17 year mission with a couple balloons. I mean, we know how to operate these. The Israelis have taken the idea as they often do with a US company and are doing it now. So the two countries that really understand missile defense, the United States and Israel have both come to rely on dirigibles and their most important missions, defending our national capital region and for them defending their homeland against Iran.

We need to reengage on this issue and figure out where we can put them and have a good competent system for how you bring them back in and put them in a safe condition when there's inappropriate weather. But that's it. We absolutely have to embrace these. So if I could fall back on this. It's we got to invest in hypersonics. You got to keep doing what you're doing. If you think there's another type of solution out there, fund it and have two solutions going. But don't come off of the one that you're already working, the glide phase interceptor.

And when you're thinking broadly about cruise missile defense, look at the systems we can field now and put them in the most convenient readiness perpetuating conditions you can, which is four station forces and using things like dirigibles instead of aircraft flying 24/7 circles. So I saw Jason came on, so I'll cut myself short there, Riki. Pass it back to you so you can give to Jason for a few minutes before we end.

Mr. Riki Ellison:

Yeah, no, we'll go a little longer. I got Jason. I just do want to follow up with you real quick on two things. Why aren't we developing a land-based hypersonic defense? To me, your hypersonic defense is to defend against the carrier. I know it's VLS, but where is that? Secondly, you talked about real capability for cruise missile defense. That's obviously going to be the NASAM, that's what the president has put in Ukraine. Is that applied to go right now into Alaska? Because it's also like Guam needing to have that aspect of it. And then further going down to you, as Greg said, the patriots are max. You can't take any patriots from anybody right now. But the THAAD, there's five THAAD batteries sitting in Texas. Why wouldn't you forward operate one of those to relieve some stress if you're going to do four base protection of JBER or Allison with a THAAD up there and it can test? So, that's real quick just before I get to Jason.

RADM (Ret) Mark Montgomery:

Okay. So three questions there. I'll do them quickly. First, on the hypersonics, whatever solution the Navy figures out with a ship with spy rate are on it at a vertical launch system, it's probably going to be land baseable pretty quickly. Now you have to do special testing about firing a missile over land. The farmers complain more than whales about orbital bodies dropping in on top of them. So you have to do some testing about that. But that's it. It's absolutely... Look, the Navy's not going to, the DOD, Department of Defense and MDA are not going to say that today, but any solution that's based on shipboard systems is clearly placeable ashore where you've already put some of those shore based systems.

Now on the question of NASAMS. You know I'm a fan of NASAMS and have been for six or seven years. I think this is easily the worst tactical procurement decision that the Army's made in the last seven years and I imagine that's saying a lot. The idea of not procuring NASAMS. Apparently good enough for our Ukrainian allies, good enough for all our European allies, good enough for our Australian allies, blah, blah, blah. Good enough for the National Guard to defend the national capital region, but not good enough for the Army. They keep searching for another solution after another solution.

I think they should procure NASAMS. Unfortunately, Riki, I would not put them, I might put them in Alaska around Clear AFB some of the air stations there because they're forward. But the first ones I'd procure would be in Misawa, Anderson, Ramstein, Mildenhall. I would defend and probably wherever our European deterrents initiative tracked and wheel vehicles are stored in Europe. There's five or six really important. That would be my first dow, so to speak, if I were at the global force management pushing them out. But you're right. After that, they would become an intrinsic part of the homeland.

The problem with NASAMS broadly is in defending the whole homeland against cruise missile defense, they have a pretty limited defended area and just have to be realistic about that. And finally on the Patriot THAAD, look, I think that if you make it permanently forward stationed, there are Patriots available. If it's a one for one rotation where it's you and your people, kind of like our destroyers are in Japan, our F15 squadrons used to be in Japan, we're just removing them now, or the F16 squadrons up in Misawa, I think that'd be a lot less pressure on the Army.

And the Army does have several thousand people forward stationed in Japan, so permanently stationed there. So this would not be that hard. And same with THAAD. I'm with you on THAAD as well. But start by making the THAAD in Guam a permanent forward station thing with families

and take the pressure off those air defense artillerymen. We absolutely need to be wiser in our forward stationing of forces.

Mr. Riki Ellison:

Well it's interesting and I agree with you, Mark, but MDA has now taken off any ICBM testing from SM-3 Block 2A and THAAD. So that seems to be, if we're going to have a shortfall with the GBIs until 2028 or 2030, that might be a good for our country to test current systems that we think that have already done it and against ICBM. So that would in the long run, I think, help strategically with it. All right. We got Jason. And Jason is probably the premier Alaskan right now on missile defense. He worked for both Don Young and Senator Sullivan. He was a national security advisor for Senator Sullivan. He's passed four major legislation pieces on missile defense and it's pretty great to have a perspective from Congress that we don't normally get. Jason, welcome.

Mr. Jason Suslavich:

Sure. Thanks, Riki. I think the kind of the thing that I would like to talk about and focus on, so to start quoting my old boss who Monty remembers fondly, I hope. Alaska's the home to three pillars of military might. So it's the strategic platform for expeditionary forces. So you're going to now have an Army division to airborne brigades there. Underneath that, it is a hub of combat air power. There are already 100 fifth gen combat coated fighters in the state of Alaska. And there should have been tankers there too, and that's something I can get into a bit more. But it's a cornerstone to missile defense with the radars and with Greely. And the thing I'd like to really focus on in Greely, which I think is lost a little bit sometimes, is understanding that RKV was an imperfect solution, but it's better than nothing. And I think an issue that came up during my time on The Hill was the cancellation of that program, and especially with Kim Jong-un doing what he's doing right now. I'm pretty certain that the war fighter would like some capacity more than what they have right now, even if it's not a perfect capacity.

But would that align pushing to NGI on the homeland missile defense front for that ballistic missile threat is critical. And then talking about Congress. I think Congress and missile defense is it's a really interesting thing. It's something I see right now in my current job working on space stuff and it's finding advocates is a challenge. Missile defense is rocket science and getting into member offices and talking to them about how important this capability is, it's not as sexy as the offensive capabilities, which I think Monty talked about a bit.

But defending against adversary advanced capability is critical. And we used to have advocates like Senator Kyle and Senator Sessions who were huge proponents of this. And I think my old boss, Senator Sullivan is still a really good advocate. But the need to develop more advocates, the Alabama delegation with Tommy Tuberville and Katie Britt coming in and others. Because at the end of the day, we can all talk about what the ideal solutions are for everywhere and for every location. But if the Congress doesn't allocate the money for those solutions, the department has to make very difficult decisions about where to prioritize. And unfortunately, at least over time, especially in Democratic-led administrations, missile defense has not been as highly prioritized as some other ones. So I'll pause there.

Mr. Riki Ellison:

Jason, thank you for that. To Greg's point and to my point, do you think we have a bipartisan position on missile defense today? On-

Mr. Jason Suslavich:

That's a great question.

Mr. Riki Ellison:

Is that something that's really in the foreseeable future as legitimately we're going to spend this type of money in Alaska to get it right for the US home and if we're doing this in Guam?

Mr. Jason Suslavich:

So I'll take that first question or that second question first. And I think it is Alaska, at least as someone who worked for the delegation for over a decade, it has a lot of potential for the US military. And I think they're just starting to recognize that. The JPARC, the Joint Pacific Alaska Range Complex, is the largest overland and over water training area. What it provides, the joint war fighter is immense. They need to advance some of their threat systems there to really take full advantage. But with fifth gen, especially, time space distance is the big challenge.

And Alaska is literally the only place that the US has control over that we can do some of that high end fighting. And so what I've always said is that if you invest dollars into the state of Alaska, and it is expensive to do things in Alaska. But if you invest, the value proposition on the back end of that is huge. And so it is why I can't be remiss and say that without mentioning the Billy Mitchell quote about Alaska being the most strategic place on the earth from a-

Mr. Jason Suslavich:

The Billy Mitchell quote about Alaska being the most strategic place on the earth from a military perspective. That's kind of on par for the course for anyone from the delegation, but the fact that we have the amount of combat air power there, the fact that Greeley is there is not by chance, and so it is something that, at the end of the day, if we don't make those investments into the state of Alaska, and don't get me wrong, Guam's important, but if you look back at military history in World War II, where was the only place that the US actually fought on its own soil? We have to look back to history to understand those points, and I'm not saying Alaska's going to get invaded, but it is a vital power projection platform for the United States from the northern hemisphere. It gives you the ability to project into both Russia and China, as well as North Korea, and leaders have to take a very close look. Our adversaries have to take a very close look at the forces and the capabilities that are there.

I remember, I won't cite who it was, but it was a former Air Force chief of staff, came into a meeting with Senator Sullivan, and this is early on in the Raider program, and talked about, "Hey, it'd be great to have B21s in the state of Alaska." Imagine what that would look like where Vladimir Putin or Kim Jong Un or Xi Jinping wakes up one day, and there's a handful of B21s sitting on their runway at Eielson, and what they have to calculate with that. Not saying necessarily based in there, but that's the value that Alaska provides you. So Riki, remind me that first question again.

Mr. Riki Ellison:

The bipartisanship or partisanship that we have for missile defense today.

Mr. Jason Suslavich:

So it's a tough question. I know when I was there, there are a lot of... The North Korea threat in the 2017 timeframe really helped that bipartisanship argument. Senator Shatz was someone who we went to and worked with closely in actually crafting the first bill that I worked on to really start upping the capacity at Greeley. The three negotiators were Sullivan's office and myself, Senator Shatz's office and Senator Cruz's office, and so it's really kind of odd bedfellows that don't mix together, but folks that understand the importance of missile defense, and then folks that also understand critically the impact of not having missile defense from the state of Hawaii, or not having a robust missile defense. So in that regard, I think it exists. I think it's there. I think it's up to the staff and the members to continually push to do those things as the threat drives the equation. So I guess the short answer is yes, it's there, but we have to keep working at it.

Mr. Riki Ellison:

Thanks Jason. Hey Mark, we could probably go 10 more minutes on Q&A, and if you want to open that up and you monitor that, if you'd like to ask the group.

RADM (Ret) Mark Montgomery:

So we got one question in here that hasn't already been answered. One I'll jump in on, though, is I will remind everyone that Guam is home to 170,000 US citizens. So in the framing of your question, Riki, you might have been slightly unfair to them, but this is an interesting one. A couple of us could probably take a whack at it, but should missile defense in Alaska become a multitiered system to defend against any missile threat, and should it have things like ages ashore, army units ashore on mainland Alaska and the Aleutians, as well as BMD capable ships in Alaska operating out of the deep water port at Nome or maybe out of Seward? So I'll pass it around. If anybody wants to take a first whack, I'll take a second whack, and I think that's probably our one question.

Maj Gen (Ret) Kevin Huyck:

Rik, let me just say... So the multi-tier, the multilayer shot at whatever the adversary would throw out there, I think we're in a situation now in Alaska where there's a lot of offensive and defensive capabilities, but what we lack is any demonstrated other capability for cruise missile defense, et cetera, and I think to answer the question, it's probably an incremental approach. We put a Thad out there in the Aleutians, we did deploy a patriot up for a specific amount of time, and I think Greg talked to it. We learned a lot, not only from testing, but employment from there.

Before we get to that final answer, which I think is what the question gets at, if you design the complete solution and you go to buy it, you're just going to price yourself out of reality, but actually putting systems with demonstrated capability and integrating them or forcing the war fighter to integrate them gives you an incremental stair step approach to do something, which is better than admiring the problem right now, which we have capabilities, but not to the point of, if raiders show up on the ramp, what's going to protect them from a cruise missile? We might be able to see them coming in pretty late. We don't have the tennis rackets, because they're locked up in the storage locker. So that would be my vote, and I also look to the dollar question. A lot of money is spent on a lot of things, and it comes down to priority. I thought Jason did a great job

of explaining that, but we need to elevate priority in certain areas, and it is costly, but that's the price of defense, and I'll pass the mic back.

RADM (Ret) Mark Montgomery:

Okay, I'll take a quick whack, and then anybody else got it if they want. I agree completely. Look, integrated iterative systems is how we have to go on this. Continue to improve them. That's what I was talking about, the hypersonic glide interceptor, for getting it at YJ 17s and 21s, and you have to play with the toys you have right now, and I agree with that, and obviously, it's hard to find someone and say, "Well I'm opposed to layered defense." I think we're for layered defense, and I will say this, we've got to get out of the business of leaving ships on stations. I also tell you, leaving ships on stations above, around or above the Arctic circle is extremely dangerous. We found this out with our destroyers that we've beat. They were not built for that kind, the kind of beating you get up there in the temperature of water that's up there, and it's caused a lot of damage to the bows of the destroyers that have operated up there during exercises.

So we have to be sensitive to that, but certainly you can surge capability or capacity if needed. We're working hard on a land-based defense of Guam to get out of the idea of putting ships on rotation between Guam and Japan. So I think we want to try to avoid that as best we can, but I would go for the layered defense, and I think this gets back to, if it's an American state, it should be a Ford stationed capability. It should be a permanently stationed capability. I think all of American states are considered equitable places to live. I get that if you get into very... You have to go up to Nome, there's a limit on how many people you can permanently PCS there, but that would probably be where I'd pull my limit, and even then, we can have people PCS there. So layered, iterative way to go. Anybody else have thoughts before I kick it back to Riki?

Mr. Jason Suslavich:

I'll jump in real quick. So Monty, on that note, I think one of the things I pushed for a lot, and you probably remember some of these coming across your desk, is ice hardening naval vessels. Not a small amount. You do need that type of capability and that ability to surge, and it's great if you can do it in the summertime, but wars aren't only fought in the summertime, and so one aspect there, I think on the layered side, I remember that coming across my desk as well, and I remember the cost of it. I think there's a way to trim that when you look at critical power projection nodes. So what do you need to put forces out the door? What runways, what APODs, what SPODs do you need? That's where you prioritize those types of investments, because at the end of the day, if we can't get forces into theater, then we're kind of toothless and we don't really have the capability that we need.

That's that for me, and obviously, American city is hopefully protected more so from that Homeland Missile Defense system layered together gives us the capability that I think we're going to want and need for this new type of adversary that we're facing. Okay.

RADM (Ret) Mark Montgomery:

All right. Thanks. Riki, over to you.

Mr. Riki Ellison:

Mark. Yeah, I just want to ask the group one question before we close our remarks. Can we wait, as a nation, to 2028 or 2030 with what we're doing now, with no layered missile defense capability on the ground with the current GBIs in play? Can we wait with what you're seeing in the threat today? Because there's a lot of people in DOD that want to wait, because there's new systems coming online on 2030, but that's the question. I wanted just go around the room a little bit and just... I'll start off with Fumez. What would you say on that.

Maj Gen (Ret) Kevin Huyck:

Riki, I would say that 2028 was specifically chosen based on the testing, the incremental capability to get to an NGI, and I could no longer speak for Northcom, but clearly that is an imperative to meet that 2028. I would take the Bravo part of the question to say we can't afford to have any delays and slip beyond that, and to Greg's point about testing, we'll learn a lot from testing, but we have to be ready to accept that there is an incremental growth and capability, much like we're schlepping the current ground based interceptors. There'll probably be a future of improvements and enhancements, but to get the next generation interceptor in by '28 is really key.

Between now and then, I think the time for good ideas has probably passed between now and then, and move full speed. The RKV point, I was told never to say RKV, because it was canceled, but we don't want to be in the same element from there, and being an old Raptor guy, same thing. We don't want to be in the point where we're having remorse about decisions that were made when we were on the cusp of moving forward, and the last point is, hey, for flight test, adversaries aren't really interested in what kind of defenses and when we're fielding. They are full speed ahead on challenging anything we have now and in the future, and we cannot wait for the perfect gold plated design. We need to continue to field and use what we have now to set a credible defense and continue to show that deterrent.

Mr. Riki Ellison:

Greg?

BG (Ret) Greg Bowen:

Well, Riki, the old axiom, "The enemy gets a vote", comes to mind here. So the strategic environment is changing rapidly. We're seeing a breakout in Chinese capability. The Russians have invested heavily in a bunch of offensive weapons while their army has underperformed, they still have a lot of nukes, and then the North Korean threat and potentially others. So in my view, perfect is the enemy of good enough, and we're going to have to... You go to war with what you've got, and I think given the current strategic environment and the threats that are presenting themselves, we can't wait. I think we need to do something now and continue to work incrementally towards more capability in the future. Over.

Mr. Riki Ellison:

Hold that up. Thanks Greg. Jason?

Mr. Jason Suslavich:

Sure. I think on NGI, test, test, test, that was a key thing we worked on. Failure is not failure. Get something out there. If it blows up, if it doesn't work, that's okay. Keep testing. It's how Von Braun did it, and we've gotten too far away from it as a country and gotten too risk averse, and I thought General Huyck's comments a few months ago, several months ago, about, Congress also has to assume some risk as well in terms of funding its programs. You can't go fast if the money's not there to do it, and so in that regard to my former colleagues on the hill, pick some things, ride or die with it, and believe in it, and just try to get it out the door. I agree with Greg. You've got to go to war with what you have, and if you're not testing, iterating and spiraling, then pursuing leap ahead doesn't really help the war fighter until it actually delivers.

Last thing I'll talk about is deterrence has to be credible, and so for me, not relitigating old decisions at all, but having capability and capacity in the ground does help provide some modicum of credible deterrence, and that's, in essence, what we really need here, and that's what missile defense is really meant to do. All of US military capability is to prevent us from actually having to go to war, and so you've got to have the capability, you have to show the capability to some extent in order for your adversaries to know that it exists and you know that they're going to have to plan or fight against it.

Mr. Riki Ellison:

There's just a distance... A little reminder, President Obama and his administration said that that requirement for GBIs was 64, and they bought those extra 20 silos. We got 20 silos sitting in the ground right now, as you know, fully paid.

Mr. Jason Suslavich:

The original plans were 250, Clinton had 250 at one point, they got sized down, there's room for a hundred, there's probably room for more.

Mr. Riki Ellison:

I'm just saying the threat has gotten way beyond what it was when they made that decision.

Mr. Jason Suslavich:

Sorry, just to pull in one point, and this is something we had talked about, and I don't know if it's even doable from a technical standpoint, but having some type of system where it's a road mobile GBI of some kind. I know that's hugely technical and really difficult, but especially with the way that the threat is advancing both ballistic hypersonic and cruise, and you don't know where it's coming from or where it's going. Having some type of flexibility, not just in the state of Alaska but other places, I think is worthwhile looking at.

Mr. Riki Ellison:

That's, again, a silver bullet. That's past 2030, before you get that. That's something that we were trying to force on Guam that's not ready yet. Like everybody said, we've got to play with what we got, to an extent. Mark, what are your thoughts on it?

RADM (Ret) Mark Montgomery:

So first I attached myself to what was said, and I do think you mentioned earlier the idea that we need to be testing some of our other systems for their missile ICBM capability. I'm not sure why we stopped on SM3, block 2A, but you'll probably need to, just so we have an understanding. I don't think a test... As one of the older missiles ages out, you can use that, so you're not costing yourself a lot. In these kind of tests, usually in a missile test, the cost of setting up the range is the big thing. Actually, in ICBM tests, it's the cost of the missile and the target kind of added together. So some of these things are aging out, you can use them, you can get some value out of them on the way out the door. So from my perspective, I think that's what we ought to be thinking about. I'm pretty sure the Japanese would appreciate that test as well. All right, that's all I had, Riki. Back to you for closeout.

Mr. Riki Ellison:

We'll just do closing remarks, but I would say that we deployed a THAAD on Hawaii to defend from ICBMs without it ever being tested against ICBM. So I know we technically think we can do it, but that kind of stuff needs to be done in the process, but that's what MDA does, and would go. Hey, great discussion. Just want to walk around real quick on closing remarks, and we'll knock it out. So go ahead Jason, we'll start with you, bud.

Mr. Jason Suslavich:

Sure. I just want to say thanks, Riki, for hosting this. Super important topic. I think maybe to push back, not push back, but to push on and reemphasize the work that those are listening and can do in terms of helping to talk to your members of Congress, getting into those offices, getting in and talking to those staff, getting interest in this, and expressing how critical missile defense is to the nation. Offensive is super important, as everyone recognizes, but to quote every famous football movie, "Defense wins championships." So I'll stop there, and I know my man Riki would like that as well.

Mr. Riki Ellison:

Thanks Jason. Fumez.

Maj Gen (Ret) Kevin Huyck:

Yeah, I'll defer the rest of my time to Greg, but I will say that the adversary does get a vote. That's a great point. Keep the throttles in the afterburner. We have to do things that keep them on their heels and keep them guessing, and that's demonstrating capability, continuing to test and move faster, and I do fully support the need to do integration. It's not just a single service in charge of one installation or defending one area. We have three combatant commands. We have NORAD and a multiple systems manned training equipped, organized training equipped by different services. There is an integration gap and scene that needs to be resolved as well, in

addition to fielding capabilities, and don't forget where the great state of Alaska sits in all that defense design.

Mr. Riki Ellison:

Then NORCAM/NORAD integration is critical too, as we discussed. Greg.

BG (Ret) Greg Bowen:

Thanks, Riki, for putting this on. Great discussion, and I have to compliment you, because you somehow managed to get an army guy, an Air Force guy, and a Navy guy to be in violent agreement on just about everything. So we fought some epic battles while we were still in uniform, but at the end of the day, we're all on the same team. So it's great to see everybody again. Thanks.

Mr. Riki Ellison:

That's great. Great unification. Thank you for that, Greg. Mark.

RADM (Ret) Mark Montgomery:

Yeah, Greg had it. I like that, and I think we can all agree that Congress has got to help fund this, whether the department puts up the right budget or not. I think that's going on right now behind closed doors in Russell and in Longworth, in the different Senate and house office buildings. Back over to you, Riki.

Mr. Riki Ellison:

Yeah. Hey, what a great discussion. A timely discussion. It was needed, and it's going to move the ball out. There's no question that we have to fight with what we've got. We've got to fight with combat ready capability and driven capability, and Alaska's a critical point, and if we're going to spend that kind of money in Guam, we definitely need to spend that kind of money in Alaska, defending our homeland every possible way we can until the silver bullets come, and the silver bullets aren't coming fast enough, we have to get this thing done. So thanks for opening up that discussion, debate and ideas to the audience and to Washington DC. So appreciate your time and effort. Thank you very much for giving your time. Defense always wins championships. See you.