

Hudson Institute

U.S. STRATCOM Commander's Perspective on 21st Century Deterrence

Event Transcript

*Rebecca Heinrichs, General John E. Hyten,
John Walters*

September 2017

The logo consists of a white square containing the letters 'HI' in a dark blue, serif font.

Hudson Institute Event Transcript
["U.S. Strategic Command Commander's Perspective on 21st Century Deterrence"](#)
September 20, 2017

Featuring:

- Rebecca Heinrichs, Senior Fellow, Hudson Institute
- General John E. Hyten, Commander of the U.S. Strategic Command
- John Walters, Vice President and Chief Executive Officer, Hudson Institute

Disclaimer: The following transcript has been formatted for clarity but may contain errors. It should not be relied upon for purposes of verbatim citation.

JOHN WALTERS: My name is John Walters. I'm Chief Operating Officer at Hudson Institute. I'm here to welcome you to the Betsy and Walter Stern Policy Center. This is a particularly important topic and a topic that's been close to Hudson. As some of you may know, Hudson was founded in 1961 by strategic policy innovator Herman Kahn. And that makes today's event part of our tradition and legacy. He began his work on strategic policy in the age of atomic weapons and was an important innovator on making both effective and flexible process of deterrence and strategic policy.

Of course, dangerous strategic threats remain today, held in check only by the courage and by the ability to solve the problems that those threats pose day by day, year by year. Russia has been joined by China in the strategic realm as a near peer of the U.S. Rogue states such as Iran and North Korea, of course, are violating U.N. Security Council resolutions to test missiles while North Korea openly continues its nuclear program with the stated purpose of harming America. And, of course, terrorists motivated by extreme ideologies continue to assault both the United States and other nations in the Western alliance and elsewhere.

We at Hudson are dedicated to helping our national leaders and our allies think through these threats and help them help the public and legislators understand what leaders are struggling with and what they are proposing. Among other things, our experts try to think seriously about deterrence, especially in today's environments.

We are most honored today to be hosting a commander of Strategic Command, General John Hyten, who provides national leadership on this subject. We look forward to hearing the commander's remarks in his conversation with my colleague, Hudson senior fellow Rebecca Heinrichs, who specializes in both missile defense and nuclear deterrence. I will turn this over to Rebecca to introduce properly the commander, but I want to say thank you. We are honored to have you with us, General.

REBECCA HEINRICHS: Thank you, John. We are pleased and privileged here to host the commander of U.S. Strategic Command, General John E. Hyten. STRATCOM is one of nine unified commands into the Department of Defense. It is responsible for the global command and control of U.S. strategic forces to meet decisive national security objectives, providing a

broad range of strategic capabilities and options for the president and the secretary of defense. General Hyten attended Harvard University on an Air Force Reserve Officers Training Corps scholarship, graduated in 1981 with a bachelor's degree in engineering and applied sciences and was commissioned a second lieutenant. General Hyten's career includes assignments in a variety of space acquisition and operations positions. He served in senior engineering positions on both Air Force and Army anti-satellite weapons systems programs. I'm not going to go on there because I want to hear from the general himself. But I can say that I believe that General Hyten is one of the most compelling and articulate STRATCOM commanders we've had. And we are very fortunate as a nation to have him in this particular time. So with that, General.

GENERAL JOHN HYTEN: So if it's OK, I'm just going to talk for about 15 minutes, then I'll sit down with Rebecca and we'll have a conversation. And we'll take questions from you. I do have to leave at the bottom of the next hour because I'm speaking across town. I was going to speak with a couple of other friends of mine, General Robinson and General McAdoo (ph). They've canceled out, so now I'm the only speaker on the stage. So I have to be on time. So I'll have to take off right when I leave.

First of all, let me just say this is my first time at the Hudson Institute. It's a true honor to be here at the Hudson Institute, especially because of the legacy of what this place is. Going back to Herman Kahn, as you heard described, one of the founders of the Hudson Institute. And you read Herman Kahn. And one of the things I did when I became the Strategic Command designee is I read Kahn and Schilling. I think that's kind of where you start. And I hadn't Kahn and Schilling, so I went back and read that. I have to admit that I identified a little more with Schilling than I did with Kahn, but nonetheless, the great thing about Herman Kahn is when he wrote "On Thermonuclear War" and he wrote "Thinking The Unthinkable," he created a debate in this country about strategic deterrence. And it created a debate about the role of nuclear weapons in our country. And it became a very public debate. And that public debate was one of the most important things that happened in the 1960s because that drove the entire development of our overall strategic policy. It drove the creation of what the presidents of the United States, from Kennedy to Johnson to Nixon and all the way through, thought about when they thought about strategic deterrence.

And one of things I note in today's day and age is we do not have a very public dialogue going on right now about what strategic deterrence is in the 21st century. I think it's one of the biggest challenges that we have is the discussion of what strategic deterrence is in the 21st century is not. And so somehow, we go to the point where the fact that under the new START treaty, we'll have 1,550 deployed nuclear weapons. And the Russians will have 1,550 deployed nuclear weapons. And those weapons will deter everybody from everything and that's the end of the story. That's actually about the level of debate that we see today, and that is so incomplete.

So let me talk about Strategic Command for a second and then I'll come back to what is deterrence in the 21st century. So Strategic Command, a privilege that I never thought I'd ever get to experience. How could a blind kid from Alabama that doesn't even fly an airplane grow up and be the commander of Strategic Command? How can I sit in the office and have Curtis LeMay's picture outside my door, live in the house that he lived in for nine years, working the command headquarters that he worked in for nine years? It's just not possible that it happened.

And so the greatest part of my job, believe it or not, is not things like today. Not that I don't love standing in front of people and talking, but the best part about my job is the 184,000 Americans that provide the strategic deterrence for the United States. That's the size of the force that I command, 184,000 Americans that do that job. Below the sea every day, above the ground in the air, below the ground in the missile fields, in space and cyberspace, missile defenders - the entire enterprise is just remarkable when you look at it.

But the most remarkable thing is our people. And we don't talk about them enough because the real strategic deterrent of the United States comes from those people. It doesn't come from the things they operate. They couldn't do the job without the things, so the things have to be there. The weapons have to be there. The cables have to be there. But without the people that can operate them and be ready at a moment's notice on the worst day in our nation's history to respond the way they have to, it is the most important thing.

So as the commander, I'm a big believer in commanding through what we call mission-type orders, where I give the mission to my commanders and I expect the commanders to generate orders for their forces to carry out. So the way you start that is with the commander's intent. So I've published a commander's vision and intent. And it's unclassified, that everybody in here can pull up on our website and read if you want to read it. If you want to see the message I've sent out to my entire command, you can pull it up and read it.

In many cases, it's very simple because there are only three priorities. The three priorities for U.S. Strategic Command are, number one, above all else, we will provide a strategic deterrent. Priority number two, if deterrence fails, we will provide the decisive response with everything that means. And priority three, we'll do it with a combat-ready force. If you think about the things I just said, I want you to think about those three priorities - strategic deterrence, decisive response, combat ready. When I say that out loud as the commander of Strategic Command, my guess is that at least 90 percent of the people in this room went right to the nuclear mission. That's actually a very good place to start because that's where strategic deterrence starts. That is the foundation. That is the bedrock. That is the most important element of our strategic deterrence. But those priorities apply to every mission of U.S. Strategic Command.

So if you look at the mission, our mission is actually a mission statement that's in the document that I actually don't like because our job is to provide - our mission in the U.S. Strategic Command is to provide tailored nuclear, space, cyber, global strike, missile defense, electronic warfare and intelligence capabilities for our nation and our allies - seven different missions. And all those three priorities I talked about? Each of those priorities apply to every one of those missions.

If war extends into space someday, our first job is to deter war from extending into space. And that means we have to figure out how to deter an adversary from doing that. Same in cyber. Missile defense is part of our strategic deterrent.

If you look at the deterrent equation and you go all the way back to the Schilling and Kahn days, there are three elements of deterrence. And the end-state's the same, to prevent strategic attack on the United States. And the ways we do that are still basically the same because the ways are we will either impose costs on an adversary that is so unthinkable they won't go down that path.

We'll deny benefit. That's where missile defense comes in. And we'll do that in a credible, communicated way so our adversaries absolutely know it. There's the three elements. And it applies to all elements of our command. So if you look at my vision for where I want this command to go, the vision is to provide an integrated multi-domain strategic deterrent and decisive response against any adversary wherever. So instead of this long list of single stovepipe missions, our goal now is to figure out how to integrate those capabilities together.

And we're about to stand up another unified command called Cyber Command that will come out from under STRATCOM and stand up as U.S. Cyber Command. So more of my job then is to reach out to the commander of Cyber Command and make sure we have tight relationships in providing strategic deterrence across the entire spectrum of information, which will include space, cyber and intelligence. So the relationship I have with commander - Cyber Command is going to be unbelievably important.

Those three priorities apply to everything that we do. So let's talk about the first priority. The first priority is, above all else, we will provide a strategic deterrent. What does that mean? To deter what? A lot of people ask me, are you deterring North Korea today? Deterring from what? That's the first question. What is the purpose of deterrence? We're at the Hudson Institute. Everybody in this room should know the purpose of deterrence. The purpose of our nuclear deterrence is to prevent nuclear attack on the United States. So how are we doing? It works. Every day, we are preventing nuclear attack on the United States.

Have we convinced our adversaries across the world to give up nuclear weapons? Answer is no. That's not a deterrent mission. That's a mission for politicians, for persuasion, for convincing - for a number of different adjectives people can use. But the mission of deterrence is to prevent strategic attack of the United States. So how are we doing in space? We have not had a strategic attack in space. No. The hard part about deterrence is that at the end game, you're trying to prove a negative. Is it working? How do you measure deterrence to validate that it's working? And the only way we have is that this United States of America that we love so much has not come under strategic attack in any of the areas that are under my command, which is the whole point of having deterrent capability.

The Secretary of Defense said this morning the reason that the strategic deterrent mission is the most important mission in the Department Of Defense is because we have to prevent fighting the war that we know we can't win. So we have to prevent fighting. And in order to do that, we have to be powerful and ready. And that means we have to have a combat-ready force. And combat-ready force does not just apply to the nuclear mission.

One of the amazing things for an air force officer, especially somebody with my background, is that in the last 10 months, I've been underway on the USS Tennessee, a nuclear submarine in the Atlantic. I've done a change of command on top of a nuclear submarine in Pearl Harbor. I've been on a French nuclear submarine, a British nuclear submarine, American nuclear submarine in Europe. And I've talked to all the sailors that are on those ships. And the one thing I can tell you today is that they're all ready to execute the mission - the most horrible, fearsome mission that our nation has. And they're ready to do that. And they're calm, professional, mature. It's just amazing to walk into that.

And the great thing about the Air Force side of the equation now is 10 years ago, I was in the command that was taking care of the ICBM business. And it wasn't just our command, but our nation had taken their eye off the nuclear mission and the Air Force side as well. But now when I go to Minot or Warren or Barksdale, I go to see the B-52s. I go to see the ICBMs. And I go down in the holes. I go up and talk to the crews. It's the same stuff I see on the Navy side - professional military people, the sons and daughters of this nation who take it very seriously that the most important job we have is to deter a strategic attack of the United States. And if that deterrence fails to be able to respond in the most horrific way rapidly without making a mistake, then you walk into my headquarters just outside Omaha, Neb., in Bellevue, Offutt Air Force Base. You see 3,000 people come to work in the headquarters every day. And we are ready to conduct that mission. And we practice it every day, every day.

So if there's an adversary in the world that somehow thinks that they can take a misstep and do something to the United States and attack us strategically, we are ready at a moment's notice, on order of president of the United States, to respond. And we will. The last thing I'll say when we talk about strategic deterrence is that strategic deterrence in the 21st century is multi-domain, multi-polar as well.

When it was a bipolar situation, it was just the United States and the Soviet Union. There was one equation. But now everything that we do and everything that any of the - our adversaries do actually impacts the entire deterrence equation. It impacts the entire world. We have to always think about it from a multiple-polar problem. And then we have to think about it from a multi-domain problem. And each domain is actually different. The nuclear piece is quite easy to understand. The nuclear piece we can explain. We can talk about it in Q and A, if you want. But the nuclear piece is actually pretty easy to understand.

If the United States is attacked, we will respond. Now, expand that into space and cyber. And one of the things that we have to do is we have to - we have to make sure the United States is not attacked strategically in space and cyber. So we want to prevent catastrophic actions from an adversary that could decimate our country in space and cyber. And, yes, space and cyber are domains where those things can happen. Imagine what happened if we lost the power grid in this part of the country. Imagine what would happen if we lost GPS over the United States. People don't understand how embedded GPS is in everything that we do. You lose the GPS. All your phones stop working. You can't get gas out of a gas station. The stoplights start work - stop working. You have significant timing issues in the entire financial network. You can't get money out of the bank. That's unbelievable, the strategic impact. So you have to think about that.

But the one thing that is similar and different about space and cyber, in particular when you talk about strategic deterrence, is that there is no such thing as war in space. There is no such thing as war in cyberspace. There is just war. And if war happens, it might extend into space someday. Some adversary may push it there. And so the response and how it's different than the nuclear side is the response - and the recommendation I give to the president of United States, if we get attacked in space, I may not recommend a response in space because that may not be in our best interests. I will recommend a strategic response of some kind. But it may be conventional. It may be in cyber. It could be any number of things because it's just war, and war requires a response to an adversary.

If an adversary is extending something into space, then we have to figure out how to defeat that adversary, not to defeat space or defeat cyber, but we get trapped in that piece of the puzzle as we start looking at this complicated role of 21st century deterrence.

So as I stand here in the Hudson Institute, the one thing I would ask you to do, especially to the folks that work here in the institute, is to start helping us engage in the public debate, not just about nuclear deterrence and not just about missile defense - that's where it starts, and we can have that discussion in Q and A - but this broader issue of what is deterrence in the 21st century. How do we deter our adversaries? How do we deter a strategic attack, which is broader than just a nuclear capability? And I don't have all the answers there. But guess what. None of the military leaders in the late '50s, early '60s had the answer either. Those answers tended to come out of the academic community - RAND, the Hudson Institute, Yale. It came out of an academic discussion that generated a public debate about what the role of nuclear weapons were. Now we have to have a debate of what is strategic deterrence in the 21st century and how do we respond to it. So I look forward to the discussion. I'm going to sit down now with Rebeccah. And then we're going to turn over for questions. Thank you very much.

HEINRICHS: Thank you for that. Commander, thank you so much for those opening remarks. Let's start talking a little bit about North Korea since that is the most troublesome threat facing the country right now.

My first question there is, are you confident that we have the strategic capabilities to - you know, part of deterrence is you want to be able to credibly hold at risk that which the adversary holds dear. Are you confident in our strategic capabilities to do that with North Korea?

HYTEN: We have, probably, the most robust deterrent that you can possibly have against a nation in our deterrent capability against North Korea. Our strategic nuclear forces completely overwhelm anything that North Korea can bring to us. So if they want to attack the United States with nuclear weapons, it is not going to work out well for North Korea. It just won't. That's the beginning. But again, if you go back to the elements of deterrence - impose cost. I just described that in the most significant way.

Deny a benefit - so the benefit is if I have a nuclear weapon and I'm plotting against the United States, I can change the equation maybe the United States won't respond. So we need to have a defensive capability. So we have a defensive capability. An offensive capability is actually built to respond to the North Korean threat. That is what it is structured for today. It really does not respond effectively to any other ballistic missile threat in the world today. But it is built to respond to the North Korean threat. The sensors we have are focused on North Korea. The radars we have are focused on the North Korean threat. The interceptors are tuned to the North Korea threat.

Can we do them better? Yes. That's why we have a missile defense agency that's investing money to try to figure out how to improve our capabilities, to have more robust capabilities. But as we sit here today, we have soldiers in Alaska and soldiers in California that are sitting alert with interceptors. We have sensors deployed in the Pacific and in Alaska that will see and characterize that threat and provide that so we can shoot it down if it's coming at the United

States or Hawaii or Guam. We have the capabilities in order to do that. And the capabilities work. It's built to go against North Korea.

So if you're talking about imposing costs or denying benefit, we have the capability to do that. Now the last piece is, have we communicated that message well enough to the North Korean leadership? That's why we conduct the missions that we do. That's why we talk the way we talk. That's why you hear Secretary Mattis talk about what we have to do. That's why you hear the president talk about what we ought to do - to transmit that message. That's why we fly B1s and B-52s and F-35s with our Japanese and Korean allies in that part of the world to make sure that they understand that we're right there. We're watching all the time. And if you want to go that way, we're ready. So we can deter an attack on North America or our allies. That's what it's there for. So we are structured to deter North Korea. And deterrence is about to deterring attack, not about convincing them to do something different inside their borders.

HEINRICHS: Thank you, sir. And since you highlighted the importance of the defensive piece of missile defense, how confident are you that the United States - should deterrence fail and North Korea were to launch an ICBM at the United States, how confident are you in our defensive capability to provide protection of all 50 states?

HYTEN: I'm very confident in that capability. Once again, that's what it was built for. Do I want it to be better, yes? I think if you ask General Greaves, the director of the Missile Defense Agency, he's going to say, I want it better. When I was asked in front of Congress, can we improve the missile defense capability, I said we can. We can do it by improving our sensor capabilities first. I think we need a space-based center capability as part of that to provide more ubiquitous global coverage. I think we need improved interceptors. And I think we can improve that technology. We need better capacity. We need all those things. And I've told the Congress that. I think we're going down that path. But I'm confident today that if something happened, this would be the commander Northern command - the commander of NORAD's job, General Lori Robinson. She has the ability with the fielded forces that we have to defend the United States against any ballistic missile attack from North Korea.

HEINRICHS: Thank you, sir. And in case we've got some folks listening who are hanging out on Guam, just want to make - how - how confident are you that between THAAD and Aegis, the Aegis weapons system, that - that Guam is protected as well?

HYTEN: Guam is very well-protected. You know, there's no such thing as a perfect defense. It doesn't exist. You know, people have made mistakes over the years by thinking you can build a perfect defense and you'd never have to respond. But the Maginot Line is probably the most obvious example in history where you have a perfect defense therefore I really don't need an effective military. But that's not the way life works. So I think we have as good a defense as you can build against Guam, against Hawaii, against the United States. We have a good defense as you can. But if some - for some reason, some unknown reason that I'm wrong and the defensive systems have a problem, oh, my gosh, the response that comes back is going to be overwhelming. And both of those things together are what provide deterrence.

HEINRICHS: I think that's such an important point, that missile defense also gives United States more flexibility to control the situation and more options then...

HYTEN: It does.

HEINRICHS: ...to respond to that.

HYTEN: It absolutely does. You know, our job right now is - you know, every military officer that would stand in front of you today would tell you that they want, above all else, diplomacy and sanctions and economic impacts. You want all the peaceful solutions to work 'cause the one thing I can tell you about anybody that wears a uniform is, you actually don't want to go to war 'cause you've seen the war and it's ugly. It's - it's never a good thing. But there are worse things in the world. And that's why we have a military. And we'll be ready to respond, and we will. But our job is to give - maneuver space now for diplomacy to work, to give as much time for diplomacy to take action, to prepare ourselves on a defensive standpoint as well as the offensive standpoint to respond to any threat that comes after us, and that's exactly what we're doing.

HEINRICHS: Thank you, sir. You - you have spoken in the past about how if you look at the way the North Koreans test their missiles, you know, they don't have the bureaucracy and they don't - they don't have the risk-aversion to these tests. They go ahead and test, and even if they blow up on the launch pad, they learn from that technology, they apply it and they get it - they get it better the next time. And now we've seen two successful ICBM flight tests in July. Can you talk about how the United States is not that way and how the United States can get faster, and, you know, to have those credible defensive and offensive capabilities that we need?

HYTEN: You know, it's interesting as that you quoted me correctly, OK, but you also left out the first part of the quote. And everybody leaves out the first part of the quote. Nobody even remembers that the first part of the quote was, we used to do business the exact same way. 'Cause I go back to one of my heroes, General Schriever, General Bernard Schriever - and I'll talk about him later this afternoon across town - but he - the first 13 times he attempted to launch the Discover CORONA mission, he failed, 13 times in a row. But each time, he learned. Each time, his team learned. And they were able to figure out - and how because they launched quickly, they learned quickly, they instrumented the heck out of the systems and they went fast. That's the American missile business. That's the American launch business. That's the American satellite business.

And so then I compared it to what Kim Jong-un is doing in North Korea, and it looks just like it. That's the part that strikes me as odd is, this - this used to be the United States' greatest advantage as we could - we had an industrial process that could move faster than anybody in the world. Go back to World War II and look at how we cranked up the industry. Go back to any time in the '60s, '70s, the entire deterrence mission, how fast we cranked it up. And then the other piece that's interesting to me is now that I say that and I go back and I use Schriever as an example, or Rickover - Rickover put a nuclear reactor on a submarine that was the size of this building. The nuclear reactor was, and he had to fit it on a submarine that's 28 feet in diameter. He did it in five years. Schriever was given the job of building a three-stage, solid-rocket ICBM. He started it in 1958, finished it in 1963. In 1964, we had 800 three-stage, solid-rocket ICBMs with a similar performance characteristic to what we have today, deployed in 800 new holes at five bases across the world. Total cost \$2.14 billion then. Seventeen-billion dollars in today's money.

And now the new program, the GBSB program, will take somewhere between 12 and 17 years, cost roughly \$84 billion and we'll get 400 missiles. So where did it change? When - when I say that, people now - and everybody in here has a different perspective. And in the media, I've been reported as I'm criticizing the acquisition process or I'm criticizing the test process or I'm criticizing the budget process, I'm criticizing the - actually, I'm criticizing every one of them because it's the entire buying process that we have that is the problem.

We used to be able to buy things quick, but where did - what were the advantages that General Schriever and Admiral Rickover had? The advantages were they got a budget on the 1st of the year, every year, fully funded. You can set up a very efficient program if you say I need this amount of money and you get it on the 1st of year. The requirements were simple and straightforward, and they were approved at the highest level. I just want a three-stage, solid-rocket ICBM that can challenge Russia now, I just want a nuclear submarine that can deploy under the water and stay under the water for as long as I need to in order to avoid the Soviet Union - those were the requirements, now go, not three years of a requirements process. We had an industry who was tied at the hip with the military that said we can - we can do this. We can - we can go fast. We had a test process that - that took risk, that understand what risk was and understand that sometimes you have to fail in order to go fast. Rickover, in 1954, Admiral Hyman Rickover said we learn nothing from success, we only learn from failure. 1954.

Imagine today's day and age. We only learn from failure, we don't learn from success. If we have the smallest glitch in any one of our test programs, it's front page news everywhere - the smallest failure. And in many cases - and I was an engineer when I started off in this business. And I remember, as painful as the failures I experienced were, those were the only times we ever learned. So Rickover's right. You learn nothing from success. You celebrate. You're happy. But when you fail, if you do it right, you go fast. And unfortunately, for the United States, our adversaries are doing that right now. They're going really fast. And we are not. And we have to change that.

HEINRICHS: Thank you, sir. And little - switching gears a little bit here, let's talk a little bit about our strategic nuclear deterrent LRSO. That tends to be something that there is a - there's some disagreement here in Washington about it. Do we need the weapon system? Do we need this capability for the current strategic environment? One, do we need the LRSO and why, specifically for this particular environment that we find ourselves in?

HYTEN: Well, there's a million reasons. We'll address all the million reasons in the Nuclear Posture Review in the classified side. But in an unclassified form, let me just point out some really obvious things. Is the B-52 going to be a nuclear capable bomber 10, 20 years from now? It's part of our strategy. We expect the B-52 to last now into the 2050s. And we expect it to be a nuclear capable platform. The air-launched cruise missile that it has right now, not only is ancient - it's 40 plus years old - but - and it's difficult to maintain, almost impossible to fly. We won't be able to fly it much longer. But it's also built for a different threat environment. Believe it or not, in the last 40 years, I don't know if anybody has watched, but the threat has changed in the last 40 years. So the air-launched cruise missile that was built 40 years ago for a Soviet threat is not the air-launched cruise missile that we need today. Therefore, LRSO will do two things. At the unclassified level, it will provide the ability for the B-52 to maintain a viable

nuclear threat for our air-launched leg of our triad. And number two, it will respond to the threats of the 21st century. Without it, you don't have the B-52 as a viable platform. The second piece, again, I won't go into the classified details, but I'll just ask you to kind of do the math in your mind. So a penetrating bomber, like the B-21 that can only drop gravity bombs, can attack how many targets at once with a nuclear weapon? The answer is one.

Now, with conventional, it can go after multiple-point targets. But a nuclear weapon is only one. So that means that every B-21 only goes after one target. We need the ability to attack multiple targets with the air leg of our triad. That's why you need a cruise missile. Those are the simple ones that you can talk about in public with anybody. And to me, those were powerful enough to say this is why we need the LRSO. There's a dozen other very powerful classified reasons that I've talked about with the Congress, and I won't talk about them here. But I think those make the case all by themselves.

HEINRICHS: Thank you. And then - let's talk about space for just a minute. And then I'll go ahead and turn it over to questions. So you can start to pass those to the outsiders there. Are we - your point about how we're deterring specific actors - so we're not deterring domains. And we're not deterring - you know, we're deterring actors. And so that - we're trying to get to the psychology of the actor there. But are we underutilizing the space domain as a country? And is there room, then, to utilize that space domain better? Because in the past there's been sort of an aversion. You know, don't go to space. But the enemy is going to space. The United States now relies on space more than any other nation. And so their space stats are increasingly looked at as targets for potential adversaries. So are we underutilizing space in terms of the way we deter? And what can we do then to better protect our space assets and utilize that space domain?

HYTEN: So that's a really good question, but I could go a hundred different directions. Let me just - I'll just go back to a study that the Air Force did, maybe, six or seven years ago. And it was called "A Day Without Space." And the purpose of the "Day Without Space" study was to basically put the combat air forces on the range at NLS (ph) and take away space, and see what happened. And I'll just say it was really bad. But I tell you the thing that annoyed me most about that study was the name of that study, "A Day Without Space." That was - what that meant to our military at large and the space war fighters at large is that a space came under attack. It was gone. So we have to figure out how to do something different. I always think about what the interwar years would have been like if when we came up in the United States Air Force with the concept of the bomber will always get through and then we started World War II with a B-17, and we found out that to B-17 didn't get through.

The United States Air Force did a study called "A Day Without Air." What did we do? We said, oh (unintelligible). We've got to give up or we won't get through. No. We ended up building radars and P-51s, P-47, pursuit aircraft. We had fighter escorts for the bombers so you can get through. If you treat space as a normal war-fighting domain, figuring out how to fight through the environment we're in is not that difficult. It's really not. It's a simple war-fighting problem. And I'll tell you an interesting story about the National Space Defense Center in Colorado Springs. So we built the National Space Defense to integrate all elements of the space national security space community, so we can get together and explore how we would deal with conflict that was centered into space. And so we brought all the services in and all the intelligence

agencies and the National Reconnaissance Office - all in this room, about 70 people. And we started running through scenarios just like you described - threat scenarios.

How do we fight through it? And so, you know, when you start something new like that, the thing about this town is that everybody in this town wants to come and see it. So everybody came. NASA security adviser came, secretary of defense, chairman of the Joint Chiefs - everybody came. And so it was hard to plan the tour so you could actually get work done because - but anyway, Chairman Dunford shows up at the National Space Defense Center, and he walks in, and there's two Marine captains over in the corner. And being a Marine and not having seen a Marine for a while because he's on Schriever Air Force Base, he makes a beeline for the two Marines. And Marines, how are you? Everything good? Everything's good. You know, what are you guys doing? Oh, man, and they just wowed the chairman with all the things they were doing. And then the chairman realized after about five minutes, I better talk to these other folks. And so he leaves the Marines, and I walk up to the two Marine captains and go, so, don't snow me. Tell me the truth. How are you guys really doing? They said, well, to be honest sir, there's 70 people in this room, and 68 of them are smarter than we are.

HYTEN: And I looked at him, and I said, you know, when it comes to space, that's absolutely true. But when - comes to war fighting, it's not. And if you just - every time there's a problem, you just provide a war fighter's view of how you would deal with that problem, you have become the most valuable people in the room. And that's exactly what happened because it's just the same as any other domain. We have to defend ourselves. We have to maneuver. We have to get out the way. We have to deceive. We have to deny. It's the same stuff in every other domain. We - if - as long as we treat it as a war fighting domain, we'll be able to figure out what to do. So I could go a hundred different other directions, but I'll just leave it there.

HEINRICHS: Well, I took a glance over some of the questions from the audience, and it appears that everybody here wants to be in a skiff and talk classified. So I'm going to give you just a couple of questions. You can answer them, you know, how you're able to, of course, sir. A couple years ago in an open hearing, there were - in the House Armed Services Committee, there was a Defense Intelligence Agency report that said that we believed that the North Koreans, however unreliable, would have the ability to launch a nuclear payload and reach the United States. Now we've seen the North Koreans test two success - we actually have seen them test two ICBMs in July. Has North Korea mastered the ability for successfully - the re-entry vehicle of the ICBM - the part that we hadn't seen tested before, and do we know what payload they had on those ICBM tests in July?

HYTEN: So except for the last part of the question - that very last part - I was asked the same question in front of Congress. So I'll give the same answer because it was a public hearing. And the answer is, we have to look at that capability - North Korea's - as a matter of when, not if. They're going down that path. They're building all the capabilities they need, which means they're eventually going to get there. Will they get there in 2017, 2018, 2019? I don't know the answer to that. I see a lot of the detailed intel. I can honestly tell you I don't know the answer to that question. But to go to the last part of the question, in the last part of the question - have I - can I tell you what payload was on the end of it? The answer is, we - understanding what they're launching. We understand what they've demonstrated.

The one thing they have not to - demonstrated to the United States is the ability to put everything together end to end and use it. And I'll just say that when we, the United States, built that capability, that endgame was the hardest part for us. And that's why we built a couple of big test ranges - the Eastern Test Range and the Western Test Range. That's why we built Kwajalein Atoll. That's why we put the huge radars out there in order to characterize those things. And I can tell you that the North Koreans did not have that kind of infrastructure, so they have not demonstrated us the whole thing end to end. But the point that you have to remember is, it's not - if you're going down that path, you'll eventually figure it out. You will, whether you figure it out by luck, by happenstance or by just sheer trial and error of doing things over and over, and fail, and fail and fail until you succeed. You'll eventually have figured it out. So we have to assume. And as the commander of strategic command, I have to assume that they have the bomb, that they will have the capability to deploy it on an ICBM. And I have to figure out how to respond if asked by the president of the United States. That's what I have to do as the commander of strategic command.

HEINRICHS: A boost-phase defense - that's the part of our missile defense system that we don't currently have mature enough yet and ready to field. So how valuable is having a boost-phase defense capability? And is - are we working towards that now? And do we need to increase our investments to obtain that capability?

HYTEN: So the interesting thing about boost-phase defense is it's - in my opinion, the traditional boost-phase defense construct, which is missiles, is not a technical question. It's actually an easier technical problem to hit a missile in boost phase than it is terminal phase. It's a - really a policy question. And why is it a policy question? And, oh, by the way, the folks that are doing research in that area love to focus on the technology side, and they don't like to talk about the policy side very much because what is the policy challenge of a boost-phase intercept?

The policy challenge is, you actually have to shoot a missile into somebody's territory because that's where the boost phase is. So you have to make a decision to fire a weapon into somebody's territory. And what if you're wrong? What if you miss? What's the equation? How do you work all them - what's the political dimension of that? How do you talk the president of the United States about that as you go in? That's the biggest challenge. If you want to talk about my view of where boost-phase should go in the future - it's not with kinetic kill capabilities, it's with some kind of other than kinetic capabilities. And I'll give you one example - lasers.

The thing - the interesting thing about laser - if I fired a laser in that direction, it stays in that direction. It does not come down on the earth. It actually goes out into space. All the way up, all the way down, lasers would go there. If you had a laser that could do that, all of a sudden, now you've changed the game because now the policy question is not that difficult. But the biggest challenge with boost phase is the policy discussion, not the technical discussion. There are technologies out there today that we could deploy to get off the boost phase. And I tell you, there's nothing that would do my heart any more good than to actually drop a missile back on the person that launched it at the United States because that would be the last missile they fire.

HEINRICHS: Given the assessment that we have of the number of nuclear weapons that the North Koreans have, there's been a - there was a media leak that said that we think that they

might have potentially 60 warheads. I'm not going to ask you to confirm that - but given those numbers, that it's more than just a few. We have 44 GBIs by - into 2017 that we're planning on. And the shot doctrine is such that we're not just going to shoot one at an incoming missile. We're going to shoot more than one. So can you just talk about how having an increased capacity would be useful, in addition to every other thing that we need to do to protect the GMD system? And is there plan - well, I'll just let - go ahead and let you answer that.

HYTEN: So capacity's important, but it's important to me that we mature the entire architecture. If you just build capacity, that's a good thing. You can't deny that more missile defense is better. It gives us more options. It gives the president more options, more - so capacity is clearly better. But you have to improve this entire system at the same time. We have to make sure that we look at the entire BMD architecture. We have to look at the entire sensor architecture to make sure that it fully supports that capability. And then you actually have to integrate it with what I'll call a counter-battery capability as well. That's the other piece that you have to consider because if somebody starts launching large number of weapons at the United States, I'll just say our only - our singular response will not just be missile defense. If they're launching small numbers, well, then the defensive response is actually, you know, very logical, very straightforward, give a lot of time. But if there's this barrage of missiles coming out, you have to integrate all the capabilities that we have as a nation in how we would respond to that, and it's not just going to be on the ballistic missile defense side.

HEINRICHS: I think that's such an important points there because, you know, there - those who work in academia who tend to be ideologically opposed to missile defense sort of create a straw man that we're just going to sort of have a catcher's mitt here and try to catch everything thrown at us. But, of course, that's not true. Missile defense is there to absorb some of the attack and then give us options then to respond as well. So it's just one tool in toolbox. It's - nobody's arguing that it's going to handle the entire problem. So I think that's very important. Funding the - if you can just talk a little bit about how the caps affect what you're trying to do to fulfill the requirements before you and then also the effect that a CR will have on your ability to provide the president what he needs.

HYTEN: No, the CR is actually the worst thing. It's worse than the caps. If you told me at the 1 of October, here's your budget, and it was a lower budget, it's a whole lot better than a full budget in April because we can then put a plan in place that we can execute through the entire year. When you don't have a budget in the 1 of October, it really, really impacts your ability to effectively respond, to manage a program, to start new things, to explore what you need to do. And when you don't get a budget until springtime - you know, in many of the recent years, it's been April before we get a budget - then you have to start a program - has anybody started a program in the Department of Defense recently? It's hard to do. All of a sudden, you're in the summertime, then you're in the last quarter, and now you can't spend your money because you're in the last quarter. And now you're in the next year budget, but now you're not going to get a budget until - that just kills you - just kills you. The most important thing is to get a budget in the first of the year, whatever level that budget is, and then we'll figure out how to deal with it. We've all dealt with difficult budgets in the past. At least, you know, if you've been in the military 36 years like I've had, there's been down budgets, there's been up budgets.

The first budgets I had in the military were Carter budgets. Then I dealt with Reagan budgets. It's been all over the map. But if you get a budget at the beginning of the year, you can plan for it and work with it. The caps can be difficult. If you go under sequestration, it would be horrendous, but not because of the level of funding but because of when the cut happened because we don't plan for the sequestration. And if the sequestration happens, now you have to jump back in the middle and redo the entire thing, and you have to blow up your entire plans. So caps are challenging. Caps are hard to work through. Sequestration is awful. But not having a budget at the first of the year is just - makes it very, very difficult for the department - for anybody to plan.

HEINRICHS: And then I would presume that that also affects the speed that you're talking about, too. If you had a spending outline that you could count on, then that could also help us - the industrial base, the industrial capacity that we have - to create the weapons systems that we need quickly.

HYTEN: Well, if you look at how industry invests their money - if industry doesn't know money is coming, they don't invest their own money. So what you want to do is if you're going to go fast, you want people investing their own money in certain things that you're going for because they know that on the 1 of October next year, there's going to be this new program and it's going to be this much money there. And you can then convince your board of directors or your investors, whatever kind of company that you have, that it's good to invest this money because there's a chance if we invest this money, here's what we're going to get. But when you don't know that program's going to start, or it's going to start six months late, then people hold their cash back and they don't invest their money. It slows down the entire process. And when they do that, that impacts the people because you have the people, the young engineers that show up and they want to do things. And then they don't get to do those things. And so what do they do? They leave the defense industry and they go someplace else. They go to Google or Yahoo or Microsoft or somebody where they can go fast and do things because they can get the money to do those things. The whole impacts of not having budgets on a routine basis at whatever level it is just very, very damaging.

HEINRICHS: You talked a lot about how the United States needs to deter for our own protection, but can you talk just a little bit about the importance of assurance and how we assure our allies in the region as well? And that's in your portfolio. You know, we've got the - our South Korean allies and our Japanese allies. You know, they're there. They're having missiles fly over their airspace. What is the United States doing to make sure that they are assured - they get a vote in terms of what's required for assurance. So we need to know what they need, you know, to hear from us.

HYTEN: So we asked them. I asked them. Two weeks ago, I was in Seoul and Tokyo. I traveled through Korea and Japan. I asked them, what do you want? It's actually much easier to measure assurance than it is deterrence because you can ask our allies, are we giving you what you need? And the basic message from me, from Admiral Harris, the commander of Pacific Command from General Brooks, the commander of U.S. forces in Korea, from the secretary of defense - the message has been, what do you need? We'll be there. We took a - we took the USS Pennsylvania, a strategic nuclear submarine, into Guam for the first time in a long, long time this year and

allowed our allies to come on board to see what that strategic deterrent was is about. That's a very sobering but impressive thing to view. And when you see it for yourself and you walk in and there's all those missile tubes loaded with nuclear missiles, our nuclear weapons - Strategic's missiles, it's a hugely powerful, sobering message. But it is an assuring message too because the whole concept of extended deterrence is if somebody attacks you with a nuclear weapon, the United States will be there for you. And if you want to see what we mean by that, please walk aboard the USS Pennsylvania and we'll show you.

HEINRICH: I've got two last questions. I'm just going to ask them back to back and then let you spend as much time as you want on each one before we close out. I do want to just talk - ask you a little bit about Iran because, you know, the Iranians and the North Koreans cooperate on their illicit missile programs. And so not only are the Iranians - could the Iranians benefit from an extent - if we allow the North Koreans to continue their missile program, but they're also watching. So there's a psychological aspect. What can the North Koreans get away with? And possibly, could get away with that too? So what - how are you thinking about that? How are you thinking about the problem that North Korea poses vis-a-vis Iran was well?

HYTEN: That's kind of the first spike of the question, speculative question that you asked. So I don't like to speculate. I like to deal with facts. So I'm not going to speculate on the partnership between Iran and North Korea. I'm not going to confirm anything along those lines. But I - so I'll deal with the facts. And the facts are that Iran is operating under the agreements that we signed up for under JCPOA. They're operating under that piece. But at the same time, they're rapidly, rapidly deploying and developing a whole series of ballistic missiles and testing ballistic missiles at all ranges that provide significant concerns to not just the United States but our allies. And why are they doing that? They're doing that to challenge the United States and our allies somewhere down the road. So we have to figure out how to respond to that. At the same time, we have an agreement that our nation has signed. And I believe when the United States of America stands an agreement, it's our job to live up to the terms of that agreement, our job to enforce that. But that means our adversaries have to live up to that as well.

So our job is to watch them, make sure they don't walk down that path, make sure that our nation's leadership understand that. We have to watch the precedents that we set with everything that we do not, just with North Korea but in every other situation in the world. Because it's not just everybody watching the United States and North Korea. Everybody's watching what the United States does every day in Afghanistan, in Iraq, in Syria, in Africa and Europe, with Ukraine. Everybody is watching us wherever we are.

And everything we do, down to the smallest tactical level in today's world, delivers a strategic message to not just the United States and our citizens but our allies and our adversaries. So we have to understand that everything we do has that effect. And yes, what we decide to do with and around North Korea will have an effect on everybody that we deal. So we have to consider that as well. But Iran is a concern. We watch that every day, and we need to be prepared for that, and we will be.

HEINRICH: Thank you, sir. I think that was a very powerful and useful way to answer that question so we can think about the consequences of our actions, of course, across the globe. But

thank you, sir, for being here and for your time. Thank you all for being here. Please join me in thanking Commander Hyten.

Hudson Institute is a research organization promoting American leadership and global engagement for a secure, free, and prosperous future.

Founded in 1961 by strategist Herman Kahn, Hudson Institute challenges conventional thinking and helps manage strategic transitions to the future through interdisciplinary studies in defense, international relations, economics, health care, technology, culture, and law.

Hudson seeks to guide public policy makers and global leaders in government and business through a vigorous program of publications, conferences, policy briefings and recommendations.

Hudson Institute

1201 Pennsylvania Avenue, N.W.
Suite 400
Washington, D.C. 20004

P: 202.974.2400
info@hudson.org
www.hudson.org