

MAY: Thank you for joining us today and welcome to another timely discussion from the Foundation for Defense of Democracies. I'm Cliff May. I'm FDD's founder and president. We're honored to host one of the United States' eleven combatant commanders for today's discussion, General Stephen R. Lyons of U.S. Transportation Command. The U.S. Military can move its people and equipment around the world with the speed and agility never before seen in history. U.S. Transportation Command makes that happen. Today, General Lyons will discuss how TRANSCOM does what it does. He also will talk about the impact of the pandemic, the threat environment overall, our allies, air, refueling, military sealift, cyber threats, and much, much more. As most of you know, FDD is a research institution. We focus exclusively on national security and foreign policy. We're non-partisan. We accept no funds from foreign governments. Never have, never will. This event is hosted by FDD's Center on Military and Political Power, which seeks to promote understanding of the defense strategies, the policies, the capabilities necessary to deter and if necessary defeat threats to the freedom, the security, and prosperity of Americans and of America's allies. CMPP features FDD's *Long War Journal*, which provides original accurate reporting on ongoing conflicts as well as professional development research opportunities for active duty military officers, active duty military personnel, as part of FDD's National Security Alumni Network. We also have an active visiting military officers' program, hosting military officers who contribute to our work throughout the year. The Center is led by former National Security Advisor Lieutenant General H.R. McMaster, who serves as chair of CMPP's Board of Advisors. CMPP is run by Brad Bowman, the Center's Senior Director, who will moderate today's discussion. Brad served as national security advisor to members of the Senate Armed Services and Foreign Relations Committees, and he was more than 15 years active duty U.S. Army Officer. During that time, he was both a Blackhawk pilot and an Assistant Professor at West Point. Today's program is one of many we host throughout the year. For more information on all our work and all our areas of focus we encourage you to visit our website, fdd.org. We also encourage you to follow us on Twitter, @FDD. With that, I'm now pleased to turn the floor over to my colleague Brad Bowman to introduce General Lyons and begin the discussion.

BOWMAN: Thank you, Cliff. I want to thank everyone who is watching. I hope you and your families are safe and well. And I especially want to thank General Lyons for joining me for this discussion. As Cliff said, General Lyons is the Commander of US Transportation Command, which is based at Scott Air Force Base, Illinois. And is one of DOD's 11 Combatant Commands. He was commissioned as a Second Lieutenant in the U.S. Army in 1983, and has spent decades serving our country in uniform. Since 2003 alone, he has spent more than 40 months deployed to the U.S. Central Command Area of Responsibility in support of Operation Iraqi Freedom and Operation Enduring Freedom in Afghanistan. In Afghanistan in 2010 was actually where I first met General Lyons and came to respect him very much. Sir, welcome and thank you for making time to join me for this discussion.

LYONS: Brad, thanks. It's a real pleasure to be with you. It's a pleasure to see you again from our time in Kabul that many years ago, but you look great and thanks for what you're doing.

BOWMAN: Thank you, sir. It's a real honor. There's so much that we can discuss in just one hour. So, with your permission, let's get started. General, for those who are less familiar with TRANSCOM, perhaps I can start by just asking you to describe its mission, its components, activities. In highly technical terms, what do you do?

LYONS: Well, I got to tell you, I'm really proud to represent the men and women at U.S. Transportation Command. If you think of the Defense Transportation System, we run the Defense Transportation System. So, airlift, sea lift, patient movement, aerial refueling, manage the global posture that enables global mobility. Our core purpose really is to project the force, sustain the force on a global scale, our time and place of choosing. We create multiple dilemmas for our adversaries and most importantly, we create multiple options for national leadership. So very proud of the team.

We have components, air component and Air Mobility Command, maritime component, Military Sea Lift Command, an Army component, and the Surface Deployment and Distribution Command, as well as the Joint Enabling Command headquartered at Norfolk.

BOWMAN: In preparation for this, I was reviewing some of your posture testimony before the Armed Services Committee and from your written testimony, there was some statistics about the sheer volume of what TRANSCOM does on an annual basis. It's breathtaking.

I mean, in 2019 alone, 43 brigade size overseas movements, 26 million square feet of military cargo, 1.9 million passengers, 1.3 million tons of cargo. It's an endeavor that I don't think many Americans fully appreciate the scope and scale of it. But there was one anecdote in your testimony that I really admired and I thought it was worth highlighting. It was about one particular soldier who was injured in Afghanistan. And what TRANSCOM did to get that soldier the medical care they needed. I don't know if you recall that or not, if you might want to comment on that, but I think it really demonstrates both the capability of TRANSCOM, but also the value we put on an individual soldier's life.

LYONS: No, I think you're exactly right. I do recall the case. Last year, I think it was in the August timeframe and in fact, General Clark, the SOCOM Commander mentioned this particular incident to the President of United States during our dinner in the Fall.

But this is a case where a SOF warrior was severely wounded. We were able to pick them up in our aerial evacuation network from Bagram, flew nonstop all the way to Brooke Army Medical Center, multiple aerial refueling efforts in route. If you can imagine a platform on a C-17 completely transformed into an aerial intensive care unit, critical care teams, all the teams required to make sure that this a young warrior made it back into the hands of our great medical experts at Brooke Army Medical Center.

And so, we're really proud of this patient movement aerial evacuation system, and there's only one nation in the world Brad, as you can imagine, that can do that or then would take the effort to apply that many resources against one great warrior. And that's how much we care and that's how much we love our warriors out there.

BOWMAN: Well said. A 19-hour nonstop flight and that soldier's alive today and with his or her family because of that. That's extraordinary.

We'd love to transition to a discussion on COVID-19. As you know, better than me, we all continue to struggle with COVID-19, the global pandemic. I'm curious how it's impacted TRANSCOM?

LYONS: Yeah, it certainly has had an impact. I would tell you from the beginning, I think Secretary Esper was pretty clear with his priorities and it was simply this, it was simply, "Make sure you can continue to operate your wartime mission." And we can and we do. "Protect the force as best you can," and we have done that with mitigation measures. And then, "Support the whole government effort to the extent needed by the whole government effort." And so that was the priority effort from the beginning.

One of the first things we had to contend with, to be honest with you, was the recognition that inside the Department, we didn't have an ability readily available to move highly contagious patients. And so, we resurrected what was called the Transportation Isolation System back from the Ebola crisis and brought that back off the shelf and trained crews up.

And more importantly, we established a joint operational urgent need of which the Air Force, DITRA, DARPA and a number of other agencies really went to work and developed a material solution in less than 90 days called a Negative Pressure Chamber that allows us to move highly contagious patients around the globe. And we're doing that today.

In other areas, we've obviously provided support to move the force like hospitals up into New York and so forth. We've provided support to move test kits early on from Europe into the United States. We provided airlift support to donate ventilators to other countries around the globe that were in short supply. And so, we're really pleased about that. One of the other efforts we endeavored upon is to help to the State Department for American citizen repatriation during the initial phases of the crisis. So very, very proud of the team and the COVID effort.

BOWMAN: That's great. How concerned are you generally speaking, obviously we're having an unclassified discussion here, but how concerned are you generally that COVID-19 might negatively impact your ability to carry out your wartime mission?

LYONS: We watch it very closely. And one of the things that we watch very closely is the impact on the economy. You may know this, but many of your viewers may not. We have established relationship with commercial carriers and through emergency preparedness programs, where we activate things like the Civil Reserve Aviation Fleet or their Voluntary Inter-modal Sealant Fleet, for example. And so, we have a dependency in our ability to project the force on these commercial carriers. We work very, very closely with them and inside some of these segments, and particularly the passenger segment of the airline industry, has been really, really hit hard. You can imagine 70% of the fleet parked right now. It was even higher, but 90% of domestic travel, international travel down. The cash burn rate is just enormous. And I do worry about whether our aviation industry and the passenger segment specifically, how long they can weather the storm and as they come back out the back end, will it look the same and will we have the same capacity to support our national defense needs.

I do think in our engagements with industry, it is a very resilient industry, but it's going to take some time. It took about five to seven years after the financial fallout to recover the airline industry, probably about two to three years after 9/11. And so, we've got a long road ahead to make sure we bring back these industries and the industrial base for the department so we can project and sustain the force.

BOWMAN: These challenges with the global pandemic of course are layered upon a geostrategic environment that's already changing. I noted in your Senate Armed Service Committee hearing early this year, you said, "In the past, we were able to deploy our forces when we wanted, assemble them where we wanted and employ them how we wanted." But you said, "The world is changing." In terms of the ability of TRANSCOM to conduct its mission and in terms of the actions and plans of our competitors or adversaries, how is the world changing? What did you mean by that when you testified to that earlier this year?

LYONS: Well, as we look at the potential for a near peer competitor. Of course, not our preference to move to conflict, but we have to be prepared for that. And if we were to move to that, to escalate to conflict, I think things would be dramatically different than what we've experienced in the last 20 to 30, really over 50 years. And that would require us as really called out in the defense strategy, to be able to operate under all-domain persistent attack.

And so, we do look at this. We look at how to integrate all the war fighting functions, how to create the conditions for us to be able to operate whether that's intelligence, whether it's protection. And essentially, if you think about what we do every day, it's a little bit of strategic maneuver. In other words, it's the ability to position forces, right? To provide

physical, psychological, and temporal advantage and day to day competition and in crisis. And so, we want to always have that competitive advantage to be able to protect the force and sustain the force at our time and place of choosing. So, we spent a fair amount of time thinking about that.

We obviously spent a fair amount of time thinking about the cyber risks and vulnerabilities associated, and then really applying a lot of effort to mitigate those risks.

BOWMAN: That's excellent. You referred to, and I suspect you have regularly, you refer to America's ability to project and sustain its forces around the globe as a, "Strategic comparative advantage," for the U.S. Why do you say that? Why is that projection sustainment capability a strategic advantage and why are adversaries trying to deny or undercut that advantage?

LYONS: Yeah. I think when you, you know – Think tanks like yours or others, when they really look from an adversary's perspective, look at the United States, there're several elements they really admire. One being global command and control. One being this robust network of allies and partners. Of course, our ability to develop leaders and empower leaders at Echelon. But the other is this ability to project the joint force transoceanic distances. And that really does distinguish the United States of America, one element that distinguishes United States of America as a global superpower. And so, we must maintain that. And with most of the force elements based in the United States, it's TRANSCOM's job to make sure that we can lift them and move them to where we need to employ them.

BOWMAN: Yeah. And I noted that you've said in the past that roughly 85% of the joint force is based in the continental United States. So, heaven forbid no one wants to conflict with a China or Russia, but if we did, 85% potentially of our equipment and personnel would be moving from the continental United States, and that presents a huge task, obviously for you and your command, but also potential vulnerabilities and things that our adversaries might target.

LYONS: No, that's correct. And so, what we want to do is we want to have many paths. We want to have resiliency, there's a military utility in resiliency, and we don't want to ever find ourselves with a single point of failure or being able to allow our competitor or our adversary a right to deny our ability or to significantly degrade our ability to project the force. We know there'll be plenty of fog and friction, but at the end of the day, we must be successful.

BOWMAN: No, that's excellent. Obviously you know this well, sir, far better than I do, but I think it's important for those watching to understand that this environment that we confront now is very different than what we saw for example, in 1991, where we were able to build the mountain of steel or of combat power in the Gulf over weeks and months, kind of on our own timeline, unimpeded and un-harassed. From my analysis just on the outside, that would not be a good assumption if we were to find ourselves in a conflict with a China or Russia.

LYONS: No, I think you're exactly right. We could well find ourselves having to fight our way in and not even the homeland is a sanctuary.

BOWMAN: Generally speaking and with appropriate deference to OSD and the joint staff and the regional combat commands, what are the implications of this reality you and I just described for pre-positioning equipment and for the forward positioning our stationing, even of U.S. forces now, in order to reduce the forces that TRANSCOM would have to get to the conflict from CONUS in a future conflict?

LYONS: Yeah. Well, I think you always want balance. There is a value in presence, there's no question about it. For many reasons, deterrence, assurance, et cetera. You want to have a blunt force, and then you can reinforce that with an immediate response or crisis response force in time and space. And where we come in is the ability to move in immediate force tonight. So, think of the 82nd Airborne division deployment in January, or a very heavy decisive search force that takes a little bit more time to get there, but there's no question about it at the end of the day, who's going to come out as a winner. So, we want the ability to do all that and balance, and what forward presence or pre-positioned forces allows us to do is close the initial elements of that force more rapidly. Then we can close the decisive force on our timeline.

BOWMAN: That's excellent. TRANSCOM conducts regular exercises to test to make sure that the air refueling and the sea lift and all of that is an appropriate state of readiness. You had Defender Europe 20 recently. Obviously, some of that was curtailed as I understand it due to COVID-19. But I'm curious what was TRANSCOM's role in Defender Europe 20, which I understand was significant. And what were kind of the after-action review lessons learned that you drew from that?

LYONS: Yeah, it was a very big exercise as you alluded to, and a very well-planned exercise. Our role obviously was significant because we moved the force elements from the continental United States to Europe. And as I recall correctly, it was somewhere around 25,000 troops, but it was also constituted the largest movement of forces, think about return of forces to Europe, the old Reforger days, probably since we had the Reforger days post-Cold War period of time.

And so, we were able to exercise with the joint force, both in lifting personnel and equipment, as well as inside the maritime domain, which was a little bit new for us, which I was really pleased to see our maritime component coordinating the handoff of sea lifts and remote sea lift ships in motion between Second Fleet and Sixth Fleet. And out of that, we were really able to take a look at that aspect of how we would protect our lines of communication. Look at the emissions control of some of our vessels and platforms and think through how we would perhaps mitigate that if we had to go to a more stealth kind of a signature.

So really a fantastic exercise. Anytime we have the opportunity, that is good for us, for our readiness, as well as to reinforce General Walters at EUCOM which is our main effort.

BOWMAN: That's great. I'm curious what your response this would be. When I hear a lot of folks talking about what we need from our allies in Europe, there's often focus on combat capability, which is certainly understandable and important. But the more I learn, the more, it seems like we also need countries like Germany to also focus on infrastructure, ports, rail heads, roads, bridges, tunnels. Can we get our forces from here to there? And a lot of that is the logistical stuff that TRANSCOM is so good at. Do you think I have that about right? Or would you caveat what I said there at all?

LYONS: No, I think you got it exactly right, Brad. And I think this is probably underappreciated sometimes. The fact that we can move forces on a global scale at the rate that we do is all underscored by this very advanced network of allies and partners that provide the access to basing and the overfly required to accommodate this very large global logistics network. And if we didn't have these allies and partners with us providing this capacity, it would be very, very difficult to project a force.

And so, I know a lot of times we'll focus on, and we should, on contributions and so forth. In terms of monetary contribution in terms of their investments and interoperability, but this is a really important area. Because as we decide

to reshape and relocate forces, the key is we've got to be able to get back to where we need to go to very rapidly. And our allies and partners are the key to success in this area.

BOWMAN: Absolutely. And you mentioned earlier kind of the all domain persistent attack that our competitors or adversaries might use against that. In the context of that you mentioned, and we'll get more into cyber later, but contract value chains, and this is one that caught my eye, invest in critical global choke points. And so, I would assume, and correct me if I'm wrong, that when we have an ally or partner in control of, or adjacent to a critical choke point or a port or a canal, that's really significant. And when we see as part of the Belt and Road initiative, Beijing purchasing key ports and establishing bases near key waterways, that that's something that Americans should be rightly concerned about, I think.

LYONS: No, question about it. And you can see it clearly on a map. They clearly get the importance of those investments to facilitate a level of freedom of movement across the globe and to a favor their influence. And so, we have to understand that, and we have to understand in our case, in TRANSCOM's case where it intersects and potentially counters our ability to move our forces.

BOWMAN: You mentioned how, we're talking about how important allies are in this in terms of just kind of from selfish American perspective in terms of protecting our interests and projecting our force, how much we rely on our allies and partners. And one thing I've looked at since coming to FDD is what more we can do with democratic allies for our mutual benefit, whether it's NATO or Japan or Australia, Israel, or India. I noticed that just this on August 2nd, there was an F35 exercise, the second F35 exercise with Israel. And there was a tanker there, there was a KC 10, I believe tanker there, helping to refuel those F35s and honing U.S. combat capability and deterrence as well as Israeli and practicing this important refueling capability, which strikes me as kind of the classic win-win.

LYONS: It is definitely a win-win. And so, from both perspectives, we find ourselves contributing to our allies and partners in the tanker situation, and we also find circumstances where our allies and partners are able to tank to our combat air forces. And so, it's a win on many levels. It's certainly a strategic win because it demonstrates very visibly our relationship and our interoperability. So technical interoperability's of our weapon systems. And then it's always good to be able to assist each other in any kind of exercise.

BOWMAN: That deterrence message I would think would be particularly important right now with COVID-19 just to demonstrate that the U.S. military can continue to do what it needs to do, even despite the global pandemic. That strikes me as a timely message. General, in terms of MILCON, so for those who don't reside in or near the beltway, military construction. The things that the Department of Defense needs to build in terms of buildings and infrastructure in order to house its people, house its equipment to conduct its mission. I'm curious, what are TRANSCOM's most important military construction needs and priorities right now?

LYONS: Yeah, we rely heavily on the services of the MILCON projects because they run the MILCON projects. What we do is we enter their process, looking at the global posture, for example, and then influence those outcomes. And we've had pretty good success. We don't have a MILCON program for ourselves, for example, we rely on the services to do that and we feed that in. Another area that where we do influence infrastructure is with the Department of Transportation. So, one of the things TRANSCOM also does is we manage for the Department of Defense critical programs like Highways for National Defense, Seaports for National Defense, Railways for National Defense, for example. In the area of highways, in terms of federal funding, we've been engaged regularly with Secretary Chao and she's been

very supportive of providing a priority framework that favors DOD and national defense interests on how they allocate funding. That's a very good relationship too, to facilitate power projection from the continental United States.

BOWMAN: You're right. To point out that services take the lead in MILCON, but no doubt TRANSCOM relies on that to conduct your mission, them getting that right. One of the things, one of the research topics we're looking at here at FDD is the European Deterrence Initiative, EDI, and what went well with that, how could it have been better, and what lessons are there that we can learn and apply that to potentially a similar program that Congress is going to require be stood up in the Pacific, whether we call the Indo-Pacific Deterrence Initiative or Pacific Deterrence Initiative. Are there any infrastructure or military construction requirements that you see from a TRANSCOM perspective that would be particularly important to facilitate your ongoing and potentially war time mission in Indo-Pacific?

LYONS: Well, I really applaud the success of the EDI that you mentioned, and the way that EUCOM and the broader community with EU, NATO approached that in really facilitating a rapid reinforcement for the Supreme Allied Commander Europe. In the Indo-Pacific very similar initiatives are ongoing, really to create what I might describe as multiple options. You have a different geography and geometry problem out there, and so you do want to have a resilient network of nodes and the ability to move relatively rapidly. The Indo-Pacific and INDOPACOM is really working along those lines. And without getting into a class wide forum on how they're approaching future planning, they've got several initiatives in that regard and we're definitely integrated with them.

BOWMAN: Sounds good. I'd like to turn with your permission to air refueling. Just for someone who doesn't do this full time or enjoy talking about it as much as we do, why is air refueling so important to not only TRANSCOM but to DOD and to frankly, to American security? Why do we need such a robust air refueling capability?

LYONS: Yeah. Aerial refueling is one of those areas that I think is probably not understood as a criticality. Everything that we do as a joint force, every problem set as described in the strategy, aerial refueling is an integral part of success. When I describe the immediate force, whether that's a combat air force, a bomber task force, whatever the case may be, if we want to generate immediate combat power to need, it requires tankers. They are the silent heroes. Fuel is the lifeblood of the joint force. The range, particularly on some of these new weapons systems, are going to be relatively limited without that tanker sitting right next to them. That's why it's so critical. everything that we do is ensure that we've got a capable and a sufficient aerial refueling fleet to meet day to day operations, and then to respond to crisis, and ultimately respond to conflict if need be.

BOWMAN: So, it's really important, both in terms of supporting forces already in battle conflict, and also getting forces there. Yet you've testified that the air refueling fleet is TRANSCOM's most stressed capability and number one readiness concern. Why do you say that?

LYONS: Yeah, because it's – the OPTEMPO is actually quite high. We have not yet met our program objective of 479 tankers. We will be healthy in the out years. Where the friction played out really on the Hill, I think, was the discussion about the delay, right, in the delivery of the KC 46, to present it the joint force. And the pressure to retire some of those legacy platforms as programmed, but before the KC 46 could be presented to the combatant command. A little bit of point of friction there. A lot of this capacity exists in the Guard and Reserve. Where most of the reductions were slated to occur was in the active component. We were about to reduce the active component tanker capacity by 30% or more against a force that's already pressing deploy to dwell ratios. That's kind of what you heard play out in that conversation.

BOWMAN: So a delay in the delivery of the KC 46s and a simultaneous retirement of older KC 10s and KC 135s, potentially leaving you with insufficient air refueling capacity. Are you satisfied in terms of the current state of play with the Pentagon and the Hill that you're going to be able to retain sufficient KC 10s or 135s until the 46 comes online?

LYONS: I am. The leadership, the members on the Hill, were very attuned to the issue. I've seen both drafts bills, and both do support the retention of some number of legacy platforms. Not all. We didn't advocate for all, but sufficient to allow us to bridge until we can get the KC 46 fully operational and present it to the joint force.

BOWMAN: That's excellent. Speaking of the – more specifically on the KC 46, Valerie Insinna at Defense News is wondering if I could ask you about the remote vision system. For those who aren't as familiar with this, back when I was working in the Senate I had the opportunity to go and visit the New Hampshire National Guard and fly in a KC 135, and got to get down there in the prone position in the rear of the aircraft, and kind of look at the boom and the – and everything. As you know better than me, with the KC 46, that position is eliminated. It is up near the cockpit and it's a remote vision system that brings the refueling boom down. Boeing has had some challenges with that.

Valerie at Defense News was curious if you're satisfied with the Air Force solution and the deal between the Air Force and Boeing and, and what your thoughts are, on kind of the KC 46 timeline going forward.

LYONS: Yeah. I mean I'll defer to the Air Force on the programmatic issues because they're the ones that ultimately have to be satisfied because they run the program and so forth. But the feedback that I get is that Boeing and the Air Force have reached an agreement, a technical agreement and a way forward with the delivery of at least some number of air frames with the revised remote visual system, starting in '23. There's still a lot of work to be done between now and then, and so we're really eager to see it. The thing I'm pleased about is we got beyond this hurdle of whether we had a problem or not. It was clear when I flew aboard the KC 46 that we had a major problem that had to be resolved. I think we're on a path to resolve that, and hopefully that'll be the case here in the coming years.

BOWMAN: That's great. Transition to Sealift. Why is strategic sealift important to U.S. military capability and war plans for the average American to understand?

LYONS: Yeah. Sealift is really accountable for about 90% of the cargo that we move, just a massive sheer size. I guess to your point, folks probably don't have a true appreciation for the ability of the Department of Defense and what must be moved. For example, if you look back on Desert Shield, Desert Storm, about 500,000 troops, 450 plus ship loads, large ship loads of cargo, millions of shore times. Sealift is really critically important in our ability to project the force, particularly for the heavy forces like the army, which constitute the heaviest demand for Sealift.

We've been on a push, and making progress by the way, to really institutionalize a sealift recapitalization effort because the last time the fleet was recapitalized was really coming out of Desert Storm, so you're thinking late '80s, early '90s. We've got about half the fleet that's going to age out over the next 10 years, and so we're working closely with Navy and OSD. In fact, I had a meeting earlier this morning, and I think we're making considerable progress on coming to agreement on an acquired use strategy as the most expedient and cost effective way to recapitalize the fleet. Then the next step really is on the Hill, to gain the support from Congress, to get the authorization to continue to procure used vessels off the open market.

BOWMAN: I think that's really important to emphasize that in your testimony, you just touched on it there, that as I understand it, the goal is 85% readiness on the readiness rates for sealift. As of your testimony earlier this year that had declined to about 59%.

Then the other point you hit there is that in the mid-2020s that you would lose about 1 to 2 million square feet of capacity a year in ships. Putting that in kind of more tangible terms, you had said that that's roughly two to four brigade combat teams of Sealift capacity you would be losing each year. And by the mid-1930s, excuse me, 2030s, wrong century, over half the sealift will be unusable. If I have my numbers right there General, that strikes me that there's a real sense of urgency there in getting the congressional support you need to fulfill this important requirement.

LYONS: There is definitely a sense of urgency. Fortunately, this year we've had two sessions with Secretary of Defense, which he personally chaired to look at this particular issue. Specified that the Deputy establish a team on the issue. And again, I think we've got a good way ahead. So, this is really the first time at department TRANSCOM Navy we're all on the same sheet of music, we're all rowing the same direction. We all have the same strategy, same objective, and the Navy's actually put some money behind the program. And now we've got to get back over to the Hill and lay that out for them so they can see we're serious and then get their support to go to an acquired use strategy.

BOWMAN: One of the issues we've touched on a bit already that I'd love to dig a bit deeper into is the issue of cyber. I'm curious from a TRANSCOM mission perspective, how has the cyber threat evolved in your view?

LYONS: Yeah, I think for everybody, everybody can appreciate the cyber threat, so to speak, and the vulnerabilities associated with it. So, when we look at that, we look at it as a war-fighting domain and we recognize very basics. We've got to understand our adversaries' intentions and capabilities better. We've got to understand our cyber terrain better. And we've got to understand our own capability to counter that. And not just here at TRANSCOM, but our adjacent organizations, JTF-DoDIN, CYBERCOM, et cetera.

And my sense is what we've done here is really looked across a very, very broad spectrum for a very large enterprise, global, fairly loud enterprise to boot. But what we're really trying to buy down is the consequential risks. So, we're really focused really on command and control of some very specific systems. And I think we're taking the right steps with CYBERCOM, but they've been a great partner by the way. We're working on proof of principle with them on zero trust and attempting to scale that, but just some basic blocking and tackling, right? Some hygiene, discipline, digital modernization, migration to the cloud, just a full range of things that we've got to do. Develop backup plans, alternate plans, all that is underway. And so, I'm actually pretty pleased with the team that we have and where we're headed, but we know we've got to keep our foot on the gas because this is an area the adversary's moving very rapidly in.

BOWMAN: You touched earlier on the fact that TRANSCOM depends heavily on commercial partners. And on one hand that expands the capacity of TRANSCOM, allows you to do more, have more throughput if you will, but also creates vulnerabilities that as you just suggested, our adversaries can target. The House and Senate National Defense Authorizations Act include provisions calling for the creation of a continuity of the economy plans to prioritize resources to critical national security functions to get them back online in the event of a widespread cyber-attack. This is a key recommendation in fact, to come out of the Cyberspace Solarium Commission.

But you also testified earlier this year that you were concerned that your commercial partners struggle to protect themselves against nation-state cyber actors, which is understandable. I mean, if you're a middle size company or just even a large sized company, I mean, how can you stand up to a nation-state cyber actor? So, adversaries could exploit

these vulnerabilities, potentially, my words, not yours, to either impede vital military movements or to learn of their location or movement for intelligence or in more time even targeting purposes. So, I mean, you touched on it a little bit already, but how do current and potential cyber-attacks on private companies impact TRANSCOM's readiness? And can you give us a little bit more on what you're doing to help those civilian partners, those commercial partners mitigate that risk?

LYONS: Yeah, there's a few things and it's a very valid concern. Our industry partners provide very impressive capacity, but they can, if we're not careful, be a vulnerability. So early on in the process, by the way, have a very close working relationship with our industry partners. So, we're talking to them on a regular basis. Right now, during COVID, on a weekly basis. And so early on it started with some very basics and fundamentals. So just meeting this standards, some contractual language to make sure, just some basic hygiene. And that helps a lot, by the way. You go back and look at some of the attacks that did occur and some of these industries, a lot of it was a function of just lack of good hygiene. But I do acknowledge that an advanced persistent threat actor, a nation-state actor, is a whole different game.

And so, we have a different look at this too. So what industry typically wants to do is they want to protect their financials. I appreciate that. I actually understand that. What we want to do is be able to operate, right? And so, we can, in some of these sectors, operate in what I might describe as somewhat of a degraded, as long as we have operational systems and we can get a conveyance where we need to get the conveyance. And we've demonstrated in the past we can work around systems to do that. And so, we're working with them very closely. The other thing that we have in our acquisition strategy is to ensure we never have a single commercial partner that creates a single point of failure. Our strategy and acquisition, we've got multiple partners. So, we have 25 or 26 aircraft partners, 25 or 26 sealift partners. And we want to have the resiliency that that provides us that if we lose one for a short period of time, we have the ability to go to another. And that's some of our mission assurance framework that we use.

BOWMAN: That's great, General. Is there anything I haven't asked you that you'd like to mention, or do you have any concluding comments you'd like to make?

LYONS: Well, you clearly did your homework, Brad, I appreciate that. You hit all the really key issues. And I just, what I would share with you is number one, I appreciate you taking the time with us today. Again, I could not be more proud of the airmen, the soldiers and the sailors and the Marines, and frankly, and the coast guardsmen that are a part of this great team. As we work closely across the joint force to be able to project the force where we need to. So, it's really, it's just great to be part of this team. We've got a unique set of assigned forces. We've got a unique set of authorities that we can operate globally every day, day in and day out. And we've got a unique stream of resourcing through a reimbursable by users. And it gives us a lot of flexibility to do the things that the Secretary needs to do.

BOWMAN: Well, General Lyons, this has been a really enjoyable conversation for me. Thank you sincerely for your decades of service to our country and your continued leadership at TRANSCOM. We all want you to succeed because your success is our success and our security. We owe you a debt of gratitude. Thank you for your time. And I hope we can do this again soon, perhaps in person next time, but I wish you the best. Thank you again.

LYONS: Thanks Brad. Take care.

BOWMAN: This concludes our discussion. Thanks to those of you watching. For more information on FDD or our Center on Military and Political Power, please go to fdd.org and follow us on Twitter at FDD and @FDD_CMPP. Thank you again.