



Maj. Gen. Linda S. Hurry:

All right, good afternoon ladies and gentlemen. Everybody please take your seats. How's everyone doing? And I am so thrilled you guys could join us this afternoon. We get to talk about one of my favorite subjects, resilient basing and contested logistics. So ladies and gentlemen, welcome to our panel today, as many of you have probably heard me say or many of the leaders in the audience say, is that logistics has been very much a great strength for our American air power for many years. But the question is, today, are we optimized for great power competition? In fact, our SECAF just posed that question to us a little bit this morning. Today, our strategic competitors are developing capabilities each and every day that directly threaten our ability to conduct operations, to conduct persistent mission generation, and to actually project air power from our platforms.

From an air force perspective, our power projection platform are our bases. And so we have to figure out a way to build resiliency into those bases and to protect not only the base, but also our aircraft, our equipment, and most importantly, the Airmen and Guardians operating from them. So to help us do that today, we're joined by several industry leading experts who have some great ideas on how we can actually turn our logistics and basing capabilities into a strategic deterrent. It is indeed my pleasure to introduce you the panel for today. First and foremost, a classmate of mine from Naval War College, one or two years ago, Mr. Chris Curtin is the marketing director for Marine Corps Programs at Elbit America. Chris is a retired Marine Corps field artillery officer, and also serves as an adjunct professor at the US Navy War College. Chris, Floor is yours.

Chris Curtin:

Oh, thank you. Well, just so everyone knows, the general got much better grades than I did. That's why she's up here. But no, it's great to be here. General, thank you for having me. Chris Curtin, I worked for Elbit America, mid-size company out of Fort Worth, Texas. And so I'm the marketing director for Marine Corps Programs. And you're probably asking yourself why is somebody that works Marine Corps Programs at AFA? And it'd be a valid question. And I think the answer really is that when you look at resilient basing, contested logistics across the joint force, it's really a joint force problem. And I think the biggest thing that I would push out to all of you is you work this very difficult challenge is leverage that because for example, in Elbit America, we're doing a lot of work with some of the other services to really get at this problem or challenge things like Persistent ISR, Survivable C2, and Counter UAS. So there's a lot of efficiencies to be gained across the joint force. I think this is a great discussion and thanks again for having me General. Appreciate it.

Maj. Gen. Linda S. Hurry:

Of course, so much to Chris's point, logistics is joint, it's increasingly allied and partner and we have to work from a coalition perspective. But to be successful in this, we also need our industry partners. So next up to bat is Mr. Will Johnson, who's the senior vice president of Leidos Logistics and Mission Support division within the Leidos Defense Group, where his business is focused on providing technical solutions to war fighters globally, specifically in the federal logistics and force protection sectors.

Will is a 20 year Air Force veteran, where retired as a communications officer after a wide range of IT related assignments, including working with the White House Communications Agency, providing IT services to the president of the United States, White House staffers in the United States Secret Service. Will the floor is yours.

Will Johnson:



Ma'am. Thank you very much. So look, it's my pleasure to be here this afternoon as a communicator sitting in front of a room full of loggies. I'm a little afraid, a little afraid. But no, LMS, I'm excited to say 2100 people around the world that are delivering exceptional services to the DOD. And when you think about the logistics and mission support business, it really aligns to what you were just talking about, General, and what we heard from the secretary. Resilient logistics for us looks at the force protection piece, which is a major part of our business and what we're doing for protecting and securing the base, along with all of the logistics opportunities.

For logistics at Leidos, I set a line in the sand some three years ago that why can't the DOD have the same capability that people get on a everyday experience? So that transparency that you have from Amazon, Leidos is driving towards giving you that same transparency around parts and pieces that you're ordering in the DOD space, and all the same time securing that capability. I recently had an opportunity to do a tour for our bases out in PACAF, and so felt the longevity of getting out there and saw what is happening to our war reserve materials. And so excited about an opportunity to talk about that today and how industry can help in that regard. Thank you, ma'am.

Maj. Gen. Linda S. Hurry:

Thank you so much. Having an IT and a communicator on a panel talking about resilient basing is absolutely perfect because if you look at the logistics challenges that we face and the basing challenges that we face, a lot of them are backed by IT, and our IT systems are vulnerable, and I think we need to lean on industry to figure out what exactly we can do to make sure we can take all the data that we have at our fingertips and turn it into logistics intelligence and to protect that data. So thank you so much for joining us.

Now last and certainly not least, Mr. Derek Turk Hess is the vice President of business development for Sierra Nevada Corporation's ISR aviation and security business area, a world-class aircraft design modification, mission systems integrator and logistics provider. Derek leads business development efforts for their strategic programs portfolio to include special mission capabilities, future vertical lift and persistent multi-domain targeting programs. Prior to his industry career, Derek served in the Air Force for over 27 years, retired as a colonel with approximately 4,000 hours in a variety of fighter and experimental aircraft. Turk, over to you.

Col. Derek Hess, USAF (Ret.):

Thank you General, and thanks for having me here today. At SNC, we deliver innovative and open architecture solutions to the war fighters and go with the war fighters wherever those missions might take them. We are heavily investing as a private company into solutions that will address a number of the secretaries' operational imperatives, and especially this one. We've got a tough road to hoe here between us as industry and service partners. I'm a bit of a historian and I think back to the interwar period a century ago, and there was a gentleman named B. H. Liddell Hart who said, "The only thing harder than getting a new idea into a military mind is getting an old one out." And there's an awful lot of that that is going to go on, I think in this engagement. The best and brightest in France and the United States came up in that same interwar period with a different set of problems, but I think it's still instructive.

And they came up with things like the Maginot Line, and the concept that the bomber will always get through, and those were both very, very wrong and cost both of our nations deeply in blood and treasure. So as we get into this, where you said is where you stand, so I'm not going to be here to talk a lot about the fighting the base things, but we're going to be talking about some crosscutting and enablers that will help enable resilient basing and confound our enemies because we can't afford as a



nation to get this wrong and we need to offer our combatant commanders the ability to have resilient basing options in every single phase of conflict, especially in phase zero, so that we may avoid a peer or a great power conflict to begin with. Thank you.

Maj. Gen. Linda S. Hurry:

So thank you very much, so much. To your point, logistics underpins the success in any operation. So I think it's particularly apropos that we have an operator along with us so that we don't have a situation where we have logisticians talking to logisticians. So the purpose of this panel, as you heard this morning, the secretary of the Air Force said each of the panels are broken out to get after the operational imperatives. Well, this panel gets after operational imperative number five, resilient basing, and it has the essential task of optimizing resilient forward basing, sustainment and communications in a contested environment.

So our first question to the panelists, the Air Force has become heavily dependent on fixed spacing. Think of Kadena in Japan and Anderson Air Force Base in Guam. How can the Air Force best secure these installations that will undoubtedly be targets in a conflict? Sir, would you like to bat first?

Chris Curtin:

Well, that really is the operational challenge as I see it. I mean, you can look for decades that we've had a pretty easy, from a basing perspective in the Indo-Pacific AOR, right? We were the major power. We called the shots, we had the technology, but now as you know, we have a peer competition. China has rapidly advanced their ballistic missile technology. The war in Ukraine has showed us some lessons, and the character of war is changing, meaning how we fight it. So we need to really take those lessons in as we look towards building base resiliency and how do we do contested logistics within that. I would say there's really two things to look at from a basing perspective. I mean, one, the reality of it is every base, whether it be a major base like Kadena or Anderson or it's a austere, remote, expeditionary base of some kind, it's going to be targeted.

China will continue to build their stockpile. So a decade from now, every location we have is going to be targeted. So I think we really have to come to terms with that. There's no escaping it. So I would say there's really two areas at the operational level. You're looking at robust anti-ballistic missile technology, and it really has to be integrated with the joint force. Survivable command and control is going to be critical, and the ability to sustain yourself when you're cut off is going to be critical.

And then more at the tactical level, at the base level itself, I think a lot of investment has to go into Counter UAS technology, counter unmanned systems, multi-domain unmanned systems, because as we're seeing in the real world, you can look at the Armenia and Azerbaijan conflict or you can look at what's going on now with Ukraine and Russia, the proliferation of cheap unmanned systems can do a lot of damage and it's coming from the air, the ground, and the sea. So those are really two areas that I see are going to have to have a big investment both from you and from us here in industry.

Maj. Gen. Linda S. Hurry:

Thank you.

Will Johnson:

If I could tag onto that.

Maj. Gen. Linda S. Hurry:



Please.

Will Johnson:

So absolutely, I agree with you that we're going to be under attack, right? And denied capabilities. And so with that, I think no secret, everyone is aware of the stove pipes that we have in our systems today. How do we break down those stove pipes so that information is shared more seamlessly across, so that that air attack that's coming in is communicated, and so the Guardians and the people on that base are able to respond to that attack. I believe that it's in the data, and we have to use the capabilities initially with artificial intelligence to make sure that we are tying that communication together as seamlessly as we possibly can.

Now, when I say artificial intelligence, I'm not saying turn it over to the machines, I'm saying to assist the war fighter. So at Leidos, we believe that you have to push to create a trusted environment. And that means initially it is assisting the war fighter so that it's crude. And as trust moves up the value chain, then you can move those people to focus on other things once they have the trust built in there. But those stovepipes need to be broken down immediately and everything that industry stands ready to partner with the Air Force, but we need the Air Force to take the lead on we're going to reduce those stove pipes, and make these systems talk to each other. There are solutions that are there today.

Maj. Gen. Linda S. Hurry:

Do you have any examples?

Will Johnson:

Yeah, so perfect example of that is what we do with the Counter UAS system where we're working with Air Force HBU right now. And Leidos specifically has come up with a solution that ties in the perimeter with the biometric systems that are there. Now that is being used by the army. And I know that sometimes in DOD, there is a desire to make sure that it originates with that military family before you take it from another family. But my point is why not take advantage of what's already been invested and created and is working, right? Every solution does not have to originate with the Air Force.

So those capabilities exist today. It's working for the Army with the biometrics, tied into the perimeter defense and the vetting systems that are there. I know that there is a system already in the Air Force, but the Leidos way of approaching that is no new boxes, no new people, no new training. So what that means is we would build on what you already have and create that capability, show that interconnectivity, and as an integrator, that's the approach we want to take, that we integrate what you already have instead of forcing you to go out and buy a new system.

Maj. Gen. Linda S. Hurry:

Thank you. Mr. Hess?

Col. Derek Hess, USAF (Ret.):

So uncharacteristically probably, I'm not going to talk about the kinetic side of things. I think we've covered a number of those with my colleagues up here. But let's look at Ukraine a bit as a model here as to maybe something that we might expect from an enemy using space denial, cyber and electronic warfare assets to shut down bases to eliminate the command and control to make them islands unto themselves. Those are the things that very much troubled me. In 1939, one of the first things that went was the undersea cables. And if we think space going away is going to be bad, just imagine what that is



going to happen when those are cut in addition to space. So we can be denied precision navigation, timing. We have to think about Alta P&T kind of solutions that are absolutely essential for our war fighting capability, weapons and platforms alike.

Think of a day without imagery, where we cannot bring imagery back into the planning cells. To be able to have a resilient base to operate and launch kinetic effects from. Denying space not only means potentially denying those communications, but denying the ability to communicate with our UASs and our reliance on those. So you now double the problem of having unmanned systems, which are anything but unmanned and need to be supported at the various resilient bases around the world. And you start to see the compounding and cascading effects of the ability to deny us the capability of communicating data, information, knowledge and wisdom around the force to be able to support the operations that we have to be able to support that we're so used to every day that we train to every day.

There are things that we are working on for other mediums to be able to pass some of this information should any of these activities happen. High altitude balloons, there are some things that are going on in that world, and I think they've been in the news recently. But rest assured there are other people besides China working on those capabilities. And the ability to set up networks, share information around the forest and support those, be able to link those islands from a resilient basing perspective, I think is of critical importance. There are some things as well in the new platforms areas, when you aggregate everything at a base, at a runway, you improve its attractiveness to a great powers as a target.

So one of the things that I think shows a lot of promise in this area are things like high-speed VTOL, which give you the ability to have runway independent operations to be able to disaggregate so long as you have the right command and control to affect them to have deep survivable adaptive sensing and data networks that are available through those platforms. Insider air and ground threat decoys, the ability to guise your force and complicate and confound enemy forces. And then attributable or attributable, I can't say that, attributable collaborative generating mass and contested environments, things like that to do the decoy and deception kind of activities that you need to be able to execute to survive through some of the kinetic effects that these gentlemen were talking about earlier. So there are electric and non-electric high-speed VTOL aircraft, but I think runway independent operations is going to be vital to a resilient basing strategy.

Maj. Gen. Linda S. Hurry:

Thank you. All right, so we're going to change it up a little bit now. We're going to talk about green energy. Gentlemen, could you please talk to me a little bit and to the team about what sort of initiatives could give our air force the advantage through green energy? Will, would you like to bat first?

Will Johnson:

Sure. Thank you, ma'am. So as you can tell, I get awfully excited about the data all the time and what the data does for us. When you think about green energy, room full of loggies, right? So how many of you have went out and procured generators for each and every unit that's out deployed in the field? And so you look out across there and there's 50 generators and you have to make sure that all of those generators are fueled, right? It seems ridiculous.

So at Leidos, what we're thinking about and what we're working on is designing of grids and taking that grid to the field. And so there's assessments that can be done. What is the impact of the electrical vehicle fleet on your fixed base, but it's also at the same time, what's that same assessment look like if you're taking a look at creating a dynamic energy grid that's going to be forward deployed? So that now as logisticians you buy maybe 10 generators that feed everything instead of the 50, and you're going to



reduce the price of your fuel that you're having to keep all those generators going and the time that it takes for the truck to go around and make sure that you fuel all of those.

But I think those approaches to the smart energy grid are part of what we have to look at around green energy. Obviously there are platforms that can be adjusted and use alternatives. Obviously there's pieces around the larger fuel piece and the bulk fuels that by getting that green energy, there's less opportunity to reduce or decrease our capability because we're not as reliant on bulk fuels. But I think taking the time to engineer and design early, ahead of just deploying to the point that you were making about, that's the way we've always done it. So it's automatic and every unit must have his or her generator. We have to get to a new way of approaching the fight.

Maj. Gen. Linda S. Hurry:

Agree. Mr. Hess?

Col. Derek Hess, USAF (Ret.):

So I think there is going to be an all of the above approach that we have to realistically look at this given that the war starts today or tomorrow, kind of mentality that I think we have to have from a resilient basing perspective. We are reliant on fossil fuels for a very good reason. It is short of nuclear, the most dense energy source available to us to be able to exploit and do the nation's work. That doesn't mean it has to be the only thing. I also think there's a lot of work in the Air force that's showing promise on eVTOLs and things of that nature.

We are working in that area because, let's say you're taking fuel to a small force somewhere forward deployed and you get there and you show up with enough fuel to have them put fuel back in your aircraft to take it back to the hub and spoke kind of operation and you don't do any good for that field at force. So having zero fuel requirements on resupplying those Ford folks from a hub and spoke kind of perspective, I think make an awful lot of sense, which means that you have to think about the electric vehicle, which I think we're doing pretty good in that area right now from a commercial perspective.

Where I worry about, our capabilities is in the diversity of generation of that electricity. You can have generators that can do that. What if you don't have fuels to operate those? You have solar capabilities, what happens when it's cloudy or it's night and you need that fuel. If you're of near water, can you use water sources to generate energy and have a true diversity of generation capability to where that electrical power for those vehicles is always there, which brings up the next things, how do you store it? Storage capacity is a huge issue that I think from a nation's war fighting perspective has to be addressed. You can aggregate all kinds of energy storage capability and then you become a pretty attractive target for all the things that we've talked about from a resilient basing. So how do you disaggregate those energy sources, whether they be Tesla walls or other kinds of capability?

There've been a lot of experimentation in California that I think shows a lot of promise in these areas for aggregating, making virtual power plants and things of that nature. But it is not an inexpensive thing to do to ensure the power that you need to conduct combat operations when you need to them. And then I think finally, I think the DOD has to stay out in front from a tactical microgrid perspective of what the standards need to be. If you show up with your Apple charging cord to a vehicle that needs an Android one, you are doing no favors to anyone. So I think promoting the standards and making sure that industry is developing and providing the capability that you need is very important.

Chris Curtin:

I guess, what I would just add to that is green energy right now in terms of, you talked to hub and spoke analogy. When I look at the hub, yes, green energy is viable. You can put out half an acre of solar panels,





you can use electric vehicles and then recharge them from energy, from solar, wind. It's the spoke forward that to me is the concern. And Will talked about it, it looks like they've got some good initiatives to get us there. But at Elbit America where I work, we have different platforms, systems, electric, hybrid, and we're experimenting with things like burn a little bit of fuel that could then convert to energy. So there almost needs to be a technology revolution in green energy before it can meet the demand of the forward deployed unit. And to me that's really the issue because if you're out, you can have an electric vehicle out in some expeditionary location, but if you have to plug it into a generator to recharge it, you're still burning fuel.

And my last point would be, also look at the individual Airmen over the last decade, Airmen, Marine, Soldier, Sailor, what they carried to the fight then 10 years ago might've been their weapon, a set of night vision goggles and maybe a radio, their battery demand might've been the radio and the night vision. I would say the individual war fighter now's energy demand has at least doubled. So on one hand we're talking about now they have tablet, advanced optics that pipes in augmented reality, right? We have that technology, we do it at Elbit America, advanced night vision, laser site, all which require power. So on one hand we're going, Hey, we got to reduce its logistical footprint. We got to reduce our power output and requirements.

But on the other hand, the military and industry, we're looking at new technologies that require more power. So there's got to be a reckoning at some point to where we can meet that technological advantage that we want the war fighter to have, but also reduce that logistical footprint.

Maj. Gen. Linda S. Hurry:

Okay, thank you. A couple of key points were brought up here. We talked a lot about storage and sustainment, absolutely critical. That is something that the OI-5 team is absolutely getting after. Reducing the amount of dependency on fuel, absolutely critical. One of the other things the OI-5 team is looking at is innovation, which brings me to the next question. One could argue that to be successful in a future conflict, we must outthink, outmaneuver, outpartner, and outinnovate any enemy we might face. So how do we break this status quo? So my question to you three gentlemen is specifically are there any innovations or advanced platforms or technologies that industry can share with the Air Force that can help harden infrastructure, assist in the mobility of forces and supplies, and strengthen basing in an austere environment? Sir, would you go first?

Col. Derek Hess, USAF (Ret.):

So I touched on it a little bit earlier. We are partnered on a program called high speed VTOL as the mission systems integrator and having some of the developmental things that I think show a lot of promise in this. And it's not because they will operate at a resilient base that is able to fight and defend itself, which is a traditional way of looking at things, but by a capability to disaggregate, getting back to some of the hub and spoke operations to have runway independent operations, such that you confound a great power's ability to target everything, to know where everything is, and then the ability to operate from those locations. Whether you are acting as a shooter or as a sensing network or providing a network to the shooters. It is part of the resilient basing concept in my mind to be able to have runway independent operations that allow you to continue to operate regardless of any kinetic or cyber or space activities associated directly with a base.

Maj. Gen. Linda S. Hurry:

Okay. Chris?



Chris Curtin:

I mean, I guess I would say, I mean there's a lot to talk about when we talk about different technologies, platforms, but to me, when we look at the future forward deployed locations because I think we kind of hit on this, is that to be survivable, you've got to be mobile and you've got to be able to distribute your force, maneuver your force through your area of operations quickly, but you also have to secure those locations. So at Elbit America, we've been doing a lot of work on force protection based security and specifically from AI robotics and autonomy. So I think there's a number of platforms out there that you could push out with some of these forward deployed units that you would tailor specific to your mission. Sensor payloads, UASs, that could all be tied together with autonomous software and that could be operated with less people. So you could reduce your footprint, but still give yourself that force protection that you need to carry out your mission.

Maj. Gen. Linda S. Hurry:

Okay. Will?

Will Johnson:

So ma'am, I want to take a little bit different approach because there's all types of innovations, to the point that you're making and you're making. But I think partnership is the biggest one. And my point there is, look, I'm 15 years retired, I think I understand the air force problem, but until you bring me in so that I can hear from you what is actually the problem, maybe we war game or do a tabletop together. And so then I can think through and tell you, hey ma'am, this problem that you have here, I can solve this problem this way. And until we get to a point where we're having those types of conversations, then it doesn't matter about my slick new command and control, my awesome new green energy, my amazing new automation or biometrics at the gate.

Because if I don't know that that's your problem or what problem we're trying to solve, I can't help you. So bring me to the fight. I'm dedicated to the mission. Leidos and all of industry want to make sure that we're successful because all of our livelihoods depend on that. I don't plan on learning to speak Chinese anytime soon. Let me help you and you have to bring me to the table for that to happen.

Maj. Gen. Linda S. Hurry:

Thank you so very much. All right, so we are almost out of time. I would like to give final comments to each of you on what we can do to make logistics and basing successful in a future fight. So we're going to start on that end and work this way this time.

Col. Derek Hess, USAF (Ret.):

So I think in general, I would just piggyback on what you said. Mark Twain once said, "It ain't what you don't know that gets you in trouble. It's what you know for sure that ain't so." And looking out into this room, into the logistics professionals and everybody else who's in this room, who is charged with fixing this problem, you have a very tough job ahead of you. Industry can help. There are things that we are exposed to as industry partners that are out into the future. They're not here today. There are innovation cells within all of our organizations that can help in these areas. But as will said, unless you bring us in, unless you talk to us, we can't proffer those ideas. I believe that all of us bleed blue or-

Maj. Gen. Linda S. Hurry:

We'll convert them. It's all good.





Col. Derek Hess, USAF (Ret.):

... green or red or whatever. We all want what is best for the Soldiers, Sailors, Airmen, and Marines in this fight together. And there are things that we can offer if you bring us in, if you let us get our innovation cells in touch with yours early on. We're not the slimy contractors that you think we are. We're here to help and we want the nation to succeed in the resilient basing area.

Maj. Gen. Linda S. Hurry:

Will?

Will Johnson:

Yeah, ditto. So oftentimes I think that the construct of how you communicate with contractors, you believe that it's illegal, inappropriate. You have to follow and you do have to follow several rules, right? I'm not asking you to provide additional information to any one contractor, then you would another. But until you can figure out how to have an open and frank conversation and break down the walls a little bit, you're not going to get the full power of your contractors and our focus and industry's power. Just telling you a quick story about Leidos, I came to this organization some three years ago and there was no money being invested into logistics, right? I went to the corporation with a strategy and we're getting substantial dollars every year to create a logistics capability. You should be working to leverage those IRAD dollars. And what that means is you come in and saying, this is a problem.

You're just listing your problem. It's up to Will and my industry partners to say, if we're going to invest our IRAD dollars to try and solve that problem. So you haven't broken any rules by coming to me and talking about your problem. Now, there might be contracting officers in the realm that disagree with that, but I'm willing to have a conversation with any one of them because until you talk to us about your problems and bring us in, we're not going to be able to solve them together because I believe it's we, right? We, together have to solve these problems.

Chris Curtin:

So we're getting down the two minute warning here, but what I'll say is that I agree with these gentlemen here and that I'm going to really ask you for three things. This is how I think you can help us. And one would be articulate what your priorities are clearly to industry. And I know it seems easy, but I know it's not. Where are you going to put your money? What are your priorities? Where do you want to focus? Because kind of like what Will was saying, then we can align our efforts and focus to support you.

The second would be, I talked about how the character of war is changing. How we fight is changing. I need to know how you see yourself fighting, or we need to know how you see yourself fighting the next conflict so that we understand your ConOps, because then we can look and design technology that supports how you're going to fight. It's not just a generic thing. It fits what you need it to do.

And lastly, the best thing that I would ask is help us get our technology and equipment in the hands of the war fighter that's going to use it, whether that be through a joint exercise, service level exercise, or even a product demo. We'd love them to take it, look at it, use it, break it, tell us what works, what doesn't. Because if we get that kind of feedback, we can then give that warrior the equipment that they deserve and that they're going to need to have to fight and win.

Maj. Gen. Linda S. Hurry:

So gentlemen, thank you so very much for all of your insights today. Resilient basing, and quite frankly, logistics as a whole is very much a team sport. We naturally talk about requirements with our joint



force, with our coalition partners, but we'd be remiss if we do not bring our industry partners into this to help solve our challenges in a great power competition. So to all of you, thank you so very much for joining us today. This concludes our panel. Have a great day. Thanks.