

Mr. Riki Ellison:

Welcome. Good afternoon from a summer day in June in Washington, DC. I'm Riki Ellison. I'm the founder and chairman of the Missile Defense Advocacy Alliance that was founded in 2003. We have a single purpose and mission. We're all about making our nation and the world a safer place through the development, the evolution, and deployment of missile defenses. And since that time, and I can go all the way back to when I was a young kid, missile defense is making our world a safer place today.

Mr. Riki Ellison:

So today we're here to discuss the global missile defense responsibilities. We are challenged by them, by those responsibilities. We have a national defense strategy that's calling us to compete with our near peers. We have limited capacity and capability that are deployed today under extreme high demand across our COCOMS. We have gaps, and we have to address those gaps, in cruise missile defense, in hypersonic defense, in 360 missile defense, in layered ballistic missile defense. We have programs of records that are in play today, but they have to sustain us until the new programs come in play. We have reducing budgets, and certainly with COVID-19, we will see that pressure. We have inefficiencies, and we have the missile defense review that is put forward our mission and our policy to defend against all missiles. So today's discussion is, how do we make this better? How do we set the conditions to make our nation and the world safer through the deployment, the evolution, and development of missile defense systems?

Mr. Riki Ellison:

Today, we have just, I think, a phenomenal group. We are represented by three combatant commands, and they each have different operational environments that they work with with their missile defense mission. We have INDOPACOM, we have NORTHCOM, and we have STRATCOM. I also, in my experience, would say that we have the two very best, most articulate, most knowledgeable, that eat and breathe missile defense here with us today. I don't think there's anybody better in the world in their knowledge and ability to communicate the issues, the technical issues, than Vice Admiral Jon Hill and Lieutenant General Dan Karbler. In life, when you excel, you force cauldrons to happen. And out of cauldrons come greatness. Out of cauldrons come ideas, concepts, and trust. And I think we have a cauldrons today with this interaction that will produce or shape and educate and advocate how we best do global missile defense and the responsibilities of that.

Mr. Riki Ellison:

So the program that we're going to do today, we'll have each of our COCOMS go first and they'll present. And then we'll maybe ask a question or two after their presentation. And then after the COCOMS have spoken, we'll let Vice Admiral Hill, the MDA director, present. And then we will open it up for Q and A after that discussion. If there are any questions, please, you can email to questions@missiledefenseadvocacy.org. I think we've got quite a few already that will be put forward at the end of the presentations.

Mr. Riki Ellison:

So I'm going to begin with our first COCOM. I'd like to introduce Rear Admiral Steve Koehler. INDOPACOM is the biggest combatant command that the United States has. It covers all of the United States' near peer competitors and threats. It is vast in space, in water. It has the stability for world peace, the stability for deterrent. It is driven in this COCOM. We also are well aware of the leadership that Admiral Davidson has done to get the Indo-Pacific Deterrent Initiative going forward. And that has

been resound by both Democrats and Republicans in moving forward with an authorization to create support for their mission. And some of that support will go towards the missile defense mission. They're unique. They have US Homeland in the order of Guam and Hawaii in their realm, as well as out front with our best allies, or some of our greatest allies of Japan, Australia, and Korea. Rear Admiral Koehler is the director of operations. And having that size of area to operate in, and having the right person qualified to do that, speaks for him and for his title of what he does. So I'd like to hand it off to you, Web, and thank you for participation and thank you for taking the time today.

RADM Steve Koehler:

Hey, Riki. First of all, thanks for the introduction. And when you lay it all out there now, I'm like, "Whoa, hey, okay, that's right. I got a lot to do today." But so does everybody. And so I really appreciate you bringing the team, the group, the forum, all the colleagues here together to discuss what you just laid out and all these important topics.

RADM Steve Koehler:

As we all know, and certainly the colleagues on the screen, and I think everybody listening in, INDOPACOM has been structuring, since 2017, the changes to the national defense strategy that directed us to assure the capability and plan for the possibility of a fight with a peer adversary, in this case, with China. China invests heavily in air and missile defense systems, or air and missile systems, I should say, to project anti-access and area denial, which challenges a free and open Indo-Pacific for which we are tasked and working to uphold. The threat of air and missile attacks from an increasingly capable China should be concerning for all combatant commands as they contribute to our national security strategy. China represents the greatest longterm strategic threat to security in the 21st century, not only in the Indo-Pacific, but to the entire globe. The Communist Party of China is actively seeking to supplant the established rules-based order in order to dictate new international norms and behaviors and new relations in the region. We see it every day and our national defense strategy recognizes it, and it directs our military to retool after 20 years of counterinsurgency warfare, to protect against existential threats and peer adversaries.

RADM Steve Koehler:

We work a design here in an effort called regaining advantage, which is designed to persuade China that any preemptive military action will be extremely costly and likely fail, by projecting credible combat power at the time of crisis to provide our national leaders with several flexible deterrent options to include a full OPLAN execution. It's based on combat credible deterrence and combat credible power forward, and it's based on four lines of effort: enhanced design and posture; strengthening of allies and partners; exercises, experimentation, and innovation; and increased joint lethality. Through these lines of effort, we must field and sustain a joint force that is postured to win before fighting, and if necessary, to be ready to fight and win.

RADM Steve Koehler:

So I'll talk specifically about two of those lines of effort here. And one is joint lethality. To retool our military to support regional conflict against peer adversaries, we must increase joint and combined force lethality. Our investments must harness the advanced capabilities provided by a network of leading edge technologies, such as integrated air and missile defenses, long range precision fighters, joint and coalition command and control networks, and resilient logistics and sustainment networks and suppliers. Our allies and partners must be relied upon, as these capabilities cannot be US-only solutions.

We work hand in hand with regional partners to include Australia, Japan, and the Republic of Korea, as Riki mentioned, to ensure advanced capabilities, support and integrate with allies and partners, to ensure a credible combined fight. Air and missile defense is a leading area for partner integration with Australia, Japan, and Korea, as mentioned, all of which own Aegis systems with regular rehearsals for employing these systems together.

RADM Steve Koehler:

As Riki mentioned, INDOPACOM is the biggest and bluest of our military geographic commands and our area of responsibility is vast, so we can't help but start with missile defense conversations here in Aegis. But the robust peer fight will require we bring the best of what all the services have to offer, integrated together at the machine level in a way that we have not needed in the past. For us, our pathfinder event is the Homeland defense of Guam. It's the most important action we can take to increase the lethality of joint force and fully implement the NVS. And that's to introduce a 360-degree persistent air and missile defense capability on Guam. It's more than just Homeland to INDOPACOM. It's a critical nexus for command and control, logistics, and power projection. We like to comment here in INDOPACOM that not only do we have to fight from Guam, but its importance requires us to fight for Guam. By integrating together the best of each service's programs of record under one battle management system, we can close gaps and provide defense against a mix of advanced air and missile threats. And as I mentioned, it's a pathfinder event for joint employment.

RADM Steve Koehler:

That integration capability will extend forward to support maneuvering forces, be they Army, Air Force, Navy, or Marine elements to bust A2/AD bubbles, and to allow our forces to project joint lethality. It's all within near term reach, and working with MDA, we aren't starting from scratch but simply tying together the best of each of the services' current and future programs to create a joint effect of any sensor best shooter. China is the most challenging requirement for missile defense, but not the only requirement. As Fumez here from NORTHCOM, it's great to have him here to discuss the responsibilities in this conversation. INDOPACOM has supported NORTHCOM's ballistic missile defense of the Homeland against rogue threats for quite a while. The requirement to defend America, including Hawaii, where I sit today, against the rogue threats does not go away. So we must find those synergies in where we are and where the architecture is capable of supporting regional conflict against those advanced threats for Homeland defense, against what is ultimately somewhat simpler though not simple rogue threats.

RADM Steve Koehler:

Finally, we must continue to refine command and control to ensure we are ready to make fast decisions necessary to win against highly capable, advanced adversaries bent on interrupting our decision cycles. While China is a global actor, conflict will most likely occur regionally below the threshold of our strategic nuclear deterrence. If our 70-year track record against Russia is any indicator, this will come to pass. So while we cannot pursue efficiencies... so not not, excuse me. So while we can pursue and should pursue efficiencies and acquisition and modernization in support of global forces, we must preserve the ability to max employ those forces regionally, to enable joint force lethality against a highly capable adversary.

RADM Steve Koehler:

So a long intro, Riki. Hopefully not too long. I appreciate you bringing us together. For us combat credible force is forward to enable the fight when needed. And the hope out of INDOPACOM is to win

before fighting, but I'll tell you the intent is be ready to fight and win so when the fight comes we're ready to take it to the enemy. And with that, I'll yield the floor to my colleagues and look forward to the discussion.

Mr. Riki Ellison:

Thank you, Admiral. Just for the audience, Guam may be the best ballistic missile defense layered for the population that they protect with both the Aegis capability and the THAAD capability that is deployed there. It seems like it would also be the leading edge, because you are the most western part of our country versus China, to set the deterrent. You have offensive capabilities strategic on that island as well. And to build that out would set the example to the other COCOMS, possibly, and to our allies, obviously, to support that architecture, support that capability to get you that deterrent that your request. And it looks from an outsider that the 360 over the horizon persistent capabilities is really warranted in that position, unlike any position. Possibly CENTCOM, but that right there, and solving that problem with the integrated air and missile defense, in addition to the capabilities that are there, it seems like this is the perfect place to lead the world in this kind of vision that I think the goal of missile defense responsibilities are heading towards. It wasn't a question, I just wanted to just throw that out there. I know Jon's going to get a chance to answer it, but I just wanted to get your perspective on how powerful that could be.

RADM Steve Koehler:

Yeah. Riki, first of all, thanks. Yeah. So we're in violent agreement there. I mean, I would tell you that from a node from which we need to project power, we do project power, and the ability to sustain, then, the fight, should it come. The defense there is critical. And as you said, there is a very strong capability here to be very deterrent in our capability and capacity forward, where it is then able to... well, or to be the enabler for combat power to continue to move forward. So in that case, the protection and needs thereof are where we get to the 360-degree requirement to handle the advanced threats that are on the horizon, certainly, and here presently now.

RADM Steve Koehler:

And so completely agree with you. I think it's an opportunity to build out what all of us in combatant commands are looking for. And this is a way to really show how this can be integrated by the services. I think we have to take all the efficiencies of all of that. It's a very unique environment. It's a fixed base US army missile defense capability then with a maritime aspect that is movement. And all of those things have to be integrated to handle this defense and enable this posture forward. So agree with you wholeheartedly.

Mr. Riki Ellison:

I look forward to Jon's position, because I think that the expense of having a Navy ship out in front and rather getting that on land would save a lot of efficiencies in cost for you. And to allow that to have another platform that you can use elsewhere is also, I think, fits well. Okay, go ahead.

RADM Steve Koehler:

I would just comment that fixing a maneuverable force for the defense of a fixed object is not as efficient when we have a strong threat throughout the theater. So the ability to move shipping and Aegis capability for the defense of the maneuver pieces that are then forward, I think is really important. And this fight will be an all-encompassing one where we're going to require all of that. So pulling ships

off fixed site defense to enable then defense or Aegis capability of forward maneuver forces, I think is key.

Mr. Riki Ellison:

Thank you. Thank you very much for that. Our next presenter, and I think for the American public is the most important COCOM in the world, which is the US Homeland of NORTHCOM. And every citizen would want to have this area of responsibility of yours completely defended against everything, but certainly against the threats that we face today with North Korea, and as we expand out. So it's an honor to have you here, Major General Kevin Huyck, as the head of operations for NORTHCOM. And you've got some great things coming. You've got the newest generation NGI, and it's going to come up there to better serve the country.

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Mr. Riki Ellison:

and its ability to defend it from BMD. But there does seem to be some gaps here with cruise missile defense up top on the Arctic. And I think there was a great document that was put out yesterday by DOD on the underlayer that was just brought the concept in there to give you more depth. And it's also great to see that because you have that existing capability and in his ships, so he may not want those ships to be used that way. But the ships are there with platforms, and so is THAAD, once those weapons systems are proven to do what they need to do. So there is some good stuff here in NORTHCOM to integrate.

Mr. Riki Ellison:

And I think there's some similarity between you and INDOPACOM on the cruise missile architecture, how you guys figure that out. But it's an honor to have you. I know I've had some time with the Fumez over in Europe, we did the European Defender of the Year together, and we also did the Dutch Defender of the Year together. So I appreciate your support for the allies. You understand that intricate teamwork that's required. So it's all yours.

Maj. Gen. Kevin Huyck:

Well, Riki, thanks. It is a true honor as the new director of operations for Northern Command. And I'm mindful that there's two patches behind me. The shared command under General O'Shaughnessy is also a NORAD, North American Aerospace Defense Command. As we look at ballistic missile defense and cruise missile defense, it's very clear that there's a nexus overall to the Homeland defense. And again, thanks to my co-panel, that's in [inaudible 00:26:42] as we bring this together. And as we talk about responsibilities, NORTHCOM and the responsibility to defend the Homeland against ballistic missile threats cannot be understated or overstated, it just has to be coming in very loud. We have a sacred responsibility and we're on the watch 24/7, and we can't do it without the partnership of my colleagues and the seniors here on the VTC.

Maj. Gen. Kevin Huyck:

And Riki, you asked, how do we make it better? I think the way we make it better is to talk about it, to see how we transform the way we think about Homeland defense. And most importantly, how we think about cruise missile defense and ballistic missile defense and advanced capabilities, that I know we'll have a chance to discuss a little bit further. And it's always on my mind, missile defense, and really great

comments. Thanks Webb, from INDOPACOM, I couldn't foot stomp more the idea about a 360 defense. And as you sit here in the Homeland, you realize every direction you look has unique geography, it has a very unique approach. And most importantly, we know that threats can come from that 360 in all areas. And being mindful of that, we know that as we transform the way we think about Homeland defense, and we look at how we need to get advocacy and advanced capabilities, it's real great to see the discussion about layered defense.

Maj. Gen. Kevin Huyck:

And I'll go into that just a little bit here. Missile defense is still relevant and at the heart of our sacred responsibility. We can't do it without our key partners to execute the mission. So I want to say thanks, first of all, to the teammates on the screen. But it's that incredibly complex and increasingly complex security environment that really makes me appreciate how we approach this forum. We're not resting on our laurels. It's through advancements in technology, continual testing, and then looking at how we bring in new advances in the systems that we currently have, and then an eye to the future, as you talked about the advances in the next generation interceptor for the future. But the one thing I'll leave everyone with is that failure is really not an option. We've heard a lot of that before, but it's more intently focused on the mission.

Maj. Gen. Kevin Huyck:

I see that as the threats continue to evolve, we too have to evolve to maintain our technical and our military advantages. As General Taylor mentioned, what we need to be mindful of what this does to our overall architecture and the need to improve. We talked about the sensors, we talk about the shooter and the way to get the intercept. And then I'll cover a little bit on the command and control piece, and I look forward to having more conversations about that. But I'll highlight, it's a team sport, and that's why all of us are on the screen here, from setting requirements, to development, and then working responsibilities across the combatant commands and bringing in that warfighter concept. Because we each look at the world slightly differently, but we all have the same aim. And it's Homeland defense, it's the forward defense, the power projection and how that nests in overall. And being in a discussion with INDOPACOM, with Strategic Command and the Missile Defense Agency really highlights those responsibilities are shared across all of us.

Maj. Gen. Kevin Huyck:

And I know the layered defense, which you mentioned, which has taken some press recently, really makes us optimistic about the opportunity to look at new sensors, new potential kill mechanisms, new shooter, if you will. And as was mentioned with the Aegis on Guam, or as we look at Homeland defense here in the continental United States, what's in Hawaii and Alaska, how do we integrate all of those sensors for a way forward to be more effective? Because we know the missile threats today require that integration. We have to have a way to sense them, to continually track and discriminate them. And most importantly, is that to make sure we don't get to an end game where we have a challenge in intercept from there. So it's having the awareness of those threats, which could come from many different regions or even under the sea, reminds us that we need to keep overall situational awareness.

Maj. Gen. Kevin Huyck:

And here at Northern Command and our co-command with NORAD, we know that using sensors that are out there already to feed into a common system really help in our Homeland defense design. And it also enhanced our ballistic missile defense. And we see the use of Aegis, and we see the use of FAD in

that layered defense really gives us an opportunity as we move towards the future to use what we have that's proven, and develop that overall layered capability. So as we modernize this Homeland defense layer here in Northern Command, there's a few areas that we're keenly focused on. One is enhancing that domain awareness. And our commander is really clear that if we have good awareness of where the threats are coming from, any potential attack or threats to our Homeland, and we're able to connect the shooter to complete an intercept and defend, that's huge success. But it's all about the command and control infrastructure and architecture that really makes it glue together.

Maj. Gen. Kevin Huyck:

And that was mentioned by INDOPACOM, I'm sure the other panelists will highlight for that. And then we have continued to push the requirements of what it looks like for a future defensive capability. And we have a real promising look to the future and the advancement of when the NGI will come into play. And it's these key elements approach, how we look at it as an entire ecosystem. And I key it on that word because an ecosystem lives and breeds with all the other pieces and parts and partnership that flow into that. And we have everybody represented here today, which is really, really important. So as it was just noted, that warfighter perspective leans us into thinking how we transform the way we look at Homeland defense, ballistic missile defense, and cruise missile defense, and we're seeking new ways to enhance and shape those capabilities based on how we layer the defense and how we use advances in the technology.

Maj. Gen. Kevin Huyck:

One of your previous forums, you talked about the space layer. And I'd be remiss to say that as we look at Space Command as a great partner as well, and how we can leverage that space layer for sensing ballistic missile tracking, and even the future developing hypersonic capabilities with the hypersonic glide vehicles. We know as that enters the discussion it becomes even more important, again, as we build this ecosystem together. And a global network of sensors would really help provide very good situational awareness from a launch, all the way through intercept. And then we blend in all the other sensors that we're talking about with advanced capabilities.

Maj. Gen. Kevin Huyck:

And I'll leave you with the concept that we have, and it's continuing to evolve as an ongoing concept, but it's our SHIELD. It's easy to say SHEILD, but it stands for the Strategic Homeland Integrated Ecosystem for Layered Defense. And every one of those words really fits nicely together, but the layered defense piece and the integrated ecosystem blend together when we talk about the cruise missile defense dynamics and Homeland defense and the ballistic missile defense all in one. And as General Koehler mentioned, the big wrap on that is the command and control. How do we sense the environment to maintain that all domain awareness? And how do we actually work the control piece of it as well to be effective in defense?

Maj. Gen. Kevin Huyck:

And as I said, it's an ongoing development. We look at what the architecture we can build out in the future, but this goes to the transformation that our commander has us looking at in NORTHCOM and also in NORAD, but really it's to joint all the main command and control, blending in the sensor grid that's layered with a defense for our Homeland. And we can't forget the partnerships that we have with Strategic Command with INDOPACOM and the other combatant commands that are out there to blend into defeat mechanisms, and to be more effective in that entire lay down. And I know the architecture,

the infrastructure, and how systems talk together at the machine level to speed decision and share data is extremely important. And I look forward to any questions that we have on SHIELD, or how NORTHCOM integrates across with the future developments. And back over to you, Riki, thanks for the opportunity to open up.

Mr. Riki Ellison:

Thank you Fumez, that was awesome. Really appreciate you bringing together the space perspective of it and being able to work that discrimination with what HBTSS is, to be able to lower the shot doctrine on those layered defense capabilities. What I'm interested, what we're interested in is, where do you and INDOPACOM come together on the architect where it's the same thing that you guys are benefiting from? Because we don't have enough money, I don't think, to fund both INDOPACOM and NORTHCOM for doing separate architectures. We just don't have it. It seems like INDOPACOM today is going to get momentum and get movement because of what the Rear Admiral Koehler had stated, how important that position is for them. So is there architect that we can share together that would be beneficial in NORTHCOM from what INDOPACOM could do or would do?

Maj. Gen. Kevin Huyck:

I appreciate that, Riki, it's a really good leading question. And I know, from Webb and I, we have a lot of these discussions as well. I'll take back to one of the initial comments I said, which is the aim to have an integration across the combatant commands to understand our tactics, techniques, and procedures, and the communications that we share from there. And I will say, based on some of the Pathfinder efforts that he's working in, and most importantly, some of the lessons that he's learning, I think will really inform where we are as we look to build out and continue to modernize the Homeland defense piece in continental United States and even up in Alaska from there. So there's a shared responsibility from there. The programmatic and what the overall architecture will look like for the future, I have to say, when you're on a team the best part is to understand what your objective is, and then continually work towards that.

Maj. Gen. Kevin Huyck:

So as we share the responsibilities and we look how the architecture lays out, we see where the funding goes. And most importantly, we get the lessons learned from that. I think we might find in the future as we continue to transform the way we think about Homeland defense, ballistic missile and cruise missile defense, we can learn a lot of lessons from that. And yes, there's a programmatic layer, but really, I think as we look to the decisions that are made, Northern Command definitely supports anything that benefits our Homeland defense overall. And I think that's the right way to look at it, because the teammates that we have here know, like you said, there are fiscal responsibilities to be managed and there is an architecture to continue to build out. And I think we might find there's some economies overall to get after the end state, which is that missile defense. Over-

Mr. Riki Ellison:

[crosstalk 00:37:46] Thank you. Thank you very much Fumaz, that was great. Our next speaker is a Lieutenant General Dan Karbler, and he is the JFCC IMD, integrated air missile defense Component Command for STRATCOM. It's also great to have an army perspective coming from him, he is the highest ranked army general on air missile defense, head of the army Space and Missile Defense Command. Dan has done everything with missile defense on the army. He's done the testing evaluation. He's done the 94th, he's done the 32nd. He's done the school house, he's been in INDOPACOM arena. He's been here

in the United States. He knows the issue very, very well with the tools that he's been around and integrated.

Mr. Riki Ellison:

But what also is pretty important to note is that Dan was the chief of staff under the former STRATCOM commander, John Hyten. And John Hyten and Dan had to submit into the MDR, the global responsibilities for missile defense, or start to look at that and influence and shape that. So it's great to get him onboard here and hear what he has to say as a STRATCOM Component Commander, and also possibly as the army. Because I know the convergence issues and so forth, and his perspective would be wonderful. And congratulations on your daughter, Lauren graduating from West Point, Dan. That's awesome. Thank you.

LTG Daniel Karbler:

Hey, thanks Riki. And I don't know if I set a good example for her, but she'll be an air defender too. So everything that we're working at is making sure that the generation close to 2020 gets the best air missile defense capabilities to keep everybody safe. But I appreciate you inviting me to be on the global missile defense responsibilities forum today, it's really an honor. It's great to be here with Webb and Kevin and my good friend Jon Hill from the Missile Defense Agency. I don't know if Jon, if this will count for our every other week touched up or not, but we'll take a take credit for it. Because it is about relationships as we're into global missile defense responsibilities and how you build on those relationships, how you interact the frequency of them. It can't just be a pickup game.

LTG Daniel Karbler:

And in the missile defense arena, because the community is pretty well knit, I feel pretty confident that it's never a pickup game. I took over Space and Missile Defense Command about seven months ago. It seems like a COVID environment, a COVID full timeframe ago, but seven months ago. When I took command, I said in my 32 years of being in the army, never had I seen Space and Missile Defense Command, more relevant than it was then. And that holds true for today. When I look at the global missile defense responsibilities, I got to just share a little bit with what my responsibilities are and how they play into that. So as you mentioned, Riki, yep, I'm the joint force Component Command for integrated missile defense, ARSTRAT, Army Strategic Command. So I work for now Admiral Richard.

LTG Daniel Karbler:

And you're right, coming out of STRATCOM for almost three years as the chief of staff, where Admiral Richard was the deputy, and General Hyten was the commander. And then as we went through the MDR, valuable experience, both being able to participate in the MDR, but also just learning from those two great leaders, General Hyten and Admiral Richard. So I work for STRATCOM, but I'm also the army service component to Space Command. So I'm the ARSPACE. So General Raymond turns to me for all army and space capabilities. And that's important to me because we've got to integrate our space capabilities into the missile defense mission.

LTG Daniel Karbler:

We've talked about it a little bit before. I'm also the supporting commander to NORTHCOM. We provide the 100th GMD brigade, provides us with our Homeland missile defense. We like to say it's 300 defending 300 million. But we provide those forces, and then NORTHCOM has the operational control of those forces, again, to keep our Homeland protected. And then lastly, I am the army's air and missile

defense enterprise integrator. So I just correct you just a little bit because if he's watching, he'll send you an email. But Jim Dickinson is really the senior army air defender, but I'm the senior army air defender in an army position right now. But as the AMD enterprise integrator, I report directly to the secretary of the army and the chief of staff of the army on all those army specific air missile defense issues that come up.

LTG Daniel Karbler:

And that can be from our forces, our modernization, where we work with the cross functional teams, to unit readiness, to training exercises, et cetera. They all kind of funnel up to me, obviously with a lot of help from different folks out there, Fire Center of Excellence, the CFT, the double MDCs, et cetera, to be able to provide a common operational picture to the army senior leaders. So let me double back a little bit, I just laid out the four big hats that I wear. So I just want to touch on each one of them if I could, a little bit. So in STRATCOM, you'll hear Admiral Richard talk a lot about the [inaudible 00:43:18] strategic deterrence failure. And a lot of times when we think about STRATCOM we only think about nuclear operations. When we think about the triad with STRATCOM, strategic deterrence has three elements.

LTG Daniel Karbler:

Two of the main ones are, impose on [inaudible 00:43:32] cost, and denied benefit. Missile defense plays a major role in denying benefit. So my interface with STRATCOM is to make sure that those missile defense forces are there and available, whether regionally or globally to make sure that we're denying adversary benefit. And that's super important as we look at where we have capabilities around the globe to make sure that they are equally dispersed to the combat commands to support their mission needs so that the adversaries don't feel that they could take advantage of a lesser missile defense capability in a particular region. And every week we are assessing our risk of strategic returns failure, and providing that assessment to Admiral Richard.

LTG Daniel Karbler:

Also in my ARSTRAT hat, I support the Strategic Command and the OFSC, which is really the requirements governing body that we have that enables all the combat commands, STRATCOM, as well as the Missile Defense Agency, to talk about the requirements and make sure that we are all one accord, as close to one accord as we can be as we talk about operational issues and push requirements up to the Missile Defense Agency. But I also support STRATCOM and the missile defense executive board, the MDEB, again, to make sure that we understand the requirements that are going up, and then understand where the Missile Defense Agency is with respect to its acquisition approaches and where it's heading to.

LTG Daniel Karbler:

So those are some of the missile defense governance pieces. And my touchpoints within Strategic Command. Now let me shift focus just a little bit to Space Command, and my role as the army space component for Space Command, working for General Raymond. And it is fortuitous because Jim Dickinson is the deputy commander at Space Command. So we really do have a really solid missile defense foundation with the base command. And it is important, because as we explore hypersonics and we explore the threats, you've got to be able to see it first. You've got to be able to see it before you can shoot it. And our HBTSS and our space sensing layer has got to be able to look at and see those threats as they come out. And not just because we need to be able to shoot them, but we need to be able to have attribution, which adversary launched them, so that we can counter that.

LTG Daniel Karbler:

General Raymond has got the responsibilities for the global sensor manager in his unified command plan responsibilities. STRATCOM, this is where the bridge happens. STRATCOM owns TPY-2 radars. They're the COCOM for the TPY-2 radars. We've got them out in INDOPACOM, we have them in CENTCOM, and EUCOM. So they're across three of the geographic combatant commanders. Those TPY-2 radars, in addition to their missile defense mission, also provide General Raymond with some space domain awareness capability. The nexus within what I do from STRATCOM and SPACECOM, we're able to provide the operational and the situational awareness to both General Raymond and Admiral Richard, for those TPY-2 radars. And again, it's pretty unique, and I really enjoy having requirement to be able to track what the TPY-2 radars are doing operationally. Again, from the missile defense perspective and from the space domain awareness perspective.

LTG Daniel Karbler:

With respect to NORTHCOM, the 100th GMD and the 49th GMD battalion up at Fort Greely, we have a great relationship with that brigade and providing that to Northern Command. We do the organized, train, and equip. So training, the exercises, the certifications of all of those crews Space and Missile Defense Command does. And then we provide that ready force to Northern Command for their operational control. They have them 24/7. Eek, it's a National Guard unit. It's the Colorado National Guard that provides those forces. They are a National Guard status until they're on mission, and then they're in the Title 10 status. So it's a very unique organization that we have, but it works great, again, with the superb help of Northern Command.

LTG Daniel Karbler:

And then lastly, as the army's air missile defense enterprise integrator. So that gives me the distinct view of the AMD forces and capabilities, as I said earlier. I give that advice and recommendations to the sec army, the chief of staff of the army. So if there is an air defense issue that comes up, I'm pretty much on speed dial back to the chief or the vice or the sec army for an issue.

LTG Daniel Karbler:

Some of the big issues that are up right now, Patriot Uptempo. As we know, the Patriot force is probably one of the most highly deployed forward station to conventional forces in the army. They're over in CENTCOM right now doing a great job over there. And there's just a huge demand on the army's Patriot forces. One of the things that I like to say, though, is people keep clamoring for more and more air defenses. We can't Patriot our way out of this. I can't remember if Webb said it, or Kevin said it, but AMD is a team sport. And so we can't just always rely on the army air missile defense forces to provide capabilities. It really does have to be a joint effort. If I could use a really bad analogy, and Jon Hill's a technology guy so he's probably going to hate me for it.

LTG Daniel Karbler:

But if you remember the old graphic equalizer days. Riki, you probably still have one in your family room. Remember the old graphic equalizers, and they had the toggle switch of treble and bass and left speaker, and right speaker, and front and back, and everything. Because at the end you always wanted to play your wonderful eight tracks, Riki. You always want to have the best music coming out the backend. Well I look at integrated air missile defense as that graphic equalizer. Where we want good IMD music coming out the backend. But unfortunately right now, from the army perspective is, the toggle switch is, we take active defense, army active defense toggle switch. And that thing is thrown all

the way to the top past defense, attack ops, coalition and allies contributions, space contribution, cyber. Those are all not quite-

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LTG Daniel Karbler:

Space contribution, cyber. Those are all not quite thrown up as high as they could be, should be, as we look at the [inaudible 00:00:08], again, as a team sport. So what we're always trying to do is make sure that we take and toggle those switches, got good capability and that they're all set just about right, so that we don't throw our forces off balance, because globally, if we're unbalanced in one area, then the other geographic combatant commanders could be without capability. So that's what I want to leave you with, Riki. Again, I really appreciate the opportunity to speak in the forum here. It's a migrated honor to be able to command the soldiers and civilians of Space And Missile Defense Command, as well as, the soldiers, sailors, airmen and Marines of JFCC IMD. So subject to any questions or comments. Thanks, Riki.

Mr. Riki Ellison:

Yeah. Thanks, Dan. Great analogy. Way to be able to picture that team through a stereo system is great. I do want to ask, because of the myriad of commands that you advise, have we changed anything on global responsibilities? Are you comfortable with you and General Hyten were looking at maybe re-addressing some of these responsibilities to become more efficient. It looks like we're still doing the same things. And are the COCOMs okay with that? Or can we be better with that? Or do we need more capacity? Or do we need better policy? How do we make this more efficient? Because there's a lot there that you threw out that doesn't seem to be that efficient as a full go thing on it. It may have worked 10 years ago, but as we get into a pretty high, near-peer competitor, it looks too big to handle there a little bit.

LTG Daniel Karbler:

Yeah. No. That's a great question. It's very topical. As principle of unity of command is really important. And in Missile Defense, we do have to do a better job of unity command. And I know that the combatant commanders are working in their dialogues with the Secretary of Defense with respect to their missile defense missions. We're working on that and there'll be more to follow up. But that's really a lot of the followup after the MDR came out, because it was. It was getting exactly after what General Hyten and we were seeking, coming out of the MDR.

Mr. Riki Ellison:

Okay. Well, thank you. And it's got to be tough, because when you have those limited capacities of Patriots and THAADs and you move them, then the other side takes advantage of when they move them out. So it's difficult to deal with that. And I'm sure getting the newer technology, the cheaper technology, the more efficient capabilities in the field quicker, so we can relieve some of that pain on that, because I don't know if we have the funding to increase that capacity that much. It's more about getting... What Jon Hill is in charge of is developing more slick, efficient technologies that are going to help everything to be able to do that. But really appreciate it. Thank you, Dan.

LTG Daniel Karbler:

No. But again, you bring up a good point is... So the Army's invested 24 billion into the air missile defense capabilities. So as you look at IBCS that's coming online here, and that test is going to start here very shortly, that's going to really help us out in the efficiencies, as we look at bringing in JFCC and other capabilities to help us bring back our short-range air defense capabilities, counter UAS capabilities. The army is significantly invested into those capabilities as well. So in addition to Patriot and THAAD, yes, I think we all recognize that there's a capacity challenge there, but some of the programs we have coming online include LTAMDS too. Some of these programs that we have coming online are really, really going to help us out mission set.

Mr. Riki Ellison:

And as you saw that underlayer, Dan, it looks like THAAD... I mean, not looks. THAAD's part of that underlayer, so those things could be also taken for NORTHCOM's role if they ever needed that as an underlayer. So it even puts some more pressure on your ability with limited capability. Is that an issue? Or is that something you got to manage again with your hats?

LTG Daniel Karbler:

Yeah. I just don't have a good answer for you right now, Riki, just because of the nascent capability of it. And plus OSD CAPE is going to do AoA. They're going to do a study of it right now. And we'll contribute to that to make sure that whatever capabilities are needed for the underlayer should THAAD be one of them, we'll be sure to inform that decision.

Mr. Riki Ellison:

Okay. Thanks, Dan. I appreciate it. Okay. We've got probably the hardest job of them all is Vice-Admiral Hill, who is the chief architect of everything. And he's got a limited budget. He's got to do R&D and he's got to make all the COCOMs and their specific requirements the best he can with what he's got. So he's known. He's where he's at with three stars for his ability to integrate systems. that's what he's great at. He's done it from very young all the way up. And he's got a very unique ability to do that. And he's at the right place at the right time. So I'd like to introduce to everybody the Director of the Missile Defense Agency, Jon Hill.

VADM Jon Hill:

Yeah. Good afternoon, everybody. And hello, Riki. Thank you. I know there's a Mr. Rood kind of hiding in the background there, but good afternoon, sir. Great to not see you. I'd like to welcome Fumez aboard. It's going to be great partnering with you. Thanks for what you're already doing there at NORAD and NORTHCOM. Always great to see my good friend, Web Kayler. Since we've been grounded from traveling, I haven't had the opportunity to be out in INDOPACOM, sitting in your office and strateg writing about the future. And of course, my partner Dan Karbler there. And we really do get together often and talk about stereos and our favorite classic rock bands.

VADM Jon Hill:

So it is great, great to be here with everyone to discuss a very important topic. We talk a lot about the Missile Defense Agency's mission. And the mission to me, I always tell my folks, it's a noble mission, because fundamentally it is about just protecting this country. It is about layer defense. It actually says that in the mission statement that has been around for a long time. I think it stands the test of time. Layered defense to protect the country or deployed forces and our allies and then across all phases of flight. So it's got some visionary aspects about it.

VADM Jon Hill:

And Dan already talked about how defense is part of deterrence. It really is. And so first time I met with the Admiral Richard and we reported up to STRATCOM, we talked about the importance of that and how it is a priority for STRATCOM. I'm going to swing back around to that in just a second. When you look at the priorities of the Missile Defense Agency, it's not just for the convenience of how we bucketize the limited funding that we do have, but it really kind of speaks to, not only my people, but to the external audience. When I say priority one is to support the Warfighter, I mean that.

VADM Jon Hill:

And I will tell you, having these gentlemen online with me today, I work for them. My team works for the combatant commands. They are how we defined the Warfighter. So that is priority one. And if you look at our budget, we take a lot of heat for this. It is where the majority of our budget goes, into that sustainment support so that the service can operate and sustain whatever in whatever geographic capacity they happen to be in. Number one priority. And, oh, by the way, despite COVID-19, we never missed a beat on ensuring that we are standing behind that priority.

VADM Jon Hill:

Priority number two is a tough one. That is the capability and capacity, building out for structure, upgrading shifts, working on the next THAAD Battery, working on the next upgrade to SM-3. Very important. And I would say at the core and the heart of what the agency does is to develop and deploy new capabilities that can be used globally by our Warfighters represented here today by these great gentleman.

VADM Jon Hill:

And then finally, the third one is the advancing threat. And we've kind of picked on it a little bit in this conversation today. I remain concerned about my bread and butter, which is ballistic missile defense, because it has not gone away despite the quietness that we might be getting from some areas that were pretty active just a couple of years ago. Those threats are advancing. They're becoming more complex and we've got to address them. And so we talked about the space layer earlier. That's an important part of dealing with some of the capabilities that are coming forward in these ballistic missiles.

VADM Jon Hill:

I'd say strategic cruise missiles, that is a real threat. And so we've got to get after that. And then what we've already seen demonstrated and we see demonstrated on a regular basis are these hypersonic threats, which come at you, either ballistically launched. They're dropped from aircraft and they come as cruise missiles. So from the sailor standing on the deck or the soldier by the battery, they all look the same. They're maneuvering and they're going very, very fast. And so we've got some big challenges up for us as we face the future. And again, that threat's going to drive all that.

VADM Jon Hill:

What works for us is how we're chartered. How are our requirements? How did they come to us? So when Riki poses the question about potential conflict between the different combatant commands, how do we define layer defenses? Is there some subtlety there? To me, there is no life. Our requirements are consolidated by strategic command. STRATCOM owns that process. Dan talked about the Operational Forces Standing Committee. That has its heritage with the JROC. It is a direct flow down from the JROC and it is headed out by STRATCOM. So Missile Defense and Missile Defense Agency relies on that

Operational Forces Standing Committee with representatives from all the combatant command and JFCC IMD consolidating those requirements. Because the last thing you want me to do as an acquisition organization is de-conflicting requirements. That is not what we should do. And so the processes in place for STRATCOM to consolidate those.

VADM Jon Hill:

And so whether those requirements in that process is stay at STRATCOM, or if they shift someplace else, it's got to stay together. Because as soon as you unconsolidate, it's going to become chaos. So I'm able to build a [inaudible 01:00:14], I'm able to roll right through the process and deliver capabilities today because I know where my requirements come from. And that's just absolutely critical. So with that, Riki, thanks. Thanks for the opportunity to chitchat. I guess we'll roll it back to you for question and answer. Thanks.

Mr. Riki Ellison:

Thanks, Jon. You brought in the cruise missile defense element, what's the best way to do this for you to have the funding or support, because you're maxed out? So is that new funding? How do we get that mission somehow under your arms with your architect? I know there's some charter that you're the executive agent for cruise missile defense, but how do we do this? Or do we leave it the way it is with separate services doing their own cruise missile defense capabilities?

VADM Jon Hill:

And you kind of touched on a little bit there, Riki. We do nothing by ourselves. All the capabilities that we can talk about and attribute to the Missile Defense Agency are typically tied to a service, and they're in the execution mode and they're operating and sustaining those different capabilities that are out there. I view cruise missiles, and that, the very lethal threat to the Homeland, as sort of in that same world to where we should not have a scarcity mentality. We shouldn't go look at the MDA budget and say, "Oh. Well, we've got ballistic missile defense. We have cruise missile defense. We have hypersonic defense. Therefore, let's just divide the budget in three ways." That is not how the enemy thinks. That is not what the adversary is going to throw at us. So the nation needs to take a hard look at that threat.

VADM Jon Hill:

And as General Karbler said, there's an AoA going on right now to take a look at specific threats that will drive us into the investment streams that we make. And if the country decides that they're going to spend more, I say, spend more. But to sit there and say that we're going to divide up the existing budget that we have and have a scarcity mentality is just dangerous for the country.

Mr. Riki Ellison:

I absolutely agree. Thank you, Jon. I'm now going to turn it over to my new board member, the former under-secretary, John Rood, to start off his questions and reflect the questions from the audience. So John, it's all yours.

Mr. John Rood:

Well, it's great to be with all the panelists here remotely. We got quite a few questions, several pages, that have been sent in from different people listening. So I'll ask some questions and try to summarize some of those questions to the various panelists. But the purpose of today's webcast, of course, was

talking about global missile defense responsibilities. And I thought Lieutenant General Karbler talked about the fact that different COCOMs are looking at that and that there's some examination of that.

Mr. John Rood:

General Karbler, I was wondering if you could elaborate a little more on that about as you look across that from your perch as JFCC IMD Commander and somebody with STRATCOM as the role of the synchronizer of operational capabilities across the joint force, where do you see the major issues and the things that need to be improved? What isn't working as well as it should to be much more efficient? Of course, these systems are working well today. They were put in place though some years ago. And the threat is closing the timelines that we have to work with. So General Karbler, could you just talk about some of the areas for improvement?

LTG Daniel Karbler:

Sure. So at the regional level, the Air Missile Defense's fight is, if you would, under the geographics, it has done very, very well. And I have my experience out in both the 94th AAMDC where I worked very closely with then General Carlisle as the PACAF Commander. And then I was also fortunate enough to be deployed into CENTCOM when General Hosten was the JFCC. And those AAMDCs are out there linked very tightly with their JFCCs and their war fighting capability is really, really well. But we bring it above the operational level and we start to take a global purview of it as Admiral Richard has right now. The unity of command starts to get a little shaky. And some of that is born by UCP language that STRATCOM has as the coordinating authority, which doesn't really put too much teeth into one person being responsible for it.

LTG Daniel Karbler:

I don't want to speak for Jon Hill, but my guess is he'd probably be pretty happy to do one stop shopping for a requirements person who is not just a coordinated authority, but who is actually saying, "I'm the one driving the requirements chain." But that's really the operational levels. And so I think when we take a look at these COCOM reviews that are ongoing and we look at UCP language, and again this is born out by the outcome of the MDR, I think we can get after fixing that. Over.

Mr. John Rood:

Okay. Thank you very much. Admiral Hill, would you like to comment on that? In MDA, of course, you're the chief architect, but also because of MDA's unique authorities, you do have a lot of flexibility to set requirements and you've set up some bodies to work with the Warfighters in a systematic way where Warfighter priorities are inputted, they are reviewed. Can you speak to that? And how do you see the areas for improvement and working globally from your role as the chief architect and principal requirements setter?

VADM Jon Hill:

Again, thank you. It's a tough game. Someone said it earlier that each combatant command has its own unique attributes. So if you're defending CONUS, for example, there are some very unique attributes and there are some very unique threat vectors that are coming there that you maybe would not see out in the Pacific. Very unique out in Pacific, big waters. We used to talk about the big and blue. So we have to account for the fact that you've got some differences. It would be great if we all had a portable missile defense that we just kind of go drop anywhere, the kind of [inaudible 01:06:10] most people

view THAAD. But the reality is there are unique differences in threat, threat vector, capabilities, rogue nation versus near-peer. So you have to account for that.

VADM Jon Hill:

But I would say that that Operational Forces Standing Committee is the key. It is our version of a JROC or Missile Defense. It works its way up to all the key stakeholders and decision makers in the Missile Defense executive board. And I think that that process is absolutely critical. I've got some freedom to move some amount of dollars over, let's say, to... If I want to help kickstart a site survey to help NORTHCOM, for example, that's something I can go do without having to ask a lot of permissions and go through big cycles of. But to make big swings, to make investments in, let's just say you pick a sensor. That requires a lot of work and coordination and rightfully so. It is taxpayer dollars, and so... We get the oversight that we have, but I would tell you, just about everything in my budget is someone's number one priority.

VADM Jon Hill:

So when we go through the hard-knocks of trying to find efficiencies or when there's a need to take a budget cut, it is hard because I'm going to get somebody irritated with me. So the only way to come through that is to communicate often. And the OFSC is a formalized way of doing it. The weekly conversations I have with Dan Karbler are very important to me. And the engagements that my team are doing right now today with NORAD NORTHCOM to see the art of the possible for the architectures for cruise missile defense, for example, critically important.

Mr. John Rood:

Admiral Hill, just as a follow-on question, you talked about hypersonic missile defense. You also talked about the importance of cruise missile defense in addition to ballistic missile defense. But working across the unique requirements that you mentioned in the global combatant command structure, how do you see your role on hypersonic defense, cruise missile defense in addition to the ballistic missile defense role? And what's the best way, particularly as you get down to cruise missile defense, each of the combatant commands, whether you're NORTHCOM or INDOPACOM in the discussion earlier on Guam defense comes into place? So where does MDA's role kind of begin and end? And where do the services have their role to do some of that work?

VADM Jon Hill:

Yeah, that's a great brunch question. Thank you. And it's probably what Riki was kind of hinting at a little bit earlier when he started to get us riled up about, you know can't the layered Homeland defense architecture and for Northern Command be demonstrated, say, for defense of Guam. I think one of the things that we can do to get a lot of lift across the way is to work with the services. So for example, I get very excited when we can find a capability, let's just pick the Navy, and we can deploy that very quickly with some small evolution to it, to maybe just take on a different part of the threats set. And then deploy that with the Army. And how quickly you can do something like that. So I think it is.

VADM Jon Hill:

If we're going to deal with the global nature and the differences across them, leveraging existing capability gets you there quickly, constantly assessing what technology pull and push you have to have for the really advanced threats downstream, coordinating with the services so that at the end of the day, they're going to be operating them and making sure we're meeting those combatant command

needs. And John, I'm not sure if I answered the question of where you're going with. That was my best whack in it.

Mr. John Rood:

Okay. Thank you. Let me go to INDOPACOM and ask Admiral Koehler about... You talked about the critical importance of protecting Guam, both in order to allow for power projection from Guam. You've gone out to the services and MDA with a request for capabilities. Do you have a firm timeline on when you think a cruise missile defense gap filler will be coming your way? Or how do you plan to handle that type of cruise missile defense, particularly the hardest ones are usually low-altitude cruise missiles? Can you speak to that place?

RADM Steve Koehler:

You guys got me? So, sir, thanks. So timelines, I think, are pretty tough. We're working with Jon very specifically within the fight up here to get after this, closing this gap and doing that and trying to rely on existing capabilities that through Jon Hill's help and overarchingly joint help writ large, integrating those things so that we can get after that gap. So the goal would be is I can work this in the fight up. The current threat and reality is here and mere. And so that's the opportunity to get after it so we can protect and fight for and from Guam. I don't know if that answers your question. I can certainly talk a little more about it.

RADM Steve Koehler:

I would pile on with what Admiral Hill talked about, on what he can and is doing in an effort to get after the threats that you mentioned and brought him. And it's all about the architecture and integration thereof. And so working with him and his team and getting all of these current capabilities to integrate, to enable sensor and shooter capability, is really important, and working specific requests for the defense of Guam and Homeland defense system Guam is what we continue to work through in the budget process. And I'll standby, if there's any further comments. Over.

Mr. John Rood:

Well, just the followup to that, Admiral Koehler, would be so the role, for instance, for MDA with things like development of THAAD, which has been deployed in Guam or a TPY-2 radar. There's also the role if Aegis ships are deployed or there's been some discussion about potentially Aegis Ashore being considered for Guam. But for cruise missile defense, then presumably the Army, General Karbler talked about some of the capabilities that are being developed, they would have the principal role for putting in place low-altitude cruise missile defense. Where do you see... Because this is part of the discussion we need to have to try to improve the way that we respond, is where's the roles and responsibilities of the Army discharged to provide that? And how does that integrate with what MDA is developing and fielding?

RADM Steve Koehler:

Well, sir, I think we continue to have, through the GFM process, the capability to get a level of Patriot capability in Guam, those types of things. I think that, in the short term, helps fill some of those gaps, but I think integrating ships, which right now, as you say, we have them or have the capability to respond in Guam, that fixes those particular sites there and then limits the maneuverability. And you have to make those risk decisions as you move through capability sets and threat timelines. But I think there's some capability to bring Army systems in and around Guam, in and around the first island chain

to get after what you're saying. And I defer certainly to General Karbler and Admiral Hill if there's something I'm missing there. Over.

Mr. John Rood:

Understood. Let me turn to the NORTHCOM then. And Major General Huyck, cruise missile defense is something, of course, that NORTHCOM and General Shaughnessy has talked a fair amount about. You're also looking at advanced systems being developed by Russia and China for hypersonic defense. And then you've got the important role for C2 and for executing defense of North America. Can you talk a little bit about what do you most need in order for NORTHCOM to fulfill its responsibilities to defend operationally against all of those threats? What do you most need from the development community? And what do you most need from your fellow combatant commanders that will allow you to do that? Because you don't just want to be the catcher's mitt where you're taking incoming from all of these systems. You want to be able to prosecute a defense with both-

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Mr. John Rood:

From all of these systems. You want to be able to prosecute a defense with both active defense but also there are offensive capabilities that Stride Com and others would import. Can you speak to that a little bit, General Huyck?

Maj. Gen. Kevin Huyck:

Hey sir, thank you. And it just makes me smile because I sound like everybody wants to give NORTHCOM and NORAD all the capabilities, and we'll take everything to be in there. But hey, let me highlight my favorite devices, the eraser to erase the lines between the combatant commands to bring us together to have the overall discussion of it is the layer of defense back here in the homeland. It's as Admiral Koehler mentioned the forward projection, whether it's the areas he's talking about in Guam as an example.

Maj. Gen. Kevin Huyck:

But what I will say is the things we need in NORTHCOM and NORAD all start with how we integrate the systems. We look at the sensors out there, and we need sensors that can continue to give us the battle space awareness and give the commander a decision space. And that's from the launch all the way through the intercept and the ability to track. And that's ballistic missiles, but also over the horizon sensing capabilities that are either forward-based or space-based or what have you. And if you can take that situational awareness and bring that into the mission, I think you'll find that we're not going to be reacting. We'll have decision space to achieve a successful intercept. And then it's that command and control layer, as I mentioned earlier, that kind of glues everything together.

Maj. Gen. Kevin Huyck:

So it really all starts with that sensing capability. And as I heard General Karbler talk about, there is a keen focus on that to continue to look at requirements and develop them. Admiral Hill, you mentioned the same type of forward-looking, because we don't want to be in a reactive state. We want to be able to, I would say, fight on, defend on our terms from there, and it all comes with that battle space awareness.

Maj. Gen. Kevin Huyck:

And then finally, we've talked about a lot of systems, and NORTHCOM's perspective is, and NORAD's perspective is those mechanisms that enable a successful intercept, a GBI, or some of the other systems that we talked about, continued advances in there. And again, the idea is to be transformational, think forward, and continue to advance the capabilities that nest together. Because that serves all the combatant commands, and it's not just talking about the homeland defense from the continental U.S. or the NORTHCOM area of responsibility.

Mr. John Rood:

Sorry, unmute.

Mr. Riki Ellison:

You're good. Go ahead.

Mr. John Rood:

Thank you. Admiral Hill, as we were doing this video conference here, of course, the news is continued, and one of the stories that has begun to be reported on the wires is that Undersecretary of Defense Mike Griffin has resigned today, as well as his deputy, Lisa Porter, effective July 10th. According to these news reports, Dr. Griffin and Dr. Porter indicated they plan to pursue a private sector opportunity that they've been approached about to do that together. First of all, can you confirm that that's the case? And then secondly, that's of course your reporting chain, and if it is the case, who would be the acting that you would report to, and what does that mean in the very near term for MDA's responsibilities?

VADM Jon Hill:

Great, thanks. I think I speak for everyone here on the net that partner with me today that if requirements, development, and the development systems moved as fast in those sorts of announcements, we'd be in a really great place. Dr. Griffin and Dr. Porter announced this morning during their staff meeting that they had submitted their retirements and that they were going to be pursuing... Setting up a company someplace, which I think is what the news is saying now. Now he followed up with an email and exactly the words that he put the email I have actually seen in the press. So to me, it's just fascinating how fast it moves. So yes, I can confirm that because I did ask him if we could share that news, and I have shared that news with my team. In terms of who will replace him in an acting position or who will be nominated, I don't know. Not [inaudible 01:19:21] that. And again, he just announced it this morning during our staff meeting. So Mr. Rood, you continue to be really, really good.

VADM Jon Hill:

I will tell you, in terms of the changes to the Missile Defense Agency, I see no change again. I mentioned our mission earlier because I love our mission. Layer defense, protect the country, protect deployed forces and allies. That mission has not changed in over a decade. I don't think that anyone's going to come in and try to change it. But the one change that we did do over the course of the last couple years, really, my predecessor he just sent me a love note so I'll mention it, General Sam Greaves, we always debated whether or not that word ballistic belonged in our mission statement.

VADM Jon Hill:

And then we thought about adding hypersonic, and we thought about adding cruise missile, but make sure we say strategic cruise missiles because we don't want to do the self-defense cruise missile work that a service does. And so finally we just took it off. And so now we just say missile defense. So I don't think that's going to change, and as we know more in terms of who may be acting and who would come forward, I don't see big swings. Again, my priorities and requirements are set by STRATCOM, who's consolidating across [inaudible 01:20:30] commands in the services. Over.

Mr. John Rood:

Very good. And then let me just... Some of the questions we received of course from folks in preparation for this session, another thing that's in the news, and I'd like to ask Admiral Hill and INDOPACOM Admiral Koehler to respond, is the Japanese government announced in the recent days that they were going to suspend pursuit of the Aegis Ashore System. Can the two of you talk about what have you heard from the government of Japan, and where does that leave the United States, and what are you doing in cooperation with the Japanese, and the fundamentals of that, that the Japanese government and different officials there commented they still face a large missile threat? And so several of the questions were around the lines of what happened? What does this mean for the future? What are we doing? Some get into the details of the contracts and so on, but they all could be summarized as, what happened and what are we doing and what comes next? And so Admiral Hill, would you please start, and then Admiral Koehler, I'll turn to you next.

VADM Jon Hill:

Yeah, yeah, happy to. Thanks for the question. I think if everyone was tracking the news, it was announced last week, Minister of Defense Kono gave a public statement and made that announcement last Monday our time, Sunday their time... Well, Monday our time, Sunday their time, whatever. Last week, early last week. I will tell you that Japan is a great partner, not only with this nation, but certainly with MDA. We have been doing lots of foreign military sales, cooperative development with Japan. As you know, the SM-3 Block IIA is a cooperative development. I've worked on that as a commander and as a captain when I was down in BMD.

VADM Jon Hill:

So, great partner. And I will tell you like all foreign military sales cases, you come through a number of decisions over time. And just to give you an example, for the last three years, we started off with looking at a lot of different missions for Aegis Ashore, and then through lots of debate we said, "Well, maybe I am the cruise missile, maybe hypersonic defense. Okay, let's go with ballistic missile defense. Let's make it very similar to the European capabilities." That was a major decision. Took a lot of time. There was a lot of emotion involved in that.

VADM Jon Hill:

And then there was a big decision on how much power sensitivity you need in the radar, and lots of emotion, lots of craziness going out in the Pacific over that decision. And we finally got there and made a decision to lock down the configuration. So where are we today? The radar contract is let. We're moving out with that. The dollars for the supporting portions of the FMS of that radar, in the treasury, [inaudible 00:08:17], we're staying very close to Japan, but we want to give them that space. I want to honor the fact that they queued me personally prior to making that announcement. And that means a lot to me.

VADM Jon Hill:

And so right now they're working at the National Security Council level to make a decision on what they're going to do and fundamentally what the issue is, is the siting. And those of you who have done military construction understand the sensitivities of local communities when you bring in a capability. We spent a lot of time going through impacts of the sensing capability, a lot of time on what it means to have interceptors near a community area. So I want to respect the government of Japan, give them that time, and I will commit that here on this station, I'm going to say the same thing to Commissioner Kato tomorrow, which is we are going to lean in and give you whatever support and help you need to make the decisions that you need to make, given the fact that we've made a number of them so far. So I'm not necessarily shocked. There are options out there and we'll work those. Over.

Mr. John Rood:

General Koehler, Admiral Koehler, rather?

RADM Steve Koehler:

Yes, sir, Mr. Rood, thanks. Well, to echo John's comment, they're a huge partner here in the region, and we certainly respect their ability to work through their issues as John mentioned on the siting and all those type things. For us and working specifically with their defense apparatus, the threat hasn't changed certainly from our perspective, and I think they would agree. What we do have with them is a very strong camaraderie. We have a very strong integration between our two militaries that work together in ballistic missile defense and all those things. And we'll continue to do that and continue to work for the best solution in the theater for them, for us, for the overarching threat that they and we face together. So I think there's a whole lot of continued work to do with the capabilities that we have in common, and we'll continue to advocate for their work here to get after this problem that they've worked on. And so, sir, I just leave it. It's a phenomenal ally, and we'll continue to work with them going forward.

Mr. John Rood:

Thank you. Let me turn back to Lieutenant General Karbler and ask to shift gears here a little bit. Another one of the questions we got was around your role in Army air and missile defense, and talks about the fact that the cross-functional team priorities were established for IBCS, MSHORAD, IFPC, LTAMDS. And they said, based on your experience in being a senior Army air and missile defense official, where do you see the next big idea, or what's going to be the next big focus area for Army missile defense? And then of course, related to that then was how will that get pursued? Will that be just an Army program, or will it be something done in a coordinated way with MDA, or how do you see that taking shape? General Karbler?

LTG Daniel Karbler:

Yeah, thanks, John. I really think that we're going to have to be able to get after our hypersonic defenses, and we'll work very closely with MDA on that, as well as with Space Command. Again, we've got to be able to sense it, got to be able to see it, got to attribute it, then we got to be able to intercept it. So we really have to get it after that. We know it's a priority. We know that the adversary is out there developing, they're testing it, and we've got to be able to defend ourselves. So if I were to pick one, that would probably be the one that's right up front. I mean, in addition to everything that we have going on right now with LTAMDS and IBCS and MSHORAD and directed energy, but really getting after hypersonic defense is going to be critical for us. Over.

Mr. Riki Ellison:

Thanks. Thanks, John. I'd just like to... There was one common factor between PACOM and INDOPACOM and Jon Hill, and that's the Hawaii radar. If you could just sort of comment on that aspect of it, because I see it's in the deterrence initiative fund and how that would benefit both of you for that. And also Jon, that's a fight with HBTSS and Space [inaudible 01:28:01], how does that go with fixed sensor assets versus space assets when we need to get up in space as well? So you can start at [inaudible 01:28:10] if you want.

VADM Jon Hill:

[inaudible 00:13:17], is that me?

Mr. Riki Ellison:

I was going to ask all three, but yes, go ahead. You can start. Whoever wants to start, feel free to chip in.

VADM Jon Hill:

I'll go ahead and give you the technical side. Again, driven by requirements that trace right back to agreements between INDOPACOM and NORTHCOM. A sensor study done years ago that said in order to have full track custody from launch through intercept, this is where you need sensors. And there were three of them. And one of them is coming to life in Alaska. It goes to low power testing this fall. And so that one is tracking along. Number two in that line was for the defense of Hawaii. And given the geographic situation and where Hawaii is, there's not a lot of sensing capability to provide against the advanced threat. Hawaii defended today by the existing sensor architecture. This was for the future.

VADM Jon Hill:

The department made a really hard decision, kind of back to the trade. And it's a shame that we have to do that, right? We have to make trades. And the primary thing when everything was voted on was that we needed to put our eggs towards a higher investment on the space side. And so that was removed from the budget, but there was a study that was done. So the radar was not canceled, it was postponed pending a study, and that study has been delivered to the deputy Sec Def, and we're standing by to execute whatever that plan would be. Over.

RADM Steve Koehler:

Hey sir, so Webb here. I would comment a little bit on John's piece. And one is a lot of his trips have come out here talking about Hawaii defense radar here, and he spent a lot of time meeting with all the local people here. And for us, it's about the opportunity and the need here in Hawaii to see the threat, to be able to discriminate it, and then you got to shoot it. And we've got to look at that as one forward node of military structure and as one of the states and the defense thereof of the Homeland. And that's been the big push for us, to get enough power to be able to do that with the appropriate architecture and the directions thereof to be able to see those pieces that they come across. And so, short and sweet, but that's where we are here in Hawaii.

Mr. Riki Ellison:

General Huyck, would you have a comment on it?

Maj. Gen. Kevin Huyck:

Yeah, thanks for that. And I like the way the sense is to the future as well. Decisions have been made. As long as they are executed well and we continue to improve the architecture overall and an advancement. Goes back to my idea of the defense of the Homeland, the global missile defense mindset as well. And we would hope and continue to advocate for what the future would hold as we look at advancement in sensors, we've talked about a lot of them already, as well as the future design of how they're linked together. So as Admiral Hill said, they're having decisions made. We understand clearly where they are. But what we definitely support from the NORTHCOM perspective is how everything ties in to the overall construct for defense. And as we look at the different areas for defense, some are optimized based on the investment, and we'll continue to have great partnership and great discussions about what the next step is now for the future. So it's that advocacy again, and what we will look like to be integrated better in the future.

Mr. Riki Ellison:

Thank you.

Maj. Gen. Kevin Huyck:

Thanks.

Mr. Riki Ellison:

John, I think we have about five minutes or three minutes left to go. So I'd like to end up with some closing statements, and I'd like to start with you, John, and we'll go around, and then we'll finish it up. But I think we've covered a lot of ground here. So, John, please summarize as you best know.

Mr. John Rood:

Well, first of all, it's been a pleasure listening to all of you and thank you all for participating. The way that missile defense has matured, where the mission and you're listening to talk about how you work with each other through various councils, the [inaudible 00:17:36], and different activities is heartening to see. It was also, I thought, very nice to hear you talking about the importance of not just ballistic missile defense, but cruise missile defense, and hypersonic defense, and then the enabling role that Command and Control plays. And I think there's a lot more emphasis on that, as well as space, to enable these various activities. And so I just wanted to say I appreciated hearing all that and seeing the collaboration that's underway. So thank you.

Mr. Riki Ellison:

Okay. Dan Karbler, Dan, would you like a closing?

LTG Daniel Karbler:

Yeah, just real quick, Riki, thanks again for bringing us all together. I was happy to be able to talk missile defense with you and with the team. And if I just, one foot-stomper leaving out of here is the importance of integration through our planning and then synchronize our operations. And that's how we get through our missile defense fight. And you see it here within this VTC, and I really am privileged to be able to see it from the commands that I have. So thanks again for having us on this afternoon.

Mr. Riki Ellison:

Thanks Dan. Kevin?

Maj. Gen. Kevin Huyck:

Thanks Ricky. I know a lot of folks are watching, and they should see that there is a very clear resolve as we move into the future how serious we take this, how we man the watch, and there's no better place to be than running the future for missile defense, because we're well ahead and we'll continue to stay ahead as we look at the threat that's continuing to evolve. Still many areas to continue to explore, but it's this partnership, this teamwork, that's really going to continue to take us to the future. Thanks again for the opportunity.

Mr. Riki Ellison:

Thank you. Webb?

RADM Steve Koehler:

Hey, Ricky, thanks, and thanks to all the teammates here on the VTC and to Mr. Rood for the questions. I would just leave with a couple of things. One, for us, it is about combat credible posture forward. And that's due to the time that we're under as far as threats. And that's First Island Chain in Guam, they're forward, and they're near the peer threat. And as it relates to time and turn back to you, Riki, I can't bet on a first round draft pick later. It has to be in this fight. I got to get after it. And the time's now to get over it, and I appreciate everybody's help doing it. So thanks for the opportunity today.

Mr. Riki Ellison:

Thank you. Jon?

VADM Jon Hill:

Yeah. I first want to thank the team here. It's great seeing Webb Koehler again, Fumez again, welcome aboard, really looking forward to getting closer with you. And it doesn't get by me the fact that you've got the NORAD and NORTHCOM valence behind your head there. That's a huge responsibility, and I'm glad you're in the chair and I look forward to serving with you. Dan Karbler, a great, great friend. It didn't get past me that you've got the globe behind you, and I get the sense of the pressure that you are feeling.

VADM Jon Hill:

I will tell you that kind of back to all of you, again, we work for you. And if there are confusion and requirements, let's go look where there is a commonality in it, because we can find that technically, right? So we kind of know there's a lot of goodness between 360 radars in a lot of different places and we ought to go build off on that, and that's what I know our teams are trying to do. For us, we tie it all together with the Command Control and battle management communications, our C2BMC system. I just have to kind of throw one out there, because that is the brains. That is how we're going to do layer defense. That's how the systems are going to talk to each other. That's our interface into JADC2.

VADM Jon Hill:

So we have technical architectures and we have the larger architectures on how we're going to go do business. And so I'm looking forward to serving with you. I want to just compliment Mr. Rood's tie. You look awesome, sir. Thank you for being a great host, and thanks for having me, I really appreciate it. And thanks for everybody that listened in today. It's an important topic. Take care. Thanks.

Mr. Riki Ellison:

Thank you everyone. And just to end it a little bit, great teams are made of first round picks. The majority of the team are not first round picks, and you develop your first round picks over a period of time. And sometimes you're lucky and sometimes you're not. And your key as a defensive group is to keep giving the ball to the offense, no matter what. You give it to the offense, no matter what they do with that ball, you got to keep giving it. And that is a deterrent. If you can do that, and you have an effective offense, you deter everybody.

Mr. Riki Ellison:

So, this is a team game. The COCOMS are huge. You're leading it. You're all leading it. We got to play together. And we don't need to rely on first round picks. We got to develop the other guys and ladies inside the team, and you got to get them to trust you and play with you and contribute to win. Because it's all about winning, and it's all about setting the conditions to win. Because we've got a heck of an opponent that we have to be together to beat or to compete against. We can't do it separately. So I thank you for your time, your service, and leading the charge on the defensive side of the game. Thank you.

PART 4 OF 4 ENDS [01:37:40]