

**General Glen D. VanHerck**  
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**Defense Writers Group**  
**Project for Media and National Security**  
**George Washington School of Media and Public Affairs**

**25 April 2022**

**Moderator:** Good morning, everyone, and welcome to this Defense Writers Group conversation with General Glen D. VanHerck, Commander, United States Northern Command and North American Aerospace Defense Command.

General, greetings and we're really honored to have you today.

**General VanHerck:** I'm honored to be here with you, Thom, and I look forward to our discussion.

**Moderator:** Thanks. As always, this entire conversation is on the record but no audio or video may be rebroadcast. We'll post a transcript in about 24 hours, as soon as it's ready. As always, I'll ask the first question before going to the list of those who emailed in advance to be put on the list. And if we work through all of those we'll open it to the floor.

General, my first question, sir, you've been in command of NORAD and USNORTHCOM for more than a year and a half. I'd love to have you describe what has changed the most in that time and what are your priorities now moving ahead, sir?

**General VanHerck:** Thanks, Thom. For everybody, please, I'm having a hard time hearing, so speak up and we'll try to make sure we hear everything on this end.

First, I just want to tell you what hasn't changed. Homeland defense is still the top priority mission in the National Defense Strategy and the passion of the thousands of people who do that on a day to day basis has not changed. There's no more noble mission than defending our homeland.

As far as what has changed, the first thing I would tell you is the threat continues to morph through the homeland. There are multiple threats out there, specifically to strategic competitors that continue to adapt and create capabilities hold our homeland at risk across all domains. That would be from

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undersea to on the sea, to air, land, space and cyberspace. So the threat continues to change.

You're right, I've been here, and I think it's almost 20 months. Gosh, it's gone by fast. I can't believe how fast it actually is going by.

When I got here one of the things I wanted to do was change a little bit of the perspective, and rather than focus on kinetic defeat in the homeland, defeating threats to the homeland. I wanted to focus differently. We need to figure out what we must defend and we've been working that with our policy folks here. Not only in the United States but also within Canada.

But beyond that, we're actually pretty resilient, and we have a lot of capability to withstand attacks on the homeland, but there are things that we must figure out that in a time of crisis or conflict could bring us to our knees in defending ourselves.

Beyond that, in December of '20, I believe it was, I signed our strategy, and our strategy really focused on campaigning, the integrated deterrence. Before the department was talking about integrating deterrence. I think that's important. I don't believe it's fiscally responsible to try to defend everything. It's unrealistic and unaffordable to try to defend everything that is within the United States or within Canada. But through campaigning we can create gaps in any potential adversary's mind about their ability to achieve their objectives by striking our homeland. Whether that be kinetically or non-kinetically.

What they want to do is potentially destroy our will and delay and disrupt any force flow. They watched us over the years, how we could get power forward. So for us it's important. And my strategy focus is on demonstrating our ability each and every day to show resiliency, readiness, responsiveness, and capability not only within the military dimension but across all levels of influence with not only our government, but my fellow combatant commands and also our allies and partners. So that has changed since I took over.

We don't start defense in the homeland. I have an approach and a strategy that's layered defense. It starts forward with my fellow combatant commanders and allies and partners. I want to generate a flex forward so we don't have to defend here in the

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homeland. Candidly, if we're having to defend against kinetic threats in the homeland I think we've probably failed to do our mission. We need to generate those effects forward and create those deterrents, and I think that's important.

My strategic priorities haven't changed. To deter and defend you have to be able to have domain awareness. So we've been pushing that really hard. This year's budget I think moves the ball down the field with regards to domain awareness. We'll be able to hopefully field over-the-horizon capabilities which will give us more standoff distance than what we currently have today.

But we also need to take that domain awareness, the sensors that we have today, and we need potential new sensors and share that data and information and utilize artificial intelligence and machine learning to make that data and information available sooner than we have in the past, and to decision-makers.

So domain awareness, information dominance and then to decision-makers in a timely manner so they can create deterrence options or to use the information space as well. I call that decision superiority. We need to do that with a global mindset.

I think the final thing as far as my strategic priorities is ensuring that we have a global mindset. Global plans informed by global risk and global resources are working with our asymmetric advantage of our allies and partners and myself, and that matters.

I'd also tell you that I changed a little bit how we viewed defense support of civil authorities. A key mission and a no-fail mission that we do here at United States Northern Command. The bottom line is every time we do some type of a response to defense support of civil authorities, whether that be a pandemic, whether the be Operation Allies Welcome, hurricane, wildfire, that's a demonstration of readiness, responsiveness, capability and resilience in our homeland. And one message properly has a deterrent effect.

So we're tying those things in as well as part of our strategy, as part of our overall integrated deterrence.

I'll close with telling you my priorities really haven't changed. We have moved the ball down the field on domain

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awareness, but we still have a ways to go. We'll stay the course on the strategy while we deal with the challenges we face today, whether that be the Ukraine-Russia situation or whether that's the environmental change which challenges us with defense support of civil authority. We will stay the course on our strategy that works on integrated deterrence through the campaign.

So I'll pause there, Thom, and take any questions.

**Moderator:** Thank you, General. The retired reporter in me has about ten follow-ups, but the new project director's going to start calling on the other reporters to ask questions.

And friends, I will repeat the General's request, do speak sort of dramatically loudly because there are some audio problems.

The first question goes to Demetri Sevastopulo of Financial Times. Good morning, Demetri.

**DWG:** Good morning, Thom. Thank you. And good morning, General.

I've got a couple of quick questions on hypersonics which you've been talking about recently. Can you explain why the US fell behind China so much and how much time and investment you think the US needs just to catch up, first of all. And second of all, given the Chinese developments in hypersonics and given the rapid expansion of their nuclear arsenal over the past year or so, what does that mean for the US in terms of developing countermeasures for hypersonics?

**General VanHerck:** Thank you for the question.

Your first question is really best answered by the services and the department in developing offensive hypersonics capability. I would tell you my personal opinion is we've focused on the counter VEO challenges for a long time and prioritized that in the recent years. While China and Russia -- by the way, Russia fielded the first hypersonic capability in December of 2019. So China has not [inaudible], Russia has had it fielded. But as far as the specifics of developing our offensive capability, I'll defer to the department.

As far as the defensive capability for hypersonics, it's a

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significant challenge to me. Hypersonics today fly a flight path that circumnavigates our current existing radars that are designed to detect ballistic missiles. In hypersonics, the speed is not what is so impressive about them, it's the maneuverability and the challenges they present by coming in at different attack vectors or different angles which allows us to not see them, candidly.

So what I'm most worried about is in my NORAD had, providing threat warning. My first mission is to provide threat warning whether that be in intercontinental ballistic missile, a cruise missile or a hypersonic. And my second mission in NORAD is to provide an attack assessment. Hypersonics significantly challenge me to do that.

With regards to defending from hypersonics, I'm not tasked to do that today and I won't be going into the future. That's what the strategic deterrent is for. It's the foundation of homeland defense with regards to the homeland. We do need to defend against hypersonics specifically in a regional focus and the department is moving out there with multiple efforts. We have to go to space soon. There are multiple capabilities being developed. We've seen that in the space force budget. You see that with the Missile Defense Agency. And utilize satellite capabilities for tracking hypersonics and the development of defensive capabilities but not for the homeland. That is for [inaudible].

**Moderator:** The next questioner is John Tirpak of Air Force magazine.

**DWG:** Good morning, General. If you could tell us a bit about what you are seeing or what you've observed in the last couple of months from Russia in terms of how often they do their bomber runs towards out identification zones. Whether it's up or down. Whether there's any other special activity that you've noticed. And whether you consider it provocative.

**General VanHerck:** Thanks, John.

First, I have not witnessed anything towards the homeland that would be provocative. Bomber activity has been within norms. I haven't seen anything significant that would give me any concerns that we're seeing what I would consider historical norms. The height of that was back in '20, I believe. Here in

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'21 and '22 what we're seeing is what we would say is basically the average over the last decade or so. Nothing too significant. I hope that answers your question.

**DWG:** If I could follow up then, when we do these intercepts we usually do them with F-22s and now there are F-35s in Alaska, but hours on those airframes are fairly precious. Do you have it in mind to maybe introduce maybe a less costly way to run those intercepts? Maybe F-16s or something else?

**General VanHerck:** John, we utilize F-16s, F-15s, and F-22s and Canadian CF-18s to do our NORAD homeland defense mission. So it's really a geography issue on where we intercept them, depending on what platform is sitting alert that respond to that. This happens to be with our platforms in Alaska that sit alert are the F-22s. But we have F-15s along the coast. We have Canadian CF-18s that have intercepted them as well in the Arctic.

As far as platforms to conduct that mission, a cheaper platform or as we get more hours on an F-22, that's really a service decision. My requirement is to defend the homeland and provide air support to do that. What I need is long range loiter time, an airplane that is a domain awareness sensor that can share data rapidly and provide weapons to defend the homeland.

**Moderator:** Our next question goes to Courtney Kube of NBC.

**DWG:** General, thank you for doing this. I just want to ask one follow-up on your answer to Demetri. Could you explain a little bit more when you say that you're not tasked with defending against hypersonics?

**General VanHerck:** The policy is for homeland defense against intercontinental ballistic missiles and right now hypersonic cruise missiles, or hypersonic missiles from space, I'll clarify that. I am tasked to defend against hypersonic cruise missiles, not hypersonics that come from space that would follow a trajectory of launch like an ICBM. The strategic deterrent, Admiral Richard at STRATCOM are responsible for the defense and deterrence based on that threat.

Does that clarify it for you?

**DWG:** Yes, thank you. That makes sense.

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Then if I could just ask one on North Korea. They've done a couple of tests recently and the US was a little bit more candid I think than usual about what they were seeing in some of their advancements. I'm wondering if you can tell us whether you are confident at this point that North Korea has the ability to not only launch an ICBM that could potentially hit someplace in the continental US, maybe the like middle of the continental US, but whether they have the ability to miniaturize and whether they have a survivable reentry. Thank you.

**General VanHerck:** Courtney, I'll address the last two first. As far as miniaturization, that's out of my league. I'm not going to address that.

And confidence to hit, I have to make that assumption based on what they demonstrated back in 2017 for their long duration shots that they took and what they demonstrated here recently and the combination of a thermonuclear detonation that they did back in 2017.

As far as reentry survivability, I'm not going to go into that. I think that would be in a classified forum that I can't talk about here. But I'm going to make the assumption based on the demonstrations that I've seen so far, that I have to defend against that threat.

**Moderator:** Next question is Eric Schmitt of the New York Times.

**DWG:** General, good to see you again. Thank you.

I just wanted to follow-up on John's question to see if there's anything else at all you're seeing unusual about Russian activity that you would normally monitor. You said things are pretty normal in terms of flight ops and stuff. Anything else about OpTempo or communications that you might have with your counterparts there? Anything like that.

**General VanHerck:** First, as you probably well know, the law doesn't allow me to reach out and communicate directly with the Russians, but I'm not seeing anything through messaging out of the Russians that would be abnormal at this time. I'm comfortable with our current posture based on indications in warning that we've seen. As you've seen in the public domain, it's clear that Russian cyber activity in the homeland has been

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what I would say preparation of the potential battlespace. I'll use those terms. But I'm not seeing anything that gives me pause right now from the air domain or the sea domain that would be abnormal.

**DWG:** Just to follow-up on your role in supporting civilian authorities. Is there anything that you all are doing at NORTHCOM to support the FBI or other law enforcement agencies as they pursue domestic counterterrorism cases or different trends there?

**General VanHerck:** We have a great relationship. I have about 40 liaisons here in my headquarters from various agencies across the government to include the FBI. So we work closely to stay plugged in on any potential threats to the homeland. Most of those fall in the law enforcement area of responsibility. In my NORAD hat I do have a responsibility for maritime warning, so we partner closely with the FBI, we partner closely with the Counterterrorism Center through Homeland Security, the Coast Guard, et cetera, to track those potential threats that may be on vessels sailing around the globe that may present a threat to the homeland.

I will point out that we're closely partnering with Homeland Security and CISA Director Easterly with regards to cyber threats to the homeland. Let me clarify that in my roles and responsibility there. I'm the DSCA synchronizer, the Defense Support of Civil Authorities synchronizer for Title 10 support from the Department of Defense to lead federal agencies. In the cyber realm what that would involve is providing forces to CISA or other agencies if required in the cyber domain to help with cyber defense outside of the DoD responsibility.

I'm also responsible if there are consequences to do consequence management from any cyber attacks, if there was a need for DoD to provide [inaudible]. So I thought it would be good to clarify that area.

**Moderator:** Next question is Jason Sherman of Inside Defense.

**DWG:** Good morning, General. Can you say a bit about the cruise missile defense homeland demonstration that you're asking Congress for \$50 million additional for in FY23. Will this be an Aegis-based system? Can you say a bit about what the demonstration will entail? And I have a follow-up question as

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well.

**General VanHerck:** Those funds are to enable basically a capability demonstration of an elevated sensor. So that's not necessarily an Aegis cruiser or destroyer capability. It would be an elevated sensor with capability to detect and provide fire control capability to architecture to a system that would be able to potentially engage that cruise missile, which could be a cruiser or destroyer, but in this case not necessarily required to make that happen.

So it would be potentially the integration of a Navy long-range surface-to-air interceptor and a live fire test demonstration.

With that said, I just want to be clear, Jason, that right now I'm not necessarily asking for a specific capability such as a cruiser or destroyer. What I want in industry, what I want in Missile Defense Agency, the services to do is let their minds run wild on capabilities to accomplish this mission.

There are multiple ways beyond the kinetic end game defeat of this that we could potentially be successful in cruise missile defense. And that could be through the use of the electromagnetic spectrum and other non-kinetic means to be able to do something beyond point defense and more wide area of defense or a limited area of defense.

**DWG:** And where are you in terms of your thinking autonomy and when something else like this might be needed to be fielded. And can you say that about what sorts of things you want to defend against. Are you going to be like defending DC, New York City, other cities, critical infrastructure? What can you say about what you're looking to defend against at this point with this cruise missile defense homeland capability, or what can you develop?

**General VanHerck:** Timing. I need it yesterday, candidly. The threat exists today, primarily from Russia. Cruise missile capability from air platforms that can launch from over Russian territory, threaten North America. From subsurface capabilities that can park off our coast. Our potential for cruise missile capabilities on container ships, civilian container ships in the future.

Five to ten years from now we'll be in the same place with China

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and other capabilities going forward. So the urgency is there in my mind. This is decision space we're ceding for our national leaders.

As far as what we're going to defend specifically, I think that's a policy decision. We're working closely with DoD on policy on what to defend. I would say the most important things that you can think of, we already defend DC. Certainly our continuity of our government, our key decision-makers that have a responsibility for nuclear command and control, our nuclear forces are key. Power projection capabilities, key defense industrial base, single points of failure in key critical infrastructure. It goes much beyond the Department of Defense.

I would tell you that energy has a piece of this. Commerce, transportation. Others have a piece and we have a broader discussion that still has to occur on what we must defend.

I hope that helps.

**Moderator:** The next question is Meghann Myers of Military Times.

**DWG:** About a month ago you told lawmakers that you think long term the border mission is very much a DHS mission, not a military mission as it has become. What conditions on the ground in your opinion need to change in order to allow the military to draw down from the border? And do you expect again this year to get another request to keep troops there?

**General VanHerck:** I think Secretary Mayorkas in Homeland Security, Customs and Border Protection are best to answer what conditions they would need in order for DoD not to have to provide support.

I did say exactly what you said. I don't believe it's an enduring mission for DoD. It's a mission in extremists that DoD should utilize or be asked for when Homeland Security and Customs and Border Protection and other law enforcement agencies are unable to execute their mission. I think they need to be funded. I think they need to also utilize technology. Technology of the future that can help them get away from a manpower based intensive problem to one that they can utilize technology [inaudible] as well to solve their challenges.

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Let's be clear, this is a law enforcement challenge and I'm not authorized under law to conduct law enforcement operations. So we need to get those law enforcement agencies manned, trained and equipped with the proper capabilities and the proper manpower to execute the mission.

**Moderator:** Next question is to Toshi Hitakochi of Kyodo News Japan.

**DWG:** Thank you for taking my question. I am from Kyodo News Japan media.

I have a question about North Korea. North Korea continues to develop ICBMs and today the 25<sup>th</sup> marks the 90<sup>th</sup> anniversary of the founding of the Korean People's Army in North Korea. How likely do you think that North Korea will launch another ICBM in the near future? And how do you assess North Korea's ICBM capability? Do you see any growing threat to the US mainland? Thank you.

**General VanHerck:** Thank you, Toshi, I appreciate your question. What I would tell you first, as far as the likelihood, he's becoming, KJU being he, more unpredictable. So as far as an assessment, I think the potential exists that within the coming weeks even days that he may launch another missile, a ballistic missile. Whether that's an ICBM or not, I don't know.

As far as an assessment of the threat, I continue to assess that based on a limited attack on the homeland that I have the capability today to defend our homeland, again, against a limited threat.

He continues to develop capability. Capability would be challenging in technology. Decoys, those kinds of things that he is certainly after and capacity.

So at some point he will exceed the capacity of the ability of the current ground-based defense system that we have. Now with that being said, that's why it's so crucial to keep the next generation interceptor on time and on target. It will give me additional capacity in the form of 20 additional interceptors and also additional capability and reliability.

Also I'd point out there's a service live extension program ongoing. That program increases reliability as well and allows

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me to adjust my shock doctrine which gives me additional capacity as well. So all of that combined leads me to believe that today we're in a good position, we just have to stay on course going forward.

**Moderator:** Next question is John Harper of Defense Scoop.

**DWG:** Thanks for doing this call.

I wanted to follow up about what you were saying about artificial intelligence and machine learning with regard to information dominance.

How would you assess the state of artificial intelligence and machine learning capabilities today as it relates to your ability to do your mission and achieve that information, decision-making superiority. And how does that all fit in with your ability to defend the homeland against cruise missiles?

**General VanHerck:** Great question.

My assessment today is I don't have what I need as far as artificial intelligence and machine learning to give the decision space to the President, the Secretary of Defense, the Chief of the Defense Staff in Canada, the Minister of Defense and the Prime Minister in Canada in my NORAD hat.

What we've been doing is working on our own, and I'll talk first about the Pathfinder Program. We've been working that now for a couple of years. Pathfinder is a program where we're taking information that's available today through radar systems of the North Warning System, and most of you know that the North Warning System is a series of radars that stretches across Canada and Alaska designed and implemented back in the '70s and '80s. It's been updated once, but candidly, we only process about two percent of their data.

The system actually has capability to give you a lot more domain awareness. So what we're doing with the Pathfinder program is rather than taking the information at that 2 percent, we're taking the raw data, 100 percent of the information. And fusing that and using artificial intelligence and machine learning and distributing that information to gain time and space, if you will.

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We took Pathfinder and analyzed, some of you have heard me say this, of the data from the 2015 incident where the gyrocopter flew down in the National Capital Region and landed on the Capital lawn. When you took that data and you fused all available data from all sources, just like we had with the North Warning System, you were actually able to see the full radar track where if we didn't do that no radar track saw it. So I'm talking military information, commercial information, FAA information, multiple information. That's the idea behind Pathfinder is taking the raw data and fusing it from multiple sources and allowing it to be processed and disseminated. That's not good enough though, because that's just focused on one problem set.

What I'm focusing on is a global look across all domains and fusing data and information. We're doing that through our Global Information Dominance Experiment which we've done four of those already. That Global Information Dominance Experiment has demonstrated that today the capability exists if you share the data to utilize the machines to learn. Machines that can start counting numbers and tell you when there's changes in vehicles in a command post, vehicles in a parking lot, vehicles in a weapon storage area. Where those vehicle are going. And then it can actually take and slew sensors to that and give you an alert to you should go look at this location.

What we're doing is, we're not creating new data, we're taking machines that take existing data, analyze it faster, and alert you to it so you can create deterrence and defense options if you need to. After [inaudible], I'm hopeful the department will take over moving forward. The Deputy Secretary's done an exceptional job with the AIDA program, the Artificial Intelligence program providing money and people. But candidly, we're not moving fast enough. We can't apply what I say are industrial base processes to software driven capabilities in today's environment. The department has to change to fundamentally go faster. We can't utilize what I would say are legacy development processes where we do everything in serial in the part of requirements, testing, development, tactics, techniques and procedures. Today we can do that in parallel to reduce the time to field these capabilities.

You may have heard me utilize, and read my article called Build the Bike While You're Riding. I think we're ready to field some of these capabilities specifically when you're focused at the

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operational to strategic level where what we're trying to do is give increased decision space to our nation's most senior leaders to create deterrence and if required defeat options. That in my mind lowers the risk of an attack on our homeland and hence lowers the risk of strategic deterrence failure.

Long answer. This is something I'm very passionate about and something that we have to move forward with sooner than later.

**DWG:** With regard specifically to how you could use this for cruise missile defense and dealing with some of the challenges that you noted with that, especially as you add additional sensors into your network, can you kind of flesh out a little bit how AI and ML could help you with that mission?

**General VanHerck:** Ideally what I don't want to be doing is reacting to end-game kinetic defeat and shoot down a cruise missile. What I would rather do is create deterrence options before that bomber takes off or before that submarine launches.

For example, if you know that the number of vehicles in the command post parking lot has changed, that may be an indicator of some type of activity. Certainly when you see weapons moving from storage facilities and weapons loading platforms around bombers, the same thing can be said around maritime assets. Before those assets ever launch, you're able to use the information environment to pick up the phone, to publicly message. For me as an operational commander to move troops into a deterrence kind of position so that they'll have pause to even launch those platforms in the first place. That's where I want to go. We need to get further left.

The same thing can be said for the ICBM problem. Not just the cruise missile problem.

But as far as taking endgame kinetic defeat, it would be fusing data and sensors to cue you to the potential launch of a cruise missile that may launch a thousand miles off the coast, the East Coast or West Coast, where a space sensor sees that information and then cues additional sensors to look to provide domain awareness to decision-makers. It's not about machines making decisions, it's about fueling deterrence options and defeat options end game to make decisions that they don't have in a timely manner today. I hope that helps clarify.

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**Moderator:** The next question is Christopher Woody of Insider.

**DWG:** Thanks for your time today.

I have a question and a follow-up regarding the Arctic.

Firstly, as [inaudible] in general between the US and Russia and the West and Russia over Ukraine, there's been commentary and descriptions of that including the Arctic. So I wanted to ask, is your perception that tensions are heightened in the Arctic? And if so, does that also mean the risk of direct conflict in the Arctic has increased?

**General VanHerck:** First, I wouldn't say I'd characterize it as tensions in the Arctic. What I would say is that Russia specifically has developed the capability to operate again within the Arctic to influence Arctic operations. As you well know, environmental change has increased access to the Arctic, whether that be commercial shipping lanes through the Arctic or longer duration, access to minerals, resources, et cetera.

For the US specific, you've got to be present to have tension. I haven't seen that. We haven't been there and had any what I would say confrontational challenges within the Arctic.

If you look in the information space, I would say what you see is a little bit more tension in the Arctic, especially Russia, in their use of language that talks about intent by Arctic nations with regards to Russia's ability to sit on the Arctic Council and those kinds of things. So there may be a little bit more tension there. But I don't see specific tension, if you will, playing out in the military dimension right now.

China calls themselves a near Arctic nation. They want to be there as well. Both Russia and China would like to change the rules-based order, norms that have served us well since the end of World War II. And based on that when nations want to change things, international law, there's the potential for friction. There's the potential for crisis and conflict. So I'm concerned about that. As a DoD Arctic advocate my goal is to be present, persistent in the Arctic to ensure that all nations around the globe have the opportunity to have economic prosperity, transport their goods through there, within law have access to natural resources, and those kinds of things. That's the goal that I would foster within the Department of Defense and here at

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NORAD and NORTHCOM.

**DWG:** To follow up, related to the history of presence, last year I think last fall there was an exercise that involved US troops deploying to Shemya Island at the far end of the Aleutians. Last month in March some Navy SEALs parachuted onto an ice flow to take part in IceEx. Your counterpart in Indo-PACOM at a hearing in March talked about ADAC and its strategic significance.

So I wonder as you try to improve and expand those domain awareness capabilities, does that also entail a presence on the ground and on the ice in the northern approaches?

**General VanHerck:** What I would say is at least an episodic presence where you demonstrate capability, where you demonstrate the readiness and responsiveness to operate throughout both NORAD and USNORTHCOM complete AORs. What you saw there was activities demonstrating exactly that. That's part of that strategy of integrated deterrence that I already talked about. The exercise you talked about brought 20 nations together to demonstrate those capabilities. When you demonstrate the readiness and capability and the resilience to operate in those environments, you don't have to be there persistent, but you do have to be there at least episodically.

We have challenges. We have a need for infrastructure. We have a need for additional forces that are ready, trained and equipped to operate throughout the AOR 24x7x365. So I'm working that with the department, working that with Canada. I'm encouraged. Canada is moving forward on their budget. I don't have details on what specifically is in their budget. But Canada sees the need to create additional domain awareness capability in the Arctic. The infrastructure to operate as well. Just as the US does.

The President and the Prime Minister agreed in August I believe of '21 about the need to modernize NORAD and the need to develop additional Arctic capabilities. And then in February of this year the Minister of National Defense and the Defense Secretary talked about the same. So I'm encouraged with where we're going. We still have work to do. But that is really about being able to have the deterrence options on a day to day basis as part of our strategy.

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**Moderator:** Next question goes to Steven Trimbball of Aviation Week.

**DWG:** Thank you very much for doing this.

I just wanted to drill down a little bit more about this Arctic presence and the North Warning System. You've been very helpful on that so far. But just to really understand this, we've got KH102 cruise missiles now in service with Russia. Hypersonic cruise missiles are being developed in China and Russia. So I'm just trying to understand how much does Pathfinder fusion and that AIDA program's AI solve that problem for you?

I also see that there's Over-The-Horizon-Backscatter radar funded in the FY23 budget request. So what role does that play in all this?

Finally, when is it necessary, if at all, to replace some of those 60 ground-based radars in the Arctic?

**General VanHerck:** Great questions.

I don't see a one for one radar replacement of the specific North Warning System that you talked about.

We're advocating, and as you mentioned the budget has funding for over-the-horizon capabilities in the US budget. I'm hopeful that we'll see the same for NORAD modernization in the Canadian budget. I believe that over-the-horizon capabilities is what we need today to give us that standoff distance, that time that we're seeking for the President and the Secretary and our nation's senior leaders to where over-the-horizon capabilities will see not only the air breathers out there a couple of thousand kilometers or beyond, but they'll also see space objects. They'll also see maritime objects significantly further than we do today.

And when you share that domain awareness of data information with a holistic network into the cloud, now we can help SPACECOM and Space Force with tracking, we can help in the maritime domain as well as it helps us solve our cruise missile defense, both hypersonic cruise missile defense and also the conventional cruise missile defense problem.

Does that answer your question?

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**DWG:** Yes, I think so.

Do any of the original North Warning System radars need to be replaced? You can just either let them expire when they do or keep modernizing the ones that you have.

**General VanHerck:** What I would say is the replacement won't be the typical North Warning System with a layer of 60 or 70 additional radars. It will likely be replaced with over-the-horizon, a small number of capabilities if we build that force.

In the meantime until these capabilities are fielded, the over-the-horizon, I have to utilize what I have.

So we are going to provide additional funding to digitize some of those. For example, in my unfunded priority list I have an ask for just over \$5 million to digitize some of those sites to continue utilizing them to make them more effective and efficient but not replacing them one for one with additional capability like that. It's taking the information that they provide today through the use of Pathfinder and digitizing that information to be as effective as we can until we have the additional capability in place.

**Moderator:** Next question is Nick Schifrin of PBS.

**DWG:** General, thank you very much.

I want to take you back to cyber and ask a bit of at least a 10,000 foot question.

I know not all of this is necessarily your domain but you did talk about how you are supporting federal authorities on cyber. Can you tell us what you've seen in terms of cyber threats since the Russian invasion? Do you see any increase in intrusions, whether from state sponsored or kind of semi-private whether or not that's from Russia. And talk a little bit about how you're postured given the kind of heightened alert that the White House has talked about quite often about the risk of cyber attack these days.

**General VanHerck:** First, as I said in testimony, we're under attack and threat every day in the cyber domain. Each and every day. Whether that be from non-state actors or state actors

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through proxy, non-state actors. They're out there trying to take advantage of the opportunities they have.

I'll tell you what the department said, what you've heard the President say is they're looking at our critical infrastructure, they're looking at our energy sector. You heard Director Ray last night if you watched on TV talk about where they've expelled some of those activities where they have planted cyber malware within some of our critical infrastructure. So we are seeing that ongoing.

As far as my posture and readiness support, General Nakasone, the commander of CYBERCOM provides Cyber Protection Teams at the request of Director Easterly at CISA and I have those available if Director Easterly should request additional cyber support beyond what we do for the DoD and federal network for critical infrastructure today. That requires special authorities to do that. As you know, we can't get on public businesses, et cetera, if they don't want us there.

So this challenge, and Director Easterly and the team have done an exceptional job of briefing, declassifying information to share with critical infrastructure, municipalities, states, et cetera, and key defense partners and others to make them aware of the cyber threat. We're postured to get after that threat. I expect it won't go away. It's only going to grow as we go forward. It's an education challenge to make sure that cyber hygiene is as good as it can be and to understand the threat and vulnerabilities that we actually have.

**DWG:** Have those requests changed in nature or quantity or speed since the Russian invasion of Ukraine?

**General VanHerck:** No. We have one request and that request has been stable since that came in.

What I will tell you is we've worked very closely with Director Easterly, General Nakasone and his team, my operations center and across the interagency to put mechanisms in place to ensure that we collaborate when there are cyber activities, to understand is that a threat? Is that an actual cyber attack? Is that an attack on our homeland? These are the kinds of decisions that we will need to make if there is an attack and to ensure we all understand and collaborate on how we're thinking about potential threats and attacks on our homeland.

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Attribution is a challenge in the cyber domain, ensuring that we're ready before we call an attack on our homeland, that we have the proper attribution and we're actually ready to [call an] attack on our homeland so that we don't inadvertently escalate or that we don't create attention and friction that we don't want to see [inaudible].

**Moderator:** Next question is Joe Gould of Defense News.

**DWG:** Hi, General, thank you so much.

I know you've been asked quite a bit about the cruise missile defense gap, but I wanted to see if I could clarify, there's around \$50 million in the unfunded request but I wanted to ask is there any funding available to do any sort of demonstration in the next year or is that going to rely on Congress funding that \$50 million?

**General VanHerck:** There's no funding available for the demonstration right now. I work with Jon Hill at the Missile Defense Agency very closely. Jon Hill has been an exceptional partner. To take money out of Missile Defense Agency and move this ball forward for me, to continue developing what I would say is the foundation for potential future demonstrations if there's no funding.

Let me tell you why there's no funding. One of the things we have to get after is there's no single authority or entity designated within the department to be responsible for cruise missile defense of the homeland. So I'm pushing hard and NDAA-17 asked the department to designate that authority, yet the department hasn't done that to date.

So I'm pretty confident we're going to get there. I talked to the Vice Chairman recently about that. If you'll recall, the Secretary of Defense was asked about that in his posture hearing and he committed to designating a single entity or authority for responsibility for cruise missile defense. But to directly answer your question, there's no funding laying around.

**DWG:** I think in one of the questions we got a decent description of what the threat is, but I wanted to actually ask you, do you want to say a little bit about what sorts of cruise missile threats the country's facing that would require what

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we've been talking about?

**General VanHerck:** Cruise missiles -- conventional cruise missiles or hypersonic cruise missiles, low radar cross section cruise missiles, cruise missiles from Russia, cruise missiles from China, potentially other countries. Cruise missiles that can be launched from undersea, from 100 miles plus off the coast. Cruise missiles from on the sea, Kalibr capable. Cruise missiles from the air. Cruise missiles from commercial vehicles launched out of a container that can be masked as part of the commercial ship. All of these things concern me dramatically in the same space that we have to be aware of.

Now my focus is not on end game kinetic defeat of all those contingent threats. It's really about deterring in the first place. We campaign to ensure that anybody that would have nefarious activity on their mind would never believe that they would be successful with a strike on our homeland with a cruise missile or any other missile or threat, for that matter.

Again, I want to get further left. My guide experiments. Global Information Dominance. To actually deter before they become a threat to the homeland.

I hope that clarifies kind of the overarching strategy of where we're going.

We do have to figure out what those key things are we must defend from kinetically from those cruise missiles, but candidly, it's not a lot, it's not every street corner putting Patriots in [bots].

**Moderator:** General, I want to use the power of the chair to ask a follow-up as well. You mentioned the gyrocopter incident at the White House. Now you take AI to track it all.

What is your assessment, not of state power cruise missiles or hypersonics but of low observable drones as they proliferate in the commercial and hobby space watched here from our continental US against targets?

**General VanHerck:** That's a great question. I'm glad you asked it.

That threat will only continue to grow and it's just a matter of

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time before we see another incident where we have to respond.

Now let me be clear in my roles and responsibility based on unmanned aerial systems. Type 3 and above. Type 3, 4, 5 and above which is 56 pounds and above. In my NORAD hat I have responsibility for defending from those. What you're talking about are Type 1 and 2, the small UAS. That is a law enforcement challenge. With regards to DoD we have authorities within inside federal land to respond to those, but our side of federal land, we're a reactive posture and a law enforcement posture. We're not in a defensive -- defensive to me is not reactive. It's actually enabling you to go off and see it before it becomes a threat.

So I think there much work to be done there . It's something that we have to balance with commerce, transportation. The FAA has significant equities here. But this is a growing threat and a challenge that we'll have to deal with long term.

**Moderator:** We're winding down to the end of the hour, General. I wanted to give you the floor for the final few minutes before I say thanks and adjourn the meeting.

So any final thoughts or smart questions that we failed to ask?

**General VanHerck:** Let me share a few thoughts.

First, thank you for the opportunity to share our narrative, our message. I'm so humbled every day to get to come to work here and defend our homelands -- both Canada and the United States with thousands of people tonight.

I walk into my office and see pictures of giants that have gone before me. Chappie James is just one. There are many others that I look at. And it's the most noble mission that one could have and we're humbled to do it every day.

I wish I could tell you that I had all the problems solved. What I will tell you is that the environment we're operating in is the most dynamic and strategically challenging environment in my 3.5 decades of service. It's not going to get any easier. That's why we need to focus on defending our homeland. Five to ten years ago really, the homeland was not challenged. When your homeland is challenged and there's threat to the homeland, the risk of strategic deterrence failure goes up. And that's

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something that we don't want to find ourselves in.

So every time we employ power around the globe, conventional power, we have to ask ourselves, what is the threat to the homeland? What's the potential risk of strategic deterrence? You see that happening right now with Ukraine and the Russia situation. We stand ready to defend the homeland. Our homelands, I should say. We stand ready to provide defense support of civil authorities which I believe is absolutely part of homeland defense.

I told you earlier, that capability and responsibility has a direct impact on the belief of our resiliency, our responsiveness and capability. So we stand ready.

I wish I could tell you that we're not going to have the challenges. The National Guard over the last couple of years has been just doing yeoman's work around not only the globe but especially here in the homeland. I wish I could tell you that wildfires will be less this year, but we're already seeing that significant in the southwest and they will be significant I think as last year. Same thing for hurricanes.

I think the pandemic, we shouldn't take our guard down. We'll have significant challenges if we take our guard down and we stand ready to continue to support that.

I'm going to focus on my strategy that I talked about. I can't get caught up in the near term of worrying about the challenges going on with Russia and Ukraine. Certainly I worry about that. I worry about it from the challenge of management of escalation, ensuring we're postured and ready to defend the homeland across all domains, and ensuring that we're ready to provide consequence management. But we have to stay the course on our strategy of integrated deterrence, campaigning to ensure that the Department of National Defense in Canada and the Department of Defense here in the homeland provide just the domain awareness that we need to execute the missions that I've been tasked and we move forward with processes to field capabilities much quicker than we have in the past.

NORAD modernization is a key thing that I'm focused on. I really look forward to seeing more details about the Canadian budget. I'm encouraged where they're going. I talked with the Minister of National Defense, I've talked to the Chief of

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Defense Staff. Their budget will certainly be increased but we need to make sure that we get to where we need to go, which is like domain awareness and infrastructure. I look forward to seeing more out of the Canadians.

As the Arctic Advocate, I will continue ruthless advocacy.

Next week I'm going to the Arctic. I'm going to Alaska. To the Arctics, strategic forces, Security Forces Roundtable. I'll also go to [Inaudible] where we're building the new long-range discriminating radar. I will go to Anchorage and we'll celebrate the 75<sup>th</sup> anniversary of Alaska Command which stood up back in the wake of World War II, the last time boots were on the ground from a threat to the homeland, Alaska Command stood up. So I look forward to doing that. We'll continue with our campaign.

Finally I would tell you, you can help me, but we have an education challenge, to ensure that everybody understands that the homeland is under threat and the way that we have projected power in the past from the homeland to a place of our choosing at a time of our choosing will no longer be the way of the future.

So we have to ensure that we are capable of providing that. I think I am very crucial to ensuring that General Wolters is successful, Admiral Aquilino is successful as well in the Indo-PACOM AOR. Ensuring that we are capable, credible to deter our homeland, that will give anybody any pause about ever striking our homeland which also means they would have pause in a Western Pacific scenario or potentially additional scenarios in the European AOR.

So I'm very humbled. I appreciate the opportunity to talk to you guys today, Thom. Thanks for your questions and the candid discussion.

**Moderator:** General, we thank you most sincerely for your time. Our entire mission here at the project is to elevate the national security debate by bringing senior leaders like you together with just the very best correspondents, and this has been a very elevated debate.

So thanks to you, to your staff for their support. We wish you the best of luck with your important mission, sir.

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**General VanHerck:** Thanks, Thom.

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