

Center for Strategic and International Studies

TRANSCRIPT

Event

**“Air and Missile Defense in the High North”**

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FEATURING

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John J. Hamre: We're delighted to have you here. Unfortunately, Senator Sullivan is not in the room, but that's because he's a senator, and he's up doing all the work for us, representing the great state of Alaska. And thank you, Senator, we can now see you, and it's really great to have you with us. Thank you.

I just wanted to say thank you to my colleagues here, for this great panel. My goodness, this is going to be a rich conversation.

Alaska is, you know, the most underappreciated defense resource we have, you know, because it is sitting squarely providing the missile defense for America, you know, at Greely, and we're going to explore what that means. We're going to explore extra dimensions of that. You know, it's a ballistic missile defense protection system. What about cruise missiles, OK? We've got a whole new world that we have to be thinking about, and this is all related.

It needs to be integrated in a coherent way, and nobody is a stronger champion of that than Senator Sullivan. And I don't need to introduce him to all of you because you know him.

I do want to say thank you to Quintillion for you guys making it possible for us to do this conference. I didn't know about Quintillion so I went to the website this morning, and it's the new digital Northwest Passage. You guys are putting high-speed fiber all through up in the Arctic. It just reminded me of failed voyages of, you know, the 1780s, you know. (Laughter.) You guys are going to make it, and it's going to be good.

Senator Sullivan, you've got a great company here in the room, and we want to turn it to you. I want to say thank you for your service – it's remarkable – and you've always been a great friend here to be willing to do events with us. So, let me turn it to you, Senator Sullivan. It's up to you now. You take it from here. Thank you.

Senator Dan Sullivan (R-AK): Sorry about this – a little bit of an audible here – but we're making it work. We just have some votes. I just got off the floor, and I've got another vote in about 40 minutes. So, driving up to CSIS unfortunately wasn't going to happen today.

But I also just want to thank CSIS. Your leadership on so many issues, what you guys do is so important, and I'm always honored to be able to say a few words, learn from your outstanding experts. I know Tom is certainly one now in terms of missile defense for your team, and we always like to learn.

And I do – like you did – I wanted to do a shoutout to Quintillion. They

are doing a lot of great work up in the Arctic, up in Alaska for the country. There's a lot going on.

I appreciated your initial statement, John, about the underappreciated national security value of Alaska. I'm going to talk a little bit about that.

So, what I wanted to do in terms of my remarks was kind of frame them in the broader context of the Arctic, and you just had to look at the news yesterday. Our friends, the Chinese, had a four-ship navy taskforce off the coast of Alaska in our EEZ. This is in addition to last summer when there was a 12-ship joint Chinese-Russian naval task force in Alaska's waters. The summer before that it was a seven-ship joint Chinese-Russian task force. So, bottom line, we are on the front lines, and sometimes in Alaska. Sometimes our military gets it, sometimes they don't get it, and I think think tanks like CSIS get it more than the Pentagon.

Now, look, I'm a military guy myself, so I love our military – just had breakfast yesterday with the chairman of the Joint Chiefs over at the Pentagon. But I will say on certain issues they kind of need some prodding, and the Arctic has been one. And I've been prodding – maybe shoving – them for the last nine years in my position here. But there is an awakening on the importance of the Arctic, and, you know, again, on the importance of making sure we have the assets to protect our national security and strategic interests in this part of the world.

Just a little anecdote: That joint task force, two years ago, by Russia and China – the Coast Guard sent a 150-foot cutter to go greet it. Well, as you can imagine, as Alaska's senator, I didn't think that was an appropriate military response. I had a frank discussion with some of our leaders at INDOPACOM and NORTHCOM saying, hey, gentlemen, like, they're going to do this again, and next time you need to be a little bit more forceful, muscular, right? I mean, if you had big joint Russian-Chinese task force off the East Coast of America, you'd have two carrier strike groups shadowing that thing. We've got a 150-foot Coast Guard vessel? I mean, I love the Coast Guard, but come on. So, last summer when that 12-ship joint task force from Russia and China came off Alaska's coast, we did respond with four destroyers and a bunch of P-8s, so that was better.

And one of the things that I mentioned to the chairman yesterday was, hey, we need to keep it up. They're going to keep doing this – we know it – and we need to have robust military responses in the Arctic, just like we would anywhere else off of the coast of America.

Like I said, I think, you know, let's just face it: from a military

perspective – my view – the Arctic used to be, from the Pentagon’s perspective, a strategic backwater. Nobody really paid that much attention to it. I remember one of my first hearings, Secretary Ash Carter was testifying in front of the Armed Services Committee – I was a brand-new senator – and I held up the Obama administration’s 13-page Arctic strategy. Seven of the 13 pages were pictures. It mentioned climate change like five or six times and mentioned Russia once in a footnote. And I held this up, and I said, Mr. Secretary, with all due respect – and you know I respect you – this strategy is a joke. It’s a joke. And I slammed it on the dais, and I said, the Pentagon has to get more serious about our strategic interests in the Arctic, and we, the Congress, will help you. So, in every NDAA in the last, I think, nine years, we have legislated forcefully on the importance of the Arctic.

What’s at stake in the Arctic? Well, certainly resources. The U.S. Geological Survey estimates there’s approximately 90 billion barrels of undiscovered oil, and the amount of natural gas is in the, you know, multiple trillion cubic feet. It’s strategic – the sea lanes, of course, are opening with receding sea ice. Putin calls the Arctic the new Panama Canal and the new Suez Canal that he wants to own; he’s trying to.

But the father of the U.S. Air Force referred to – that’s General Billy Mitchell – he talked a lot about the Arctic, and then he talked about Alaska, calling it the most strategic place in the world. Whoever owns Alaska – because you can access North America, Europe and Asia so quickly – will own those areas.

Well, fortunately for America, we own Alaska and, you know, one of the things in terms of what’s at stake there that I always like to remind people – when I got to the Senate, I met with the NORTHCOM commander back then, and he didn’t really focus much on the Arctic at all, even though that was part of his AOR, and when I was pressing him on it, he said, well, Senator, you know, there’s another issue. There’s just really nobody up there. (Laughter.) I was, like, excuse me, sir, like, there are people up there. They actually happen to be my constituents. So, if you’re a military member, don’t say that again – (laughter) – because it’s really kind of annoying.

But Alaska, I like to say, constitutes three pillars of America’s strategic might. We are the hub of air combat power for the Arctic and the Asia-Pacific, all kinds of military assets in terms of aviation up there. But we have over a hundred fifth-generation fighters stationed in Alaska – F-35s and F-22s. There’s no place on the Planet Earth that has over 100 fifth-gen fighters stationed in one place. And by the way, they can get to Russia and China very, very quickly from Alaska. We are the expeditionary platform for new military forces. Some of you may have

seen the – two years ago, at my urging and something I worked closely with the U.S. Army on – they reestablished the 11th Airborne Division, so now we have two airborne divisions in the U.S. military: the 82nd on the East Coast and the 11th Airborne Division in Alaska.

By the way, that was a storied airborne division. Not a lot of people know about it – 82nd and 101st Airborne get all the glory, but the 11th Airborne had a very storied history in the Indo-Pacific during World War II and afterwards.

And then finally – and I think what’s really important for the discussion today – Alaska, as John mentioned – we are the cornerstone of America’s missile defense. All the ground-based missile interceptors, with the exception of four at Vandenberg Air Force Base, are based in Alaska. All of the radar systems, including the new Long Range Discrimination Radar system at Clear Air Force Station, which is – that’s now the most sophisticated long range discrimination radar system on the Planet Earth – all the radar systems tracking missiles that could come from anywhere as diverse as North Korea or Iran, they are all based in Alaska. And the reason they are based in Alaska, as John mentioned, if anyone is going to shoot at our lower 48 – cities, states, you know, New York City, Chicago, Miami – it doesn’t matter. That’s all going to initially come over my great State, so that’s where we’re going to shoot it down from. So, that’s why we are the cornerstone of missile defense.

However – and John already raised it – in the – you know, the incident we had with the Chinese spy balloon that happened last year, we have definite vulnerabilities in terms of over-the-site radar capabilities but, really importantly, in terms of cruise missiles, in terms of sonics – and again, if Russia or China was going to send cruise missiles or hyper sonics to hit, say Chicago, or D.C., or New York City, those would all come over Alaska first.

So, what do we need to do? We are behind in this area; we just need to catch up. Some of you might remember from CSIS – because I did brief you a number of years ago on this – in 2017 I put forward a bill called Advancing America’s Missile Defense Act of 2017. The vast majority of that got into the FY ’18 NDAA, and what that did, it built out Fort Greely even more. There are currently 40 ground-based missile interceptors at Fort Greely – they are going through an update – and my bill added 20 silos. Those are already built, and they are getting ready to receive the next-generation interceptors. We’re hoping earlier than 2028, but the Pentagon is saying 2028. This is something I’ve been pressing them on. We got, like I said, the Long Range Discrimination Radar system. That was over a billion dollar investment at Clear Air Station. That’s now up

and running. And provisions also required in that bill of mine that became law to develop air-launched and ship-based boost-phase intercept capabilities, working with our allies in Japan and in Korea.

So, these are all things that we're working on now, but the work has to continue. In this year's NDAA, we secured a lot of wins that continue to build on what we've been doing in terms of missile defense, including funding for our hypersonic targets and countermeasures program and the Glide Phase Interceptor program.

I was able to also get the Navy to look at reopening potential previous bases out in the Aleutian Island chain. For any of you who either served at Adak, the naval base there, or visited Adak, when you get there, you just – your first reaction – my first reaction is, wow, this is an incredible piece of strategic terrain because it's essentially the gateway to the Arctic and something very far out west in the Indo-Pacific – much further west than Hawaii. That's the Adak Naval Base, used to be a naval air station, a submarine base, and to me, those are the kind of things that we need to look at, particularly during these dangerous times. With authoritarians on the march, and the Chinese and Russians, and the Iranians dramatically building up their military, I think that looking and continuing to build up our missile defense forces for America – because that's what they are for in Alaska, they're for America – and having much greater domain awareness in that part of the world is going to be critical.

Now, one final point which I think is exciting, if you look at the Republican platform that just came out a couple of days ago that we're going to be discussing next week at the Republican Convention, there is a great – it's a very – and by the way, it's a very succinct – 16 pages, that's it. Marsha Blackburn, senator from Tennessee, she was the chair of that. She did a great job. But 16 pages – that's the entire platform. I think the Democrats' platform is going to be 300 pages. I'm not sure what the implications of that are for both of us, but the part about national security and national defense focuses on peace through strength, which is a strong tradition in the Republican Party – think of Reagan, think of George W. Bush, think of the first Trump administration term – but there was a lot of focus in this document on the need for kind of an iron dome for America.

So, there is going to be a lot of additional work, if the White House changes hands, particularly on missile defense. It's briefly sketched out in this platform, but I think it's needed, I think it's exciting. We already have plans to modernize the northern warning system with our friends, the Canadians, but so much more needs to be done. And at least one political party is putting this in their platform as what we're going to be

focused on post-November elections.

So, again, John and the team, thank you again, and I look forward to being able to participate in a little bit of the Q&A, pending additional votes in the Senate, which I think we have a couple coming up in about ten minutes.

Tom Karako: Well, thank you, Senator, I appreciate that and know you have a hard stop at 12:45.

I wonder if you could elaborate on some of things that you were saying there in terms of how you think about what's happening in Ukraine where they are facing cruise missiles and air threats on a daily or weekly basis. And I noticed that the SASC NDAA that just got released had a provision calling for an integrated air and missile defense architecture for the entire U.S. homeland – not just the ballistic missile stuff, but air and missile defense more broadly, which was in that bill that was just put out.

So, how do you see what's going on in Ukraine and other places right now, as well as the Middle East, and how does that inform our need for those kind of capabilities at home?

Sen. Sullivan: Well, I think, you know, you mentioned the Middle East. I've been one of the strong proponents in each year's NDAA, doing the work. We've done a bunch of work with the Israel defense forces on their Iron Dome. As you guys know, that's been kind of joint work. We've authorized about a half-billion (dollars) a year to work with the Israelis on that. Again, from the Alaska perspective, we had the IDF come out to Kodiak Island a couple of years ago where we have the Alaska Aerospace testing grounds there, and the IDF did a bunch of work on their Iron Dome, and David's Sling out in Kodiak, Alaska.

So that work has been really ongoing, and there has been work with regard to CENTCOM for integrated missile defense as it relates to our allies in the Middle East, and with the Israelis, but also with the Emiratis, Bahrain, even the Saudis. This is work that we think is important, and of course, that work is directed at the major threat in the region, which is the terrorists in Iran.

Your question as it relates to – for the United States in Ukraine, I was part of a group of senators who met with President Zelensky yesterday, and we actually talked about the innovations that they have been able to undertake at the speed of war, to be honest – at the speed of combat. And one of the senators actually asked, well, what could we learn from them. And I think the answer is we can learn a lot because they are

innovating at the very rapid rate, which of course is driven by the existential threat that they are facing right now. That is missile defense, that's the drone work that they are doing.

And then we are also doing this, as I mentioned – starting with some of the legislation in my bill from 2017 – with Japan and Korea, and integrating kind of boost phase missile defense that we have with those important allies of ours.

So there have been so many advances, in part driven by the real-world combat that our allies like Israel have been facing, partners like Ukraine have been facing, and of course, the threats that Japan and North Korea continue to face – I'm sorry – Japan and South Korea continue to face from North Korea, that it just makes sense for us – and you saw that in the NDAA and you saw that, as I mentioned, in the Republican platform – to take that concept and start applying it to our own homeland.

One of the final things I'll just mention that's exciting to me that the NDAA tries to address is so many of these high-tech, smaller businesses that are really focused on national security and defense. It's a great opportunity for us where we have some of our best minds to do work in this space, and we have some great innovative companies. You know, you may have heard that Lockheed Martin just was awarded a big \$17 billion contract for the next generation of interceptors to defend the United States from intercontinental ballistic attack. But we also have these smaller, very nimble companies that are being developed, and I think they are learning a lot from what's happening in Israel, what's happening in Ukraine, and it's going to be a very active space for our military, missile defense, and it's going to involve a lot of the learning that we're seeing from these conflicts around the world.

Dr. Karako: Well, thank you, Senator. I know you've got to run to other engagements, but we look forward to having you over to CSIS in person in the near term, I hope.

Sen. Sullivan: Great, thanks, Tom, and thanks everybody – appreciate it. Sorry about the audible that we called. Thanks to all our technicians on both sides who have done a great job enabling us to connect, and we really appreciate it.

Dr. Karako: Thank you.

All right. Well, we're going to transition seamlessly here. Thanks, everybody, for your patience on this.

We've got a great panel lined up here to continue the conversation and



kind of pull threads on especially some of the policy and programs, and operational considerations here. So on the other side of the stage you've got Major General Mike St-Louis, Canada's defense attaché to the United States. If I tried to pronounce the French pronunciation I would embarrass myself very badly.

To his – to his right – to his left – or to his right, your left, Dr. Peppi DeBiaso, thirty years of service for the U.S. government. He was the director of the Office of Missile Defense Policy from 2000 to 2021, and now a senior associate here with CSIS Missile Defense program; and finally, Charles Jacoby, retired Army general whose last retirement – last command prior to retirement was to command NORAD and U.S. NORTHCOM, and the first and only Army officer to ever do so.

Charles Jacoby: First and last. (Laughter.)

Dr. Karako: I also want to thank and acknowledge acting ASD, Rebecca Zimmerman, who wanted to be on the panel today, but she had another responsibility come up, and we are really looking forward to having her at another time.

And today was sponsored by Quintillion, as Dr. Hamre spoke about, and I want to acknowledge that General Jacoby is an advisor to them for transparency.

So, I thought we would just begin with the threat. You heard Senator Sullivan talk about that – not just about the rogue state ballistic missiles, all these other things.

And General, I wonder if you might start off with Canada's perspective on this and how you see this. Canada has committed to making some very substantial investments on this. But first, how do you see the threat that Senator Sullivan was talking about? I might ask Peppi and General Jacoby to do the same.

Michel-Henri St-Louis: First of all, I'll tell you how humbled and fortunate I feel to be on this panel. Thank you for CSIS and the sponsor, and the chance that I have to sit here with one of my previous bosses, when General Jacoby was in service. It's a little bit daunting. He has been introduced as the first Army officer to hold the chair of NORAD/NORTHCOM commander. Not at the same rank level, but I was the first Army officer within our air division in Canada's NORAD region to be the chief of staff in that headquarters, so I got to learn about this different culture, the imperative of this domain, and the importance to the defense of North America.

I appreciate me giving the first of these answers. I thought I was going to go last in the order over there – (laughter) – a little bit dislocated now, so bear with me. And if I start switching to French, well, too bad. (Laughter.) You can come at the end and I'll try to translate.

But, yeah, we should start with the threat, right, because the threat informs the why, and if you understand the why, you can probably get to the best possible plan. And I found it fascinating to listen to the senator on a conversation about the Arctic, the defense of the Arctic, the defense of North America, Alaska, and he singled out China in the first couple of minutes.

So, when I joined the forces in the 1990s – by that time General Jacoby was probably a general already – but in that time it was Russia, and it was all about Russia. NORAD was about Russia. NORAD came about to defend North America against the Russian threat. And the fact that we are speaking about China, that we're speaking about North Korea, that we're speaking about – still – Russia, I find it quite telling and interesting.

And I would say, for my country, which I appreciate I'm the only one on this panel that speaks for another government. The other ones can say with a little bit more freedom and more freely their position. Please bear with me and be indulgent of my position. A lot of what I'm going to say is my opinion. But the threat in Canada, the perception of the threat in Canada is now squarely in line, I think, with what is seen in places like the NORAD/NORTHCOM headquarters, in places like the Joint Staff, in how it's articulated in some of your policy documents.

We just recently issued a new Indo-Pacific strategy; we have not had such a document for years. We just issued a new defense policy update which is titled, "Our North, Strong and Free," which dovetails perfectly with what we are talking about here and the importance of the Arctic and what the senator spoke about. And the realization that the Arctic is becoming more accessible, more freely navigable; that is a line of approach to a number of threats across all domains; that Russia, China are looking to behave in a way that is outside international norms, and if we are not careful and we don't address these threats quickly at the pace of war, that we will jeopardize the security of this sanctuary that we have kind of taken for granted – I'll speak for Canada – or our position of being protected by three oceans and a best friend to the south. And I think that reality has really struck the imagination of our country, our politicians who are become very seized with that definition of who is our adversary, who are our friends, and what do we need to do to protect our national interests.

Dr. Karako: Can I just direct a similar question to you, Peppi, and you've spent a lot of time doing missile defense policy for DOD. How do you think about the changing threat piece – before we get into any programs or anything like that – or even policy?

Peppi DeBiaso: Sure, sure. I mean, for – insofar as it relates to the topic of the panel today, right – the question is related to sort of cruise missile defense of the homeland, cruise missile defense of North America. I mean, we took sort of a 20-, 25-year holiday, right, in the post-Cold War period, right, in terms of the concerns we had with sort of major powers like Russia and China. I mean, up until 2016, 2017 – and this wasn't really even much of a focus, right, within the Pentagon. We had potential sort of air-breathing threats to the United States or North America.

Of course, this began to shift, right, with the return of, you know – five or six years ago we started to call, you know, great power rivalry, and kind of a recognition that, sort of, Russia and China in particular were developing sort of a growing range, a growing set of conventional, long-range strike capabilities. And we're beginning to see this sort of manifest itself sort of more in a regional context, right. There's sort of this term of art known as anti-access/area denial, right, where the Chinese and the Russians, in particular, building up large postures, if you will, of missile capabilities, really to tie the United States down either in a European, or Middle Eastern, or sort of Asia-Pacific – Asia-Pacific fight.

This became sort of, I think, you know, perhaps a greater recognition that we were now beginning to see these threat capabilities – long-range conventional missiles, whether launched by aircraft, submarines, or ships, right – sort of posing a kind of anti-access/area denial threat to the homeland, right – Russia and China attempting to bring these threat capabilities to the United States as a way of impeding our ability, right, to flow forces out of the United, right, to respond to a variety of crises and conflicts overseas.

And so, I mean, this became really a very significant focus. You can look at the 2022 Missile Defense Review, for example, and in that review, there was an acknowledgment, a recognition that both Russia and China were now developing capabilities – developing, fielding, training and operating – capabilities to conduct both kinetic and non-kinetic strikes against the United States, right – kind of a little bit of buzz word terminology, but the kinetic piece was pretty clear, right? I mean, these were long-range, conventional strike capabilities that both great powers – big powers – were developing, fielding and exercising, right, to potentially hold at risk, you know, critical targets in the United States. And, you know, for two-plus decades, right, that simply was not

anywhere on the American, sort of, radar screen, right, if you will.

The other interesting piece is that we began to see developments, right, in the way the Chinese and Russians were thinking about attacks on the United States. Again, if you look at the 2022 Nuclear Posture Review, right – and I tend to talk in terms of American national defense strategy documents having spent 30 years, right, developing, and writing, and drafting American national security, national defense documents, so the policy framework to me is – I mean, it's sort where all of this sort of starts, right?

But the 2022 NPR – yeah, it said something really interesting. It said Russia and China really are developing capabilities to carry out strikes against the United States below the nuclear threshold, which was kind of an interesting development, right? So, I mean, you're beginning to see recognition sort of in this shifting – and I'm getting a little bit more maybe highbrow here – but sort of in the shifting nature of warfare, the types of warfare Russia and China are contemplating for limited strikes, either of a conventional nature or of a nuclear nature against the United States in the belief, right, that the United States, right, in the conventional context, right, that they can thwart and blunt, right, an American response to some conventional conflict overseas that China and/or Russia may be involved in, and/or they can carry out limited nuclear strikes in ways to sort of bloody the U.S. nose, put the U.S. back on its heels, and convince the United States, right, that it needs to sort of stay out of, right, Europe or the Asia-Pacific region in a conflict, and that they – Russia and China – are prepared if the U.S. does respond, right, to escalate further, right, imposing potentially more pain on the United States.

So, I mean, that's a pretty big shift that you sort of see coming about in the 2018, 2019, time frame, I think, you know, during the Trump administration, and I think that sense of sort of where Russia and China in particular are, right, evolving capabilities, right, sort of reaffirmed when you look at sort of the Biden administration's National Defense Strategy and Missile Defense Review insofar as sort of that – the way that threat picture has evolved with regard to kind of the vulnerability of the United States, sort of a set of capabilities and strikes, right, that we simply didn't focus on for 25 – you know, 25 years.

Dr. Karako: Taking air superiority for granted.

Well, General Jacoby, when you were the head of NORAD and NORTHCOM, you were making the case that we – that there was a problem, that we needed to do something different as opposed to just this holiday. What were you seeing then and what are you seeing now

that's changed?

Gen. Jacoby: Well, one of the things I'm really happy to see is closer cooperation with Canada on the key issues, and a key issue has always been, for the NORAD/NORTHCOM commander, aging early warning that was totally focused on nuclear war with Russia. And slowly but surely we're starting to understand, but we're really still talking about it. I mean, there's – the Long Range Discrimination Radar is a big step, but everything that's aligned with the ground-based, mid-course missile defense is tailor-made for deterring and denying benefit of North Korea. It's a geography problem. It's a geometry problem. And we haven't – we really purposefully wrote – most of the documentation in the early days was to deal with a rogue threat, and that was North Korea. Later we started thinking about Iran as a rogue threat, and we started looking at another east coast missile site, but we decided – I know a lot of ink was spilled on that, but there is no east coast missile defense capability.

But as was mentioned by the senator, many of the trajectories can be covered with interceptors from Fort Greely. But your math problem is wrong if you've got multiple threats from multiple directions. So, I just want to throw that out there. I mean, in the big picture, every NORAD/NORTHCOM commander since my day has been making the case that the homeland is not a sanctuary anymore, and to recognize that the fact that the homeland can be held at risk by other things besides massive nuclear exchanges with Russia – and then we kind of said, and maybe with China, too – and that's – you know, we're all playing with the same table stakes there, and deterrence in that manner does work. It's very uncomfortable, but it has worked.

But we don't have a credible deterrent to the cruise missile threat – the non-strategic, non-nuclear, or even the strategic limited nuclear strike. Do we have a credible response for that? We're just not going to launch all our missiles based those kinds of attacks. And so we really need to have the ability to look at these cruise missiles and other threats that we're watching come from Iran and from Russia, and we know that China is working on a whole new variety of weapons designed to be able to reach the homeland and to hold it at risk, below the nuclear threshold or to include the nuclear threshold in a very limited sense.

And so we have to go ahead and accept – you know, you have to be in favor of what's going to happen, right. So, we are going to get compromised. Our freedom of action, of strategic decision-making is going to be compromised by their ability to do damage in the homeland that we don't have a credible deterrence for or a credible response for, except for North Korea, apparently.

And so, as the senator said, there has also been a lot of ink spilled on a series of, this is our Arctic strategy, and it's mainly to make Canada happy, but we didn't really have our heart in it at all until we really – it's really picked up since the '16, '17 – and we did in '14 get some increases in the missile defense, but again, totally oriented on North Korea.

Now I will tell you that, as an Army guy coming to NORAD, you know, everybody was highly suspicious of, you know, an airborne Ranger instead of a fighter pilot, but it really – it gave me the opportunity to take fresh looks at everything. And I said, well, look at – look at what Russia is doing, look what they are building. They are refurbishing all their long-range strategic bombers. They are developing cruise missiles that can be launched from distances barely out of Russian air space. The best avenues of approach and our most vulnerable avenues of approach are over the Arctic, and we're still just talking about it, and we're not doing too much about it.

And as the senator pointed out, they are starting to make some progress, but even that progress is compromised by other mouths to feed. We're still having – I mean, starting with having a problem with recruiting right now, OK? And it goes on and on and on and on, and we are in a tail chase, a catch-up game on a lot of things, but we can't afford to be in a catch-up game in deterring non-nuclear strategic and limited attack on the homeland because it will do the following things. As I said, it will reduce freedom of action and strategic decision making.

What am I talking about? If the homeland is at risk, and that risk is being demonstrated on a daily basis, and a president someday says, well, look, what are we going to do if they launch a cruise missile attack, or how about after a cruise missile attack? And you say, well, that's just going – we don't really have a good, credible response. Are we going to go shoot cruise missiles into Russia? How are we going to do that? How many do we have? We're spread – the peanut butter spread is pretty thin now, and when I was growing up, we used to have – we wanted the ability to fight two major wars, a little one, and something else, and something else to be determined.

We're stretched pretty thin right now, and we have the additional task of defending the homeland, which is a must because if we're not defending the homeland, it puts at risk every forward combatant commander's war plan; may or may not get approval to launch something based on the homeland being held at risk, or maybe having been hit, or maybe suffering non-kinetic strategic attack – cyber, space – and that's why when I say that the number one issue for NORAD/NORTHCOM and Canada starts with this all-domain awareness, which is driven by, of course, very focused intelligence.

From the 25-year hiatus we took from worrying about near-peer competitors, we got very, very good at fighting terrorists, and getting patterns of life, and understanding who they are and what they are. It took a while, but we got there – and preventing attacks on the homeland from terrorists. And NORAD completely shifted itself over to Operation Noble Eagle, which is shooting down hijacked airplanes so that they don't auger into the World Trade Center, or into the Pentagon, or the White House, or wherever they would be aiming for.

We got pretty good at that, but we really lost the bubble on what are the capability and intentions of China, because they were growing. What were the capability and intentions of a new Russia because they were growing, and everything that they – they don't do their stuff for fun, OK? They're not building a whole variety of short-, medium-, long-range ICBMs, hypersonics, fractional orbital – you can name them – but the one that we have – to tell you the truth, is the most likely and we have the most problems with is cruise missile defense because we really have a difficult time with that. It takes a very comprehensive series of things in the kill chain: first of all, intelligence that tells you, OK, maybe some bombers are taking off and that kind of thing; or maybe you lost track of a submarine that's very uncomfortable to lose track of; or what could be the risk? And then you start – you start watching closer, and then you have to be able to detect a cruise missile, which could be right off the coast.

What just happened? It could be in the Caribbean, or it could be a shore-based cruise missile off of Cuba, who seems to be close buddies now, again, with Russia. And so – but the number one problem is – really there are two. If I had to design a missile defense system focused on the cruise missiles, it would be the National Capital Region, and there's a stretch of the East Coast that is critical to the United States' ability to defend itself and to project power, and Alaska. And Alaska is not just vulnerable; it's a tremendous opportunity, and I think the Senator did a great job communicating the opportunity we have in Alaska and with Canada to deny – to deter and then deny benefit, and we've still got to work on what the punish response is to that deterrence equation – cruise missiles and also the threats of them collaborating – the Russians collaborating with the Chinese and the North Koreans.

And you've got an unholy alliance going on right there, and you've got to watch it, and you've got to be in – they're not doing that just for fun. Putin didn't go to North Korea to ride the Ferris wheel, OK? They're making deals. He's getting stuff from them; they're getting stuff from him. I don't know what it is. I don't get that kind of intel, but I'm just

guessing – but I think it's a pretty good guess.

And it's – Alaska and the High North is a competitive advantage for us in hip-checking all three of our most potent adversaries. And with a little bit of help, can help us with our other nefarious actor, which is the proxy-using Iranians. And I will tell you, the Iranians – they weren't goofing around when they launched 300 things at Israel. And we did pretty well. We, meaning the – Israel and the allies, which included the Middle East. But the investment that's gone into that has been real. It's been strong. Our forces are oriented there. Now we have 100 fifth-generation fighters up in Alaska. But you know who they belong to? They belong to the PACOM commander.

So we can talk about that later, but there's some real awkwardness. And, you know, command and control is the problem up there. But that command and control, and infrastructure, and domain awareness, and presence all needs work in the High North to really defend the homeland. Otherwise, the homeland is at risk. Decision making is at risk. Assuring our allies is at risk. The logistics flow is at risk. I mean, most of our stuff was brought back to the – brought back to the homeland.

Everybody's TPFDD, which is what they need at case of a war, most of it is still in the states, and has to go. And they are not going to contest that. They will. And our supply chain. Holy cow, we still have a vulnerable supply chain that's at risk. (Laughter.) So that – my view – and my view is, don't forget, whatever you're seeing about the Russians and the Chinese working together, it's not for show. And whatever they are building and practicing with – back in 2011 when I took over NORAD and NORTHCOM – they're using it on the Ukrainians today. And they're ready to use them on us. They practice it all the time.

And so it's a reality. The threat is real. Canada gets the threat's real and is rubbing the Canadian dollars together. And we need to do the same thing. And we've got a lot of programs starting. But if you look at – if Russia's looking at us right now, and China, and North Korea, the only meaningful challenge they have is getting North Korean missiles involved to distract us or to pin us down, or to deny us freedom of action in Indo-Pacific. Otherwise, if I was a Russian, I wouldn't see much that was deterring me from conducting those strikes. And I'm not seeing much of a credible response in return. I'm sorry.

Dr. Karako:

No, no, you're good. I wonder – General and Peppi – I wonder if you could react to something that General Jacoby, I think, articulated very well. And that is the nonnuclear strategic attack. I feel like at CSIS missile defense project we talk about this a lot. And I want to – I recall



that was, I think was, nine years ago this spring, we had the Vice Chairman Admiral Winnefeld in this room talking about that, in his view, it was the cruise missile threat to the homeland that was overtaking the importance of the threat from regional ballistic missiles. And that was the Obama administration, when regional ballistic missile defense was the thing.

That was in 2015 that the vice chairman said that. It doesn't seem like it's sunk in yet. And so my question for you is, to what extent has – is that registering in Canada, in the halls of the Pentagon. Is what General Jacoby was describing, cruise missile or other kinds of threats but nonnuclear strategic attack, has that taken hold? Or is it still seem more on the abstract kind of a problem?

Dr. DeBiaso: Yeah, look, from my perspective it has started to take hold pretty much only over the last handful of years, right? I mean, a kind of recognition or awareness that Russia and China are developing, right, an additional set of capabilities, right, to hold the United States at risk. And this, I think, derives from what I would call, on the behalf of Russia and China, an obvious appreciation that the core of American defense strategy for decades has been our ability to project power. Yes, we're a forward-presence power, but we're a much – in the post-Cold War era – we're a much-diminished forward-presence power, right?

And so there's a recognition that look, I mean, if you provide the opportunity to the United States to go build an iron mountain, as we did in first Gulf War, right, the United States military is likely to prevail in a significant, major regional, conventional conflict. So –

Dr. Karako: If we can get there.

Dr. DeBiaso: If we can get there, right. So what's the key objective, if you're, you know, a U.S. rival, right? It's to deny the U.S. the ability to go build that sort of iron mountain, if you will, or whatever that mountain looks like these days. If it's not iron, it's made out of, you know, titanium or something else.

And so that sort of, I think, has driven over the past handful of years, right, the recognition on the part of Russia and China, look, you know, there is enormous benefit that accrues from being able to at least have the option to hold at risk and destroy targets within the United States, right? You know, again, you know, in the absence of sort of a massive exchange of nuclear weapons. I mean, we have strong nuclear deterrent capabilities that are presumably deterring those large-scale exchanges.

But everything – in my judgment – everything below that is sort of fair

game. I mean, you have to sort of combine that with the sort of geopolitical reality. I mean, Russia and China are American rivals, right? This isn't sort of a friendly competition, like a race, right? We're going to – me and the general are going to – we're going to have a race, and at the end, you know, one of us may win. I don't know, who knows. I'd probably fall down. But, you know, we're going to shake hands and get a ribbon. I mean, that's not the nature of this sort of great-power competition, right? To use the term of art.

I mean, these are – these are rivals who are trying to put the United States at a disadvantage. They recognize that if Russia and China to be able to exploit advantages, right, within their sort of regions of sort of geopolitical interest, they've got to keep the United States out of the region. And they can do that two ways, right? They can complicate sort of what we're doing if we're already in the region, right? And we know that both countries have really heavy missile-centric, sort of anti-access/area denial strategies regionally. But I think what we're seeing over the past handful of years, and this is sort of what I get out of General Jacoby's remarks as well, right, I mean, they're applying their anti-access/area denial strategies to the United States homeland, right? They're prepared to take on some risk, right, to keep the United States out of a fight that's important to them.

And so that – you know, we've talked a little bit about this for sort of four or five years, six years, maybe a little longer. I think the realization, though, that Russia and China are genuinely interested in, you know, holding at risk, right, the United States and developing capabilities, to me, is really within the last couple of years. I mean, it's starting. And we're sort of getting punched in the nose on this now, despite sort of having policy words in previous documents years ago that sort of said the right things about, you know, attacks below the – below the threshold. We're starting to genuinely pay more attention to it – without foreshadowing further conversation.

I mean, I'm not sure we're doing much about it. I think there's some pretty significant sort of gaps. But we're at least – I mean, we're finally admiring the problem the correct way. And now the – (laughs) – now the opportunity is, what are you going to do about this?

Gen. Jacoby:

So, just going back to why we're talking about the High North a little bit. The High North is not an easy place to work, OK? And so you have to have a will. You have to really buy into this threat to then look at the High North and say, look, I have to pick and choose what I defend in the homeland. I can't do it – I can't do everything all at once. So you have to pick and choose. You got to pick Alaska. And you got to pick the national capital region, and as much of that Eastern Seaboard capability.

There's a million other places that need to be protected – ports, airfields, places that we generate combat power and move it. But the things protecting the homeland right now are existing in – I mean, the senator should be very proud of the expansion that we've gotten on that missile defense. Not near enough. Not near enough, and too narrowly focused. (Background noise.) See, they like what I just said. (Laughter.) And the other – the heavier – the other part of Alaska is the perception – on the one hand, everybody knows the sea is melting and it's going to be much easier to move and influence all kinds of economic, and diplomatic, and military activity up there. But on the other hand, it's too hard to work up there. You know, wait.

Dr. Karako: It's still cold.

Gen. Jacoby: It's a long ways away. I mean, it is a really long ways away. Come visit – you know, my buddy's up in Anchorage. It's a long ways off. And but I will tell you, in 1954 we started the DEW line. It was done in 1957. A sense of urgency, right? That's what we're trying to communicate. It's time for a sense of urgency about the reality of what's threatening us.

And it really gets to, I mean, our grand strategy for a long, long time has been to defend the nation forward with allies and partners. I'll probably get critiqued by everyone in the world for my, you know, back of the envelope grand strategy. It's still valid. We still need to be out there. We still need to be reassuring allies, providing leadership, providing influence and opportunities to pick us as a security partner, even if you have to pick China as an economic partner. And that's what, you know, the forward guys, and gals, really are the ones that influence all of those aspects of trying to have the world that we all feel comfortable living in.

You know, on the other hand, we all need to recognize that the game has changed significantly, in that you don't have a free lunch in the homeland anymore. We have to recognize that, because if we have – even if we are threatening to get them on the ropes, they're going to do something to us in the homeland to get us off them. And right now we're very vulnerable to that, particularly cruise missiles.

Gen. St-Louis: Yeah, that free lunch, that false sense of security is really gone in Ottawa and in Canada. And our country has had the same government in office, or same party in government, since 2015. So they've been reelected three times. So from 2015 to today, it's the same party that's been in government. And during their time in government, they have changed their views with regards to the great nuggets you've heard about the threat and the new variations on the threat. And that has been the impetus for our new investments and our new policy that is focused on the Arctic, to no longer take for granted that sanctuary, and double

down on what Canada can do to help protect it. And then, afford the United States the ability to continue to go to that forward game with the assets that it has. Recognizing that Canada can't do everything.

But a couple of thoughts come to mind. We've used the analogy of Israel and their defense against that 13th-14th of April strike from Iran. That was one day in a country that you can drive from left to right in an hour and a half and north to south in five hours. I can't get anywhere in Canada in an hour and a half. I'm still in Montreal or in Toronto. (Laughter.) So when you put Canada and the U.S. together, their geography, like, there's no Iron Dome that can cover that. You might put an Iron Dome over D.C. You might extend it on the Eastern Seaboard. We might put it between the corridor of Windsor and Quebec on the Great Lakes and the St. Lawrence, some strategic nodes. But it is a daunting task.

The defense attaché of Israel was giving us a brief on what they went through during that 24-48 hour period. And it comes down, because it's been years of effort, millions and billions of dollars of effort, and it's a small field to defend. There's an ability to stack. And the attack lasted one day. You keep that attack for 30 days, you make thousands instead of 300, it is a challenge.

But to come back to what I said, that it's the same government that's been in office, they come in right after Russia takes Crimea and starts this Ukrainian war. They come in and are briefed by NORAD, NORTHCOM commanders, General VanHerck, General Guillot. And their briefings might have been more successful than yours, not because of the deliverer but because of the nature of the threat. And it is a 360-degree cruise missile threat. It is a hypersonic that can be launched from where you expect it to be launched, but then will glide and come from the south in a way that your fans of protection now need to be 360.

There's this realization in Ottawa that you are being challenged in the cyber domain all the time. That you are being interfered in your elections. That your space supremacy, your constellation, now is under threat of being taken down the minute there's a conflict. And an approach by Russia and China and our adversaries to use nonnuclear means, physically with cruise missiles and others or other domains, to put pain in North America in a way that maybe we were not accustomed to.

That all moves the needle to, for the first time in Canada, a public opinion that sees security and defense way higher than all the usual things we see. Forty billion dollars to NORAD modernization and \$70-odd billion for overall defense policy updates. But there is a change in

our government and in the people that vote for these governments because of some of the nuggets you express on how the threat has evolved, and changed, and is being articulated.

Gen. Jacoby: Yeah, just – and a comment on the Arctic. And I'd be interested in your thoughts on this. And we sat down and wrote a white paper with Admiral Papp, the commandant of the Coast Guard. He was the only guy I could get an audience with that would talk to me about the Arctic, because he had Coast Guard District 17 up there. (Laughs.) So we identified these four gaps that exist in the Arctic that need to be filled. And it's a good way to prioritize our efforts. The first gap is command and control. I could talk to you all day about dysfunctional command and control. We've got it up in the Arctic.

It's archaic. It's an anachronism from the – from World War Two, to some extent, the whole west coast forces thing. But it's also where does money flow from, and what's the – what's the driver of priorities? You know, the integrated priority list. I told the guys earlier today, when I was a combat commander, I said I shot an IPL in the air, it came to Earth I know not where. (Laughter.) Because none of those were ever, you know, compelling enough to get traction.

The second thing is all-domain awareness. We really have to know what's going on. We need – we need to start studying and collecting, as General VanHerck talked about in his guide experiments, every scrap of data on what's going on in the Arctic. What's the pattern of life of our enemy forces? Just like we did – or, adversary capabilities in the High North – just like we did with terrorist patterns of life during the global war on terror. Except for it's much more serious issue. And we need to do it in all domains.

Space. We are so reliant on space in the homeland, it's incredible. What they could do to our economy, what they could do to our intelligence community. You just start ticking them off one by one. Cyber. Everybody knows that we get messed with in cyber. I mean, we have a – you know, a medium sizzle going in the cyber conflict right now. And then infrastructure. And infrastructure is everything from rail to roads to air bases. But now, it's all about data. We want to do joint all-domain command and control. And we want sensor to shooter – seamless sensor to shooter, any service, any weapon. We call it out. Right weapon, right target, and we kill it.

That's all – that's all data transport driven. And you know wideband is required. You know, we have a very difficult communication problem in the Arctic. It can be overcome. It can be overcome in a way now that we can do the over-the-horizon radars. Critical for cruise missiles.

Dr. Karako: Let me – let me engage on that, because it's – the all-domain awareness problem in particular. You know, and, General, you were talking about it's a big, big place. It takes time to get from one – it also takes time for the threat to get to us. And so, but the types of systems, the north warning system – that was designed to look for high flying but low speed bombers or ballistic missiles, you know, other early warning for that – it's not suited to these threats.

And so, you know, I think, for instance, Ukraine put together a nationwide acoustic sensor network to listen for, you know, the buzz of certain kinds of threats coming in. How do we use geography to our benefit, the bigness of it all, to see these things coming? And I think you just put your finger on it. It's the over-the-horizon radars. LRDR is not going to help you with this. It's a fantastic capability, but it's looking up. So I might direct this to Peppi or the general. OTHR has to be part of the problem.

Gen. St-Louis: OTHR is in every document, in every policy choice, in every capability pursuit. There's people working at this every day trying to get it in place as quickly, as fast as possible. Have Canada contribute to a couple of areas of the pie wedge or the donut, whatever analogy you want to use on the clock. The U.S. taking some of them. And yeah, you cannot come fast enough.

But there's certainly a couple of other ideas, and maybe things that we were not considering 10 years ago. In our in our new policy choices there's some money put aside specifically for sensors and subsurface acoustic sensors. That's what I thought you were going to talk about. And if the Arctic becomes navigable, well, it's big – like a whole continent. Like, it's as big as Europe. There's 25,000 Canadians. I appreciate the senator taking exception when a NORAD commander said there's no one out there. I don't know. I'm no NORAD commander, but there's not many people out there. (Laughter.)

So you can't base yourself with troops out of this problem. You can't put a manned DEW line again. So the promise of unmanned capabilities, proliferation of cheaply or more affordable, numerous capabilities that can detect and sense, send it to a place that is AI-enabled to put an algorithm that will tell you if this is a threat or not, and sense: Is someone with nefarious intent coming underwater, on the surface, or above? And then be able to do something about it. And leveraging the one geographic advantage we have, which is this standoff distance. Most of it is over Canada, where everyone lives along the border or in the United States.

And then have the vectors or the tools to do something about it. But I'm kind of enthused when I – in this job, I get to go to some of the trade shows and see what industry is producing. But this ability to have unmanned vehicles, undersea, new sensors, new microphones, new radar technology. That is one of the ways we're going to secure the homeland. Not with troops. Not with new bases. It is too big.

Dr. Karako: And a report we put out two years ago on this topic, we called it a 21st century DEW line, because it has to be so substantially different. And nevertheless, what I'm hearing from both of you is – all three of you – is, oh yes, we understand the threat is here. The threat is substantial. And yet it was just in the news this week about DOD pushing off over the horizon radars to FY '26. You know, so something's not clicking there.

Dr. DeBiaso: So, on the homeland – I'll stay away from the technical solution, but the generals can certainly advise on that. But on homeland CMD, I mean, there's a significant sort of say-do gap, right? Not related to the DEW early warning. (Laughter.) I mean, you can go back now six-plus years. And I would argue, you can look at all the important sort of national security and national defense strategy documents. The policy on the importance of some kind of homeland CMD against this new type of threat we've been talking about is sort of well-established and agreed to across both Republican and Democratic administrations.

Yet, over the past six years there's been close to zero investment on sort of homeland CMD, right, new capabilities, new systems, new platform, right? A little bit of work on the NCR stuff that's been around for a while.

Dr. Karako: A little bit.

Dr. DeBiaso: Yeah, very little bit. But the big development over the past three or four years was supposed to be the sensors, the domain awareness. Everybody agreed right, this is – we can all agree on this. We don't really agree yet on shooters for homeland, CMD, how many, what type, are they kinetic, are they non-kinetic? We'll let the Air Force figure that out, which it probably won't. But sensors, all-domain awareness, got it. That's the thing everybody agrees on.

We didn't start any effort until about FY '23, right, for these new OTH radars, right? Three or four – there's only four in the United States and maybe in Canada a couple. And as you just mentioned, Tom, we're just two years into the development of the important all-domain awareness sensors that are essential to homeland CMD. And the Air Force is already starting to backpedal on, well, we've got other priorities. They

notified Congress two weeks ago they're not going to be funding these. They're going to push the decisions off to FY '26.

I mean, there's a complete lack of – to be honest, there's a complete lack of seriousness and urgency on the question of sort of homeland CMD. So despite, near and dear to my heart, right, the good policy words that have existed about what we should do, and why should we do it, and the nature of the threat, I mean, there's a complete lack of seriousness. I suspect we won't see anything meaningful for a decade or more on this, right? It's late to need, I would argue.

Gen. Jacoby: So one of the things that's frustrating is this doesn't require a bunch of research that takes a decade, like, you know, trying to figure out how to have a fusion reactor or how to have a quantum computer that can add one plus one faster and get two. This stuff is out there. We just tested a bunch of it. And, well, we're testing it in Ukraine, and we're testing it right now in the Middle East. (Laughs.) And it works. But it's not focused, and it's not here. And so that's part of the frustration.

I mean, there's other work to do on how to improve sensors and make them better, stronger, faster, smarter. But the stuff to start with exists. And so it's the will that doesn't exist. And what is deterrence? It's capability and will. And we have capability. It's not defending the homeland. And we don't have the will to proceed.

Dr. Karako: But I think it was you, or I think it was you, that mentioned Noble Eagle. You know, there's a handful of aircraft at any given time, in any given place.

Gen. Jacoby: Thirty-two.

Dr. Karako: Which is not very many for the geography that we're talking about. And yet when you think about it, we would be appearing, in the absence of GBAD, to be hopefully building big radars to see the threat and then presumably try to fly airplanes at them and shoot them down. That's a – that's a hard thing to do. I wonder if, General, you might talk to the challenge of going after a cruise missile attack with a manned fighter aircraft.

Gen. St-Louis: I think in North America it's a huge challenge. (Laughter.) It is – again, to come back to the 13th-14th of April, and the success of the story, and listening to some of the Israeli aircraft going after cruise missiles. But it is because this is a saturated, stacked AO with short distances. Short distance to react, I will admit, but a short area to defend. The ability to defend a capital, maybe. You start expanding that bubble, it is extremely complicated. Ground based air defense gives you a chance. Thirty-two



aircrafts, or thirty, or whatever aircrafts trying to fly at Mach-something to go catch up to a low-flying, slower-flying cruise missile is an absolute challenge.

So it will become a choice. It will become a choice of what you defend and what you don't. And then maybe, to come back to deterrence but from a different way, is then we will incur a cost. And if you accept you incur a cost, then what do you telegraph will be the response? What is the cost for you to have inflicted pain in the homeland? And I think that might be a new area to work on, right? It used to be this mutually assured destruction, or you only talk about the nuclear domain. But what happens when you start getting below that threshold, you start getting some licks, you get punched in the face. What is the response? And there might be at conversation to nuance and make a more sophisticated deterrence conversation, given that.

Gen. Jacoby: Yeah. The frustrating thing is that the challenge – and the reason for getting passionate about it is that this is workable now. We've got a pretty good understanding of the threat capabilities. We have a pretty good understanding of what we need to do. But are we going to be calamity based? Or are we going to be thoughtful, you know, defenders of the American and Canadian people, and all of North America? And maintain our ability to project power globally?

Dr. Karako: The other bucket that you really highlighted was infrastructure. Because, yes, there are people in the Arctic. We've established that. (Laughter.) We've also established there's not a lot of them in some of these places. So what is the – what is the kinds of infrastructure? You talked about the C2 being decrepit, in some respect. What is the kind of infrastructure that needs to be done up there to have a 21st century DEW line? To have this all-domain awareness?

Gen. Jacoby: I mean, I think we're going down the road of JADC2 as an operational – warfighting operational concept. I think it's the right thing to do. I mean, I think we can have a competitive advantage in it. I don't think it replaces humans at all. I think it just speeds up decision making. Get information dominance and decision superiority when you're taking advantage of integrating all of the sensors – space, ground, air, subsurface, surface. But the challenge is then to take every scrap of data, collect it, transport it, process it as close to the edge as you can, and then curate it in a way that you can get it out to the entire enterprise, which includes Canada and could include NATO as well.

NATO has a huge interest in the Arctic. Japan has a huge interest in the Arctic. And so – and we have great allies. Allies remain a competitive advantage. In fact, it's one of the things that the Russians and Chinese

and the North Koreans have observed. And said, hey, that ally thing seems to really be working for them. I wonder if we should be allies. And they're still sorting through it. But they're sailing together, and off our coast. And I think there's, ha-ha-ha, you know, I wonder how, you know, the NBA Finals are going today, so.

Gen. St-Louis: In addition to the command and control infrastructure improvements the general was talking about, for Canada it is – while we don't have that many – but it is redoubling down on our airfields. Where are you going to land these aircrafts? If you need to have them on station and being ready to intercept, well, you need to upgrade those, especially in the context of our country getting F-35s. So fifth generation aircrafts require a different infrastructure that our F-18s did not require. Improving those is in our plan.

Ground based satellite stations, or stations on the ground that can help communicating with the satellites to improve communications over the Arctic. If you are serious about defending and taking advantage of that geography, that's in the plans. Acknowledging global warming harbors, ports is in the plan. Where are you going to dock? Our Arctic offshore patrol ships, our future Canadian service combatants, our future submarines that were announced yesterday, you need to be able to navigate. And if we don't have a port and the ability to navigate, our adversaries will wind up in the northwest passage with impunity.

So all of that infrastructure is in the plan. But infrastructure in the north is extremely expensive for us. We include and consider indigenous issues, our environment issues, try to roll all that in. But a building like this here or a building like that in Iqaluit, exponentially more expensive, let alone military infrastructure. It is almost prohibitively expensive. So getting after that in the future will be a challenge, but it is required. You can't just fly from Toronto and go defend the Arctic, or defend the north, or be a credible presence to defend our common sovereignty up there.

Dr. Karako: And CSIS means something different in Canada, if I'm not mistaken. (Laughter.)

Gen. Jacoby: But it's also seasonal, by the way. There are – there are times in a season that just don't lend themselves to digging, and other things. There's a lot – a fair amount of concrete from the Cold War. But it needs to be updated. And we need ports. We really do. And, you know, the senator mentioned a good one. We need to – if we're going to bother the Navy to get some ships up there and make a – and have a presence routinely, especially in the weather periods where it's available, as soon as it's available, we need to be able to support them.

Dr. Karako: So, Peppi, I think, General Jacoby warned, what's it going to take? Are we going to be calamity based? So I guess, you know, again, from your policy perspective, you've seen sometimes the challenges of moving from understanding a problem to actually going after it. What's it going to take? If seeing what's happening in Ukraine today doesn't seem to be moving us towards it, what's it going to take? And how do you think about changing the policy discussion on these issues?

Dr. DeBiaso: Well, look, I mean, I think policy, as I said, I think the policy framework is sort of in place to do – to do this, right? It's the – it's the sense of prioritization, the sense of urgency that's missing. I mean, one of the things you know that has sort of bedeviled homeland CMD for decades – you know, and I recall sitting on my first homeland CMD panel as a policy rep in the, I don't know, late 1990s. So this goes back for decades, right?

The Department of Defense would study sort of homeland CMD and sort of – I mean, you know, it concluded – you know, every time we sort of did it, you know, during the post-Cold War period, it was kind of a protect every rock, first of all, right? And so the architectures and the constructs were, you know, obviously expensive and elaborate. There was also kind of a lack of urgency on the threat in the post-Cold War era. We were looking at homeland CMD, but we really didn't think there was sort of a viable threat from Russia or China, right? They weren't perceived as adversaries.

I mean, you sort of fast forward to last five, six, seven years. I mean, that was the old problem. I think we're focused – I think we're rightly focused on the new problem, right? You're not trying to protect every rock in the United States, right? Number one. Number two, you're looking at more kind of limited potentially conventional strikes from a Russia and China that are focused on some kind of infrastructure that's intended to impede sort of our ability to carry out, you know, our security commitments abroad, to uphold our security obligations.

So there does seem to be a consensus sort of forming around sort of what this thing might look like, and that it might be manageable. But even in the Pentagon for three decades, it's hard to understand why we continue to simply not move forward on this. And I will tell you, I mean, during the last handful of years I think there's a sense of, you know, well, is this threat real? Is Russia and China – will they actually carry out threats, you know, of a conventional nature against the United States? Will they attempt to sort of bloody our nose?

And I think there's been doubts about that in the past. I think the last couple of years we see all the sort of coercive nuclear signaling that Russia and China do on a regular basis in areas that are important to them, that are intended to influence the U.S. and, as General Jacoby said earlier, our decision making, right? There's now this sort of clear linkage between sort of regional conflicts involving China and Russia, and possibly North Korea and Iran, and the homeland, right? And I think that linkage was not perceived or not acknowledged or not recognized in the past. I think there's a growing awareness that there's now a much tighter linkage between what happens overseas and the vulnerability of the homeland, and that you've got to start to do something about it.

Gen. Jacoby: So we got to communicate that this is in our national interest. We're not – we're not inventing a problem. And also, there's nobody that wants to have this fight. Nobody wants to fight with Russia. Nobody wants to fight with China. We don't want to fight with North Korea. The only answer is to effectively deter it, because they're – they've got a different agenda they're following. And we have to just admit it. They have a different agenda. They have a different worldview. And we have to – we have to talk to the American people. We have to build consensus within the services and in the agencies. And get – and get the focus where it needs to be so we're not calamity based.

And I will tell you, you know, I used to tell people that, you know, as a four-star, I made very few decisions. I spent most of my time trying to make a case – as a combatant commander – make a case for missile defense, make a case for, you know better, command and control, make a case for –

Dr. Karako: Elevated sensors.

Gen. Jacoby: Elevated sensors, yes, which we put one up, and that guy after me lost it. So he – (laughs) – the JLENS aerostat. He didn't really. But there's – and we have to make a case to the American people and to the – to the community that worries about defense that this is important. And that we like – we like world leadership. It's good for the people. It's good for the economy. It's good for our friends and allies. But it starts at home now and radiates out from there.

Dr. Karako: Yeah. Well, gentlemen, this has been tremendous. Really appreciate this discussion about the importance of defending our homelands against these non-ballistic threats and digging into the number of challenges it's going to take to get after it. So thank you all for coming out. And thank you for being patient with the schedule changes. And please join me in thanking the panel. (Applause.)

(END.)